

16th World Conference on

Tobacco **OR Health**

**TOBACCO AND
NON-COMMUNICABLE
DISEASES**

Abstract Book

Abu Dhabi United Arab Emirates 17-21 March 2015 WCTOH.org

The Union

Permanent Secretariat
World Conference
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TOBACCO AND NON-COMMUNICABLE DISEASES

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ORAL PRESENTATION SESSIONS

01. INNOVATIVE WAYS FOR ACHIEVING TOBACCO FREE GENERATIONS, ENDS

OP-200-19 Cigarette Consumption and exposure to second-hand smoke in vehicles in Buenos Aires City

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Background: Smoking is a global problem with serious consequences for public health. In the City of Buenos Aires is estimated that 15% of health spending is due to related active and passive smoking diseases. It has been shown that consumption of cigarettes and second hand smoke (SHS) exposure are causes of morbidity, mortality and disability. Smoking in transportation merits special attention because they are places with small size, which can be achieved SHS concentrations well above those achieved at home, work or entertainment venues such as nightclubs and bars. Moreover, the consumption of snuff during driving is a distraction that increases the risk of traffic accidents. The objective is to describe and analyse the percentage of persons vehicles with adults and children exposed to SHS in Buenos Aires City.

Design/Methods: A descriptive cross-sectional study was conducted by direct observation of vehicles in the 15 municipalities of Buenos Aires City in April 2014. Three groups of two people stood at three intersections obtained at random in two hours and recorded in various forms designed for our purposes all vehicles stopped at the traffic lights that count with at least one person smoking. Statistical analysis was performed using the WHO programme Epi Info version 3.5.4.

Results: 4800 direct observations yielded an overall prevalence of smoking per vehicle of 4.2% (95% CI 3.7-4.8) were performed. However, this percentage increases to 4.43% if calculated based on the number of people who were present. 57.1% (95% CI 50-64) were private vehicles, and 32.5% (95% CI 26.1-39.4) taxis. 60.4% (95% CI 57-70.6) vehicles had other occupants are exposed to passive smoke snuff. Of these passive smokers 1% (95% CI 0.1-3.5) were minors.

Conclusion: The prevalence found is very similar to studies conducted in other parts of the world, being the first to be held in Argentina. This study provides information

that will allow designing interventions and evaluate their results, also helps to reinforce the concept of tobacco free environments. The dissemination of results has contributed to building consensus among legislators and submitted a draft law to ban smoking while driving in Buenos Aires City This study was conducted with support from Bloomberg Philanthropies and The Union

OP-201-19 Perceived risk, smoking status, quitting behaviours and maintenance of smoking cessation among Uruguayan adult smokers

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Background: Uruguay implemented a world-leading tobacco control strategy in 2006. Measures include strong tobacco control policies, such as comprehensive smoke-free laws and the largest graphic warning labels in the world. Uruguay has signed the Framework Convention on Tobacco Control in 2003. Motivational factors have been proved to be good predictors of quitting behaviours. Perceived risk of smoking, then, is considered a relevant psychological aspect linked to changes in tobacco-related behaviours. Recent research suggests that awareness on smoking related diseases is an effective predictor of plans and attempts to quit, and sustained quitting. This study is part of the ITC Project, which utilises multiple country controls, a longitudinal design, and a pre-specified, theory-driven conceptual model to test hypotheses about the anticipated effects of given policies. The aim of this study was to explore the relationship between risk perception and consumption and tobacco-related behaviours among Uruguayan adult smokers. Overall, regional and national research in this area is scarce. The current study contributes to the health literature in general and the tobacco-related psychosocial literature in particular, in areas that have high societal relevance.

Design/Methods: Participants were 1411 smokers and quitters drawn from wave 3, and 1417 from wave 4 of the ITC Survey, and were recruited in household settings in 5 regions of the country from 2011 to 2012.

Results: Preliminary analyses were conducted (frequencies, descriptives, mean differences, correlations for scale items). ANOVAs showed differences in risk perceptions related to demographic variables, and consumption and tobacco-related behaviours.

Conclusion: Results have diverse implications. For example, this information should be incorporated into group-based tailored psychoeducational programmes that specifically address population's mental health and psychosocial needs. The latter may result in a reduction in health disparities and unnecessary loss of life, which will benefit society as a whole, contributing to enhance population's ability to obtain, process, and understand the basic health information they need to make appropriate tobacco-related decisions. Implications of current study

may also provide support to national tobacco control policies, currently dealing with diverse legal and economic challenges; and contribute to global tobacco control efforts.

OP-202-19 A systematic review of health effects of electronic cigarettes

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Background: The epidemic spread of electronic cigarettes (ECs) raises great concern in some health- and public health professionals and great enthusiasm in others. The aim of this article is to give a systematic review of the existing literature on the health consequences of vapouring of ECs and discuss the implications of our findings on public health.

Design/Methods: A search was carried out in Pub Med, EMBASE and CINAHL including original publications on health-related topics, published in any language before 2 September 2013. PRISMA recommendations were followed.

Results: We identified 855 studies; 177 relevant after screening; 69 eligible. We included 51 studies investigating content of fluid/vapour of ECs, reports on adverse events and human experimental studies. Serious methodological problems were identified. In 41% of the articles the authors had a conflict of interest. ECs are a very efficient nicotine delivery system. Studies found fine and ultrafine particles, cytotoxicity, nano-particles of harmful metals, carcinogenic tobacco specific nitrosamines and carcinogenic carbonyls. Some studies found harmful substances in many/most samples, others only in one/few. Most studies have compared concentrations of harmful substances in conventional cigarettes but health hazards may be different than from smoking; of special concern is propylene glycol, the major ingredient. Experimental studies have found effects after short-term exposure that remind of the obstructive effects seen with tobacco smoking. Persons exposed to passive vaping absorb nicotine, are exposed to harmful substances, and may experience short-term lung obstruction. Most adverse events reported have been from the mouth/throat and the respiratory system but some users report decrease in respiratory symptoms.

Conclusion: Due to the many methodological problems, severe conflicts of interest, the relatively few and often small studies, the inconsistencies and contradictions in results and the lack of long-term follow-up no firm conclusions can be drawn on the safety of the ECs, and much is left to subjective interpretations. However, ECs can hardly be considered harmless and may have a very negative impact on public health if the use is spread to a large part of the population. Strong regulation of the ECs is essential. Use of ECs should be restricted to smokers unwilling to quit smoking.

OP-203-19 Regulation of e-cigarettes in the European Union: loopholes and solutions

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Background and challenge to implementation: In 2014, the European Union decided a legislation on nicotine containing e-cigarettes in the frame of the Tobacco Product Directive 2014/40/EU (TPD). The main intention of this regulation is to increase the quality of e-cigarettes and consumer safety, but also to protect children and young people from new nicotine delivery systems. Due to massive interventions by an e-cigarette lobby, there are many loopholes in the law.

Intervention or response: The regulative parts in the TPD concerning e-cigarettes were reviewed under two aspects: implementation of this legislation and identification of regulative gaps regarding consumer safety and protection of young people.

Results and lessons learnt: The TPD only expresses recommendations to EU member states. These must be filled up by the member states with concrete measures. To fulfill some recommendations, new standard procedures have to be established, for example for the listing of ingredients, emissions and toxicological data. "High purity" of ingredients has to be defined. Banned additives have to be named explicitly as the description in the TPD is vague. Packaging has to be regulated, as the actual packages may be extremely attractive to youth. Several public health aspects are not regulated adequately by the TPD. Therefore, beyond TPD regulation the following measures should be taken: A sales ban to minors to protect them from an addictive product with unknown long-term health effects; a vaping ban in smoke-free areas to protect third parties from emissions; taxes on e-cigarettes to make them too expensive for youth; set up a special environmental tax to minimise the environmental burden. Non-nicotine products are not regulated by the TPD. As new non-nicotine products are emerging, such as e-shishas, which are very attractive to young people, non-nicotine e-cigarettes have to be regulated in the same way as nicotine containing products.

Conclusions and key recommendations: The TPD regulation on e-cigarettes improves product quality, however several loopholes remain. As it is realistic to assume that billions of e-cigarettes will be consumed in Europe in the near future, there is an urgent need for a comprehensive public health oriented regulation, which is missing so far.

OP-204-19 Factors influencing online seeking of smoking cessation information among adult smokers in the US

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Background: Cigarette smoking poses a major public health concern - responsible for nearly 20% of US deaths, yet online smoking-cessation programmes are underutilised. Smoking also imposes a significant burden on the healthcare systems and substantial economic losses to the society. With the current increase in internet coverage and use, internet-based smoking cessation interventions present opportunities which can effectively be utilised to help smokers quit.

Design/Methods: We analysed the Health Information National Trends Survey (HINTS-4, CYCLE 1) data to estimate proportions of US adult smokers who sought online smoking-cessation information (OSCI) in the last 12 months, and to describe associations between OSCI-seeking and socio-demographic factors (age, sex, education, race and income), healthcare related factors (given opportunity to ask questions, able to rely on health professionals to care for healthcare needs, overall healthcare quality rating) and trust of internet information. Weighted point and variance estimates were obtained accounting for the complex sampling design.

Table 1: Bivariate associations between seeking OSCI and study's independent variables among smokers (N=615)

Variable	Weighted associations	
	% Seeking OSCI	OR (95% CI)
Age (Years)		
18-34	25.8	5.4 (1.3 - 22.0)
35-49	25.1	5.2 (1.6 - 16.5)
50-64	19.1	3.7 (1.1 - 12.4)
65+	6.1	1
Trust of internet information		
No	17.4	1
Yes	24.8	1.6 (0.4 - 6.7)
Rely on health professionals		
Always	18.1	1
Less than always	27.3	1.7 (0.8 - 3.6)
Rating of quality of healthcare		
Excellent	21.2	1
Less than excellent	24.1	1.2 (0.5 - 2.5)
Opportunity to ask health related questions		
Yes	24.3	1
No	20.5	0.8 (0.3 - 1.9)

Results: Current smoking was reported by 17.5% (N=615) of respondents, among whom 22.0% sought OSCI in the previous 12 months. Among smokers (N=615), 25.8% of 18-34 year-olds, 25.1% of 35-49 year-olds, and 19.1% of 50-54 year-olds reported OSCI-seeking compared with only 6.1% among those aged 65+ years ($p < 0.05$). Though OSCI-seeking was reported by 27.7% of college graduates, by 27.9% of those with some college education, and by 16.6% of high-school graduates or less, OSCI-seeking was not significantly associated with education. No significant difference in OSCI-seeking was noted between males (22.2%) and females (21.8%), between respondents with

>\$50,000 annual income (30.6%) and those with lower incomes (21.5%), or across racial/ethnic groups - Whites (22.1%) and others (21.9%). Sex and trust of internet information significantly modified the association between age and seeking OSCI (heterogeneity of ORs [$p < .01$]). Sex was also a significant modifier in the association between ability to rely on healthcare professionals for care and seeking OSCI. Respondents who expressed trust of Internet information were only slightly more likely to seek OSCI than those who did not report trust of Internet information (24.8% vs. 17.4%). This difference was not significant before or after controlling for socio-demographic factors (ORADJ=1.4, 95% CI 0.3-6.1). Similarly, none of the three healthcare related factors were associated with OSCI-seeking before and after controlling for socio-demographic factors.

Conclusion: Age was a significant socio-demographic predictor in seeking online smoking cessation information among sampled smokers. Given the lack of robustness of study findings considering all study variables included, these results pointed to some interesting directions for further investigations to identify significant factors influencing seeking online smoking cessation information. Understanding these factors will enhance design and utilization of effective web-assisted tobacco interventions.

OP-205-19 New Zealand's challenges to responding to new nicotine products

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Background: There is a market for products that provide smokers with nicotine, but are less harmful than smoking. Many recent products are marketed as an alternative to tobacco and some make claims for harm reduction or smoking cessation. The rapid evolution of this market and the lack of high quality data make it challenging for the health sector to respond. In New Zealand, electronic cigarettes (EC) have polarised the tobacco control sector. Some believe these devices will contribute towards a smoke-free New Zealand 2025 by assisting people either to quit or to replace smoking. Others have concerns that EC may impact adversely on individual and population health, perpetuating nicotine addiction, re-normalising smoking behaviour, promoting dual use, and that they might be a gateway to smoking tobacco. Further to this, the tobacco industry is purchasing companies producing these products.

Response: The Ministry of Health acted on the World Health Organization's advice, recommending a precautionary approach. New Zealand opted to apply its existing regulations to provide a regulatory framework for EC. Subsequently, the Ministry has identified various concerns and is considering a regulatory response. The challenge to developing advice for the Government and the health sector is to assess the conflicting opinions and evidence.

Results: Non-nicotine containing EC are widely available in New Zealand. No nicotine containing EC have been li-

censed for sale so far: they should not be sold but people can import them for personal use. Enforcement of illegal sales of EC is an emerging issue, and the divergent views of tobacco control experts present a challenge to informing policy decisions. In the meantime, other new products are developed and introduced, with possible impacts on the health of consumers and non-consumers.

Conclusions: The tobacco control sector has been leading the way in New Zealand on how to effectively and comprehensively address a major health issue and we have made good progress towards our smoke-free goal. We are at a critical point deciding whether new nicotine products, such as EC, will help or hinder further progress. Ongoing, constructive policy debate on nicotine products is needed so that valid concerns of both sides can be addressed.

02. POST 2015 DEVELOPMENT AGENDA, ECONOMIC ARGUMENTS

OP-206-19 Price and tobacco marketing strategy: lessons from 'dark' markets and implications for the WHO Framework Convention on Tobacco Control

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Background: A marketing strategy involves specifying target markets and establishing a related marketing mix, which is commonly broken down into the 4Ps (i.e., product, price, place, and promotion). It is important for those in tobacco control to recognize that marketing is much broader in scope than advertising or promotion. Managers may estimate the impact of alternative price levels on profits. Each of the 4Ps are designed and directed toward well-defined target markets and developed synergistically to ensure a coherent and consistent brand meaning.

Design/Methods: Internal corporate documents, made public from litigation, were searched online from the Legacy Tobacco Documents Library (<http://legacy.library.ucsf.edu>) to examine various pricing techniques used by tobacco firms to market their products.

Results: Tobacco marketers use a number of strategic pricing approaches. Price lining involves establishing a limited number of price points for products, which serves to simplify the consumer's evaluation of alternative products. Retailers selling cigarettes in Canada have commonly listed prices using up to three price points, with the various price points being dubbed, "premium," "value," and "budget." For prestige pricing, retail prices are purposely established high relative to competing brands, with the higher price and "premium" moniker meant to convey superior product quality. In contrast, odd-even pricing may be used to convey value and affordability by setting prices just below even dollar values (e.g., charging \$9.99 for a product rather than \$10.00). Leader pricing exemplifies setting a promotional price, selling select products below their usual listed price, as a means of gaining attention or drawing consumers to the retail setting. Discount prices are likely to prompt impulse purchases and consequently encourage smokers to consume more than they might otherwise.

Conclusion: In the elaboration of guidelines for implementation of Article 6 of the WHO FCTC, it is strongly advised that the stipulations go beyond tax measures and also recognise the pricing strategies that may be utilised by tobacco firms in their marketing initiatives. Much of the tobacco control literature concerning price has focused on taxation as an intervention, and while this body of literature has been very important, more research is needed regarding tobacco pricing from a marketing and consumer perspective.

OP-207-19 Migration from tobacco to alternative crops - the Ghana experience

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Background: Tobacco was introduced into Ghana in the 15th century. Tobacco cultivation began in 1930s and 1940s. Pioneer Tobacco Company later British American Tobacco Ghana (BAT) introduced tobacco cultivation on a commercial scale in 1953. BAT provided about 80% of its major raw materials locally, until its factory closed in 2006 which meant the farmers lost the major outlet for their crop. The Tobacco Atlas (2012) indicates Ghana has between 5,000 to 9,999 hectares devoted to tobacco growing. Article 17 of the WHO Framework Convention for Tobacco Control (FCTC) calls for support for economically viable alternative activities for tobacco growers.

Objectives: To examine the experiences of tobacco farmers specifically if farmers still grow tobacco, alternative crops under cultivation in addition to challenges faced.

Methods: Two towns in Kintampo North and South Districts of the Brong-Ahafo region are purposively selected. Agriculture continues to be the main economic venture in these districts. Plantation and mechanized farming is on a small scale. Major crops cultivated include; yam, cassava, millet and sorghum, cowpea, maize, rice, groundnut, watermelon, cashew, mango and tobacco. Tobacco farmers (15 females 35 males) were purposively selected for four FGDs and six in-depth interviews.

Results: Most respondents are not growing tobacco because there is no ready market for it. However, very few farmers still cultivate tobacco sold on the local market.

They recalled with nostalgia how BAT provided them excellent agricultural extension services. However, our data reveal that tobacco cultivation affected their health. Challenges included no plots of land to continue farming, lack of money for inputs and unstable prices. The farmers identified crops namely beans, maize, cassava, plantain, cashew and mangoes as viable alternatives to tobacco. Inputs such as fertilizers, tractor services, storage facilities, ready market and guaranteed prices for their cultivation were desired.

Conclusions: Ministry of Food and Agriculture (MOFA) should lead in promoting economically viable alternatives to smaller scale tobacco farmers and integrating its support into the government's overall food and agriculture programme.

OP-208-19 A novel taxation structure for cigarettes at the global level: an endgame for cigarettes

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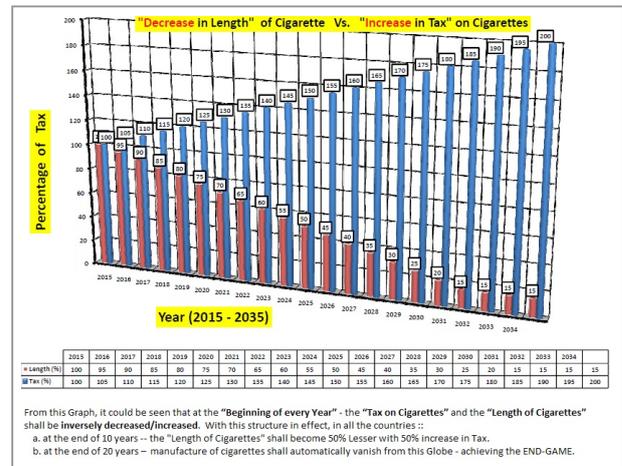
Background: In spite of multi-fold and multi-faceted fight against tobacco across the globe over the past few decades, the establishment of a 100% tobacco-free global society is still a far-cry from reality. However, with the uniform introduction of the following tobacco endgame taxation structure and regulating the length of cigarettes uniformly and concurrently in all countries under the auspices of WHO, accomplishment of this distant dream (100% tobacco free global society) is sure to happen within two decades.

Design/Methods: Presently, taxation of tobacco products varies from country to country and even province to province within the same country. These tobacco taxes are increased very minimally or not at all for a number of years in a few countries resulting in thriving business for the tobacco companies. To achieve an endgame for tobacco with the initiative of the WHO and UNO, the inversely-proportional structure of length of cigarettes vs. cigarette tax shall have to be uniformly introduced in all the member-countries of the WHO across the Globe.

Assumptions: a.) Year 2015 shall be treated as the base-year in all countries; b.) Tax on cigarettes prevailing in the year 2015 in the respective country shall be taken to a base of 100; c.) Length of cigarettes prevailing in the year 2015 in the respective country shall be taken to a base of 100; d.) Tax on cigarettes shall be increased by 5% in every consecutive year; e.) Length of cigarettes shall be decreased by 5% in every consecutive year. Depending upon the local conditions, the increased/decreased percentage figures may be fixed for the cigarette length vs. cigarette tax.

Results: It is a clearly established fact that every percentage increase of tax on tobacco products shall result in a decrease in consumption of tobacco products by at least two to three percentage points, especially among the youth and poor who form the vulnerable segment of the society largely affected by tobacco products.

Conclusion: With the uniform implementation of above tax and length structure for cigarettes, endgame of cigarettes shall surely be achieved within two decades.



OP-209-19 Smoking among the poor and the impact on economy and health in Bali

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Background: Indonesia was the third country with the largest number of smokers in the world after China and India. Data in 2010 showed that the prevalence of smokers was 34.7%. National Socio-Economic Survey Data in 2005 showed that the prevalence of poor male smokers by 63%. Karangasem is one of regency in Bali which has high poverty rate, while there are many people also live below poverty line in the city of Denpasar. Cigarette consumption in poor families reported 22%, and was greater than food expenditures. This study was conducted to examine smoking among the poor in Bali and the impacts on the economic and health.

Design/Methods: Design of the study is cross sectional study (survey). The sample size was 289. Samples were selected using multistage random sampling method. Totally were selected 8 districts and 16 villages. Then from each village, samples selected by simple random. Data were collected using questionnaires and were analysed quantitatively.

Results: The results showed that the prevalence of poor families who smoke 68.5%, while in urban areas 75.9% and 61.8% in rural areas. The proportion of cigarette expenditure among poor families was 1.25%, which in urban areas 0.29% and 0.21% in rural areas. Prevalence of upper respiratory tract infection was predominant (25%). The prevalence of non-communicable diseases was 19.5%. Moreover, the prevalence of stillbirths among poor families was 9.7%, of which 17.4% in rural and 5.1% urban. Prevalence of miscarriage among poor families was 56%, of which in urban areas and 54.3% in rural areas. Prevalence of Birth with low weight among poor families is 18.4%, of which 21.7% rural and 15.4% urban.

Conclusion: The prevalence of poor families in urban areas who smoke cigarette expenditure is greater than in the rural areas. The prevalence of infectious diseases was more frequent than the non-communicable diseases. Prevalence of stillbirth and low birth weight in rural areas is greater than urban. However, the prevalence of miscarriage in urban areas was greater than in rural areas.

OP-210-19 Socio-economic and environmental determinants of tobacco product consumption: a case study of Pakistan

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Background: Pakistan is sixth most populous country with highest tobacco consumption among South East Asian region. Every year around 110,000 tobacco related deaths occur in Pakistan. So far no study has analysed the tobacco consumption expenditure in detail using national level data. This study aims to calculate the approximate monthly household (HH) expenditure on tobacco purchase as percentage of total HH expenditure and to determine socioeconomic and environmental factors for tobacco demand in Pakistan.

Design/Methods: Using secondary data of Household Integrated Economic Survey (HIES) 2010-11 where tobacco consumption expenditure is proxy indicator and constructed new variables. Ordinary Least Square model used to run multiple regression analysis.

Results: Study showed that the mean expenditure on tobacco consumption as percentage of total Household (HH) expenditure in rural areas is 1.36 % and 0.96% in urbanites. The highest mean expenditure of 2.98% is observed in rural Sindh, whereas the lowest 0.52% is observed in urban areas of Khyber Pakhtunkhwa province. Mean expenditure on smoke-able tobacco products is higher than non-smoke able tobacco product in Pakistan. Spending on tobacco is higher in HH with average age group equal or more than 35 years i.e. 1.44%. Tobacco consumption expenditure is more in male and divorced individuals. Higher tobacco spending observed in HH with three or more adult male members, more employed males and with per capita income ranging from 3500 to 5000 per month. Multiple regression analysis showed significant negative correlation with average years of schooling and per capita income. Lack of environmental factors such as poor drinking and toilet facility and non-availability of gas and electricity have significant negative association with tobacco consumption expenditure.

Conclusion: Higher HH spending per month is observed in males living in rural areas, illiterate, divorced and with poor standard of living condition. The tobacco control efforts should be targeted towards low socioeconomic, rural and marginalized communities for both smoke able and non-smoke able tobacco products.

OP-211-19 Cigarette price differences and cross-border purchase of tobacco products across the European Union in 2012

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Background and challenges to implementation: Tobacco taxation is one of the most important determinants of tobacco control. This study assessed the effect of EU-wide cigarette price differences on cross-border purchasing of cigarettes as a price minimisation strategy among current smokers.

Intervention or response: Data were obtained from the Special Eurobarometer 385 (77.1), conducted from February 25 to March 12, 2012. Analyses were restricted to current smokers (n=8,131 adults) aged ≥ 15 years from 27 EU member states (MS).

Results and lessons learnt: Price differentials between higher-tax member states and lower-tax states increased the incentives for cross-border purchase of tobacco products within the EU in 2012. For every unit increase in cigarette price between EU MS, the likelihood of a cross-border cigarette purchase increased by 36% (aOR= 1.36; 95%CI: 1.21-1.51). More so the odds of buying tobacco products from a country outside the EU were over 2-fold higher among these MS that had geographic contiguity with external EU countries (aOR=2.22; 95%CI: 1.40-3.52).

Conclusions and key recommendations: These findings underscore the need to harmonise tobacco prices within the EU –including its bordering countries to strengthen the effectiveness of individual MS tobacco taxation strategies.

OP-212-19 What works to reduce socioeconomic inequalities in smoking?

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Background: Smoking in countries at stage 4 of the tobacco epidemic is declining but the social gradient in smoking is not. We know which tobacco control policies reduce youth and adult smoking, but their equity impact is unclear. This is of concern as countries consider which strategies will achieve the 'end game'. Previous systematic reviews of the equity effect of tobacco control interventions found limited evidence to inform strategies aimed at reducing socioeconomic inequalities in smoking. No studies had assessed the equity impact of tobacco control policies on youth smoking. This presentation describes the findings of three systematic reviews on social inequali-

ties and smoking undertaken as part of the SILNE project on inequalities and smoking in Europe.

Design/Methods: Three systematic reviews of primary studies (1995 – 2013) in ten databases, of interventions/policies reporting the impact on smoking outcomes on lower versus higher socioeconomic status (SES) groups, in countries in Europe and/or at stage 4 of the tobacco epidemic. The reviews covered: (i) population and individual level interventions/policies on youth smoking, (ii) population level interventions/policies on adult smoking cessation, (iii) individual level adult cessation support interventions in Europe. SES variables included income, education, occupation, area deprivation. Equity was assessed as: positive (reduced inequality), neutral (no difference by SES), negative (increased inequality), mixed (equity impact varied) or unclear.

Results: 35 interventions/policies were included in the youth review, 130 in the adult population level review and 29 on adult individual smoking cessation support. The distribution of equity effects for youth interventions was: 6 positive, 15 neutral, 10 negative, 3 mixed, 1 unclear; for adult interventions: 33 positive, 36 neutral, 38 negative, 6 mixed, 17 unclear; and for adult cessation support: 10 neutral, 18 negative, 1 unclear.

Conclusion: Few studies have assessed the equity impact of tobacco control interventions/policies in adults and even fewer among youth. The most consistent evidence of a positive equity impact in adults, and to a lesser extent in youth, is for price/tax increases. Smoking cessation services, if not effectively targeted at low SES groups, are likely to increase inequalities in cessation. The evidence base for the equity impact of tobacco control interventions needs strengthening.

03. ILLICIT TRADE, ACCESS BY MINORS

OP-213-19 Tobacco use by household members predicts tobacco use in school children in Kerala, India

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Introduction: The Indian Parliament enacted the Cigarettes and Other Tobacco Products Act (COTPA) and the rules were notified in 2004 in line with the Framework Convention on Tobacco Control (FCTC) that included prohibition of sale of tobacco products to minors and within 100 yards of educational institutions. However, school children continue to use tobacco products. We studied tobacco use patterns among school children and its association with tobacco use by other members of the household.

Methods: We selected 4310 school children aged 11-16 years (50.6% boys) by multistage cluster sampling from one of the 14 districts of Kerala State and collected information on tobacco use of both students and members of their household using a pre-tested structured questionnaire. Current tobacco use was defined as any tobacco use in the last one month. Bivariate analysis was done to find out the linkage between tobacco use by the students and their household members.

Results: Current tobacco was reported by 5.0% (95% CI:4.56-5.53) of boys. Smokeless tobacco use was the predominant form. Exclusive smokeless tobacco use was reported by 1.9%, smoking only by 1.6%, and use of both forms of tobacco by 1.5%. Among girls 1.1% reported use of any form of tobacco. (95% CI: 0.9-1.4). One percent

reported smokeless tobacco use and 0.1% reported both forms of tobacco use. Only one girl reported exclusive smoking. Close to half (46%) of the students reported that at least one member of his/her household was a current tobacco user. Current tobacco use among boys from a tobacco using household (6.7%) was two times higher compared to their counterparts (3.5%); Odds Ratio (OR) 1.98, 95% CI: 1.61-2.44 and similar figures for girls were 1.8% vs 0.9%, OR 2.13, 95% CI: 1.27-3.59.

Conclusion: In spite of the existing tobacco control rules in India a substantial number of school children in our study were current tobacco users. In addition to stricter enforcement of the COTPA rules, tobacco control measures in the schools should address tobacco use among household members of students. The existing parent teachers association of the schools could be effectively utilised for enforcement of COTPA rules and tobacco control among students and their household members.

OP-214-19 Moving from efficacy to effectiveness: findings from a school-based tobacco use prevention intervention among Indian adolescents (Project STEPS)

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Background: Tobacco use is the leading risk factor for NCDs. The efficacy of school-based tobacco use prevention interventions in reducing tobacco use among Indian adolescents has been established. The Youth Empowerment component of Project STEPS was a scaled-up effectiveness trial implemented in two states-Gujarat and Andhra Pradesh. It aimed to prevent and reduce tobacco use among school-going adolescents through increasing their knowledge, enhancing attitudes and modifying behaviours related to tobacco use.

Design/Methods: The study was a randomised control trial. Schools were allocated into intervention and control arms. All students in grades 6 and 8 were eligible to participate and were followed over two years (n=68223; age 10-16 years). A multi-component intervention comprising of innovative classroom activities; training peer leaders and teachers; and peer-led health activism components was administered in intervention schools. Baseline and endline evaluations comprised of self-administered classroom questionnaires. Outcome indicators: current tobacco use (smoking and smokeless tobacco), intentions and susceptibility to smoke and use smokeless tobacco, advocacy skills, knowledge about harmful effects of tobacco use and tobacco control policies and refusal skills. Mixed effect regression models were used for assessing changes in outcomes from baseline to endline.

Results: Reduction in current bidi smoking was significantly higher among female students in intervention vs control schools (slope -2.42 vs -0.91; p=0.035). Intention to chew smokeless tobacco among females reduced in intervention schools vs an increase in control schools (slope -1.69 vs 7.70; p<0.01). Overall, advocacy skills increased in intervention schools vs a decrease in control schools (slope 0.27 vs -0.22; p=0.045). Intentions to smoke increased from baseline to endline in both intervention and control schools. However, the increase was significantly higher in control vs intervention schools (overall slope 1.44 vs 3.57; p<0.01, female students 0.37 vs 1.84; p<0.01).

Conclusion: These findings have important implications for designing and implementing school-based tobacco control interventions, policies and programmes. They demonstrate a replicable and sustainable model to empower adolescents as effective advocates. The impact on current bidi smoking and intentions to chew smokeless tobacco, among females is of particular significance, given that these two forms of tobacco use are the most prevalent in India, and that tobacco use is on the rise among young Indian females.

OP-215-19 Exposing the myths: ITIC's Asia-11 Illicit Trade Indicator

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Background: In 2013 International Trade and Investment Center (ITIC) and Oxford Economics (OE) launched a tobacco industry-funded report (Asia-11: Illicit Tobacco Trade Indicator) that highlights illicit tobacco trade in 7 ASEAN countries and Australia, Hong Kong, Pakistan, and Taiwan, claiming that illicit trade cost these 11 governments US\$3.4 billion in lost tax revenues and blaming "excessive tax increases, weak enforcement, and...criminal networks" as key drivers of the region's tobacco black market. This report is being used to deter governments from undertaking tobacco tax measures that effectively reduce tobacco use as prescribed in the FCTC.

Intervention: The Southeast Asia Tobacco Control Alliance asked government and non-government partners to verify the report's data and conclusions, developing a critique covering 8 of the 11 countries and exposing ITIC/OE's selective data use, inconsistencies, and overestimation of illicit trade. The critique was shared with governments and advocates to counter industry arguments against effective tax increases.

Results: There is no detailed discussion on methodology to allow independent validation. Various data sources (empty pack surveys, expert opinions, retail audits, etc.) are cited, but ITIC/OE don't provide a detailed description of each source nor the limitations that may affect their estimates. Use of industry-provided data also raises doubts about the reliability and accuracy of ITIC/OE estimates. By excluding large countries with high cigarette consumption but where illicit use is low (i.e. China, Japan, and S. Korea), the report overestimates the extent of illicit trade in the region. Since "unspecified market variants" (packs without specific market labelling or duty-free labelling) comprise the bulk (52.3%) of ITIC/OE's illicit use estimate and are differentiated from counterfeit products, the report ignores the tobacco industry as a possible source of illicit products, either illegally exporting their products to other countries or exporting and illegally re-importing their products, and the likelihood that the legal supply chain is insecure.

Conclusions: The ITIC/OE Report is an unreliable source of data on illicit trade. Governments should continue to raise tobacco taxes to reach their public health and fiscal objectives, while implementing effective strategies to combat illicit tobacco trade consistent with the articles and guidelines in the Protocol to Eliminate Illicit Trade in Tobacco Products.

OP-216-19 Promoting cross-border shopping by preserving price differentials between countries: the tobacco industry's pricing games in Central Europe

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Background: The global tobacco industry has identified tobacco taxes as a threat to their business and vociferously argues against such increases. A main argument of the industry is that higher taxes boost the illicit cigarette trade and cross-border shopping between neighbouring countries with large differences in cigarette prices. However, the tobacco industry may be fuelling these cross-border price differences and thus illicit cigarette trade and cross-border shopping prevalence by cross-over shifting: an increase in price in one country after a tax increase in a neighbouring country.

Design/Methods: Net cigarette price in Germany was modelled as a function of lagged price, as well as taxes in the Czech Republic and Poland. We controlled for unemployment and income in Germany.

Results: We found that cigarette tax hikes in the Czech Republic and Poland increase cigarette prices in Germany. Our findings support the cross-over shifting hypothesis and suggest that the multinational tobacco companies use inter-country pricing strategies to maximize their profits.

Conclusion: The main argument of the tobacco industry against higher tobacco taxes in the EU is the possible increase in illicit trade and cross-border shopping. However, industry's own pricing strategies might establish and maintain price gaps between neighbouring countries. Through cross-over shifting, tobacco companies can influence the tobacco tax avoidance and evasion, fuelling their own rhetorical cycle.

OP-217-19 Youth accessibility to cigarettes in six sub-Saharan African countries

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Background: Tobacco smoking is initiated and established predominantly during adolescence. To curtail the harmful consequences of tobacco use, it is critical to target prevention efforts at young people. The World Health Organization Framework Convention on Tobacco Control's Article 16 prohibits the sales of tobacco products to those under the age of 18. Understanding where youth obtain their cigarettes can inform effective programme and policy action.

Design/Methods: The Global Youth Tobacco Survey (GYTS) is a school-based survey of students aged 13–15

years using a consistent and standardised protocol. We examined GYTS data, from 2009–2011, on cigarette accessibility in Cote D'Ivoire, Ghana, Republic of Congo, South Africa, Swaziland, and Uganda. All analyses were performed using SUDAAN 10.0, accounting for effects of complex survey design.

Results: GYTS results show that current smoking prevalence ranged from 3.6% (95% CI: 2.3–5.7%) in Ghana to 13.7% (11.0–16.9%) in Cote d'Ivoire. In all countries except Cote d'Ivoire, the venue where most youth smokers obtained their cigarettes was in the store/shop (22.6%, 11.2–40.2%, in Uganda; 26.9%, 18.4–37.5%, in Ghana; 28.2%, 17.2–42.7%, in Swaziland; 37.7%, 25.2–52.1%, in the Republic of Congo; 52.6%, 43.2–61.8%, in South Africa). In Cote D'Ivoire, majority of smokers obtained cigarettes from an older person (33.2%, 25.6–41.7%). Cote d'Ivoire and South Africa had 68.9% (51.0–82.5%) and 68.7% (59.5–76.6%) of students, respectively, who were able to purchase cigarettes despite being underage. Percentage of those who were offered free cigarettes by a tobacco company representative was lowest in Cote d'Ivoire (4.7%, 3.7–6.1%) and highest in South Africa (12.1%, 10.1–14.5%).

Conclusion: Policy measures that prevent youth from accessing tobacco products in stores should be introduced, where not available, and enforced. Tobacco industry targets youth in order to attract new customers. Therefore, fully implementing WHO FCTC's Article 16, as a part of a comprehensive tobacco control programme, could prevent youth access to cigarettes.

04. GLOBALISATION OF TOBACCO INTERFERENCE

OP-218-19 Tobacco industry liability: scientific evidence on smoking to provide subsidies to judiciary power in Brazil

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Background: Surveys on the judicial decisions in the last decade in Brazil revealed that the jurisprudence regarding the civil liability of the Tobacco Industry (TI) is not in favor of tobacco consumption victims. To exclude the TI liability, decisions are usually based on the supposed lack of causal link between tobacco use/diseases, free will for smokers and on the fact that it is a legal business. In several cases there is a clear discrepancy between the judge

decision and the scientific evidence currently available about smoking. In order to change this scenario, it was necessary to discuss how to change the jurisprudence, before encouraging new lawsuits. A closer dialogue between the health and legal professionals was promoted through a meeting held in 2010. The Guidelines publication emerged as a proposal to provide subsidies in cases of civil liability involving the TI.

Intervention: From 2011 to 2013 a team composed by experts in tobacco control, as healthcare professionals and lawyers, made a comprehensive review based on scientific literature of tobacco addiction, related diseases and the Framework Convention on Tobacco Control (FCTC). The initiative was made under the coordination of the Brazilian Medical Association. The document was elaborated in a proper language/format to be suitable to legal practitioners, especially magistrates. A book titled "Scientific Evidence on Smoking to Provide Subsidies to Judiciary Power" was produced and a strategic plan was built to disseminate it nationwide.

Results: The Guidelines has been disseminated in 7 Brazilian states, among magistrates, lawyers, public prosecu-

tors and public attorneys, in events in which a debate is promoted among health and law experts. As an outcome of this initiative, a paper was written by a judge questioning the existing jurisprudence, two others are promoting meetings on the issue, giving signs of a possible shift in the current scenario in the future.

Conclusion: Facing the jurisprudence favorable to the tobacco industry in cases of civil liability in Brazil, the creation of an enabling environment between Health and the Judiciary Power seems to be a good way to promote future changes. Conducting lawsuits against TI can be costly, take too long and be unfeasible for organizations working on tobacco control, usually with limits of resources and staff. This initiative can encourage the FCTC Article 19 implementation and can also be useful to other countries in similar situations.

OP-219-19 Fundamental human rights and freedom - Articles 9 and 10 of the FCTC

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Introduction: Brazil has ratified the Framework Convention on Tobacco Control (FCTC) in 2005 and enacted on its legal system, through Decree 5.658/2006, which equates the treaty to ordinary laws. Articles 9 and 10 provide that the Parties shall take legislative, executive and administrative measures to regulate the content and dissemination of information regarding tobacco products, aiming to reduce the attractiveness of such products. This paper presents an analysis of the legal arguments used by our Supreme Court to counter legal demands brought up by the tobacco industry, which questions the legitimacy of the National Health Surveillance Agency Legal claims - ANVISA, with reference to the internal processing of FCTC.

Methodology: Documentary research examined international treaties and legal mechanisms of lawsuits filed by industry regarding the prohibition of additives in tobacco products, ANVISA documents, processes that move the Supreme Court, and documents made available by the FCTC, available on the Internet from 2012 to June 2014, categorizing the arguments presented by the parties from the perspective of the right to health and the protection of human rights.

Results: The results demonstrate that ANVISA has, among other attributions, to create standards regarding the assignment of substances of public health interest, such as smoking. The Board Resolution - RDC 14/2012 ANVISA, restricted the use of adding inputs to cigarettes, aiming to reduce the smoking epidemic and its concomitant diseases, ensuring the commitment internationally assumed with the treaty in Articles 9 and 10 of the FCTC and promoting the protection of fundamental human rights.

The Brazilian government, through the judiciary, endorsed the suggestions of the tobacco industry, which is a proponent of free enterprise, individual freedom of consumers, human rights, as well as questioning the legitimacy of ANVISA to regulate health-related products. This argument ignores the fact that the state has a duty to ensure human rights through public policy and fulfill its international agreements, even taking this treaty under ordinary law.

Conclusion: Tobacco companies are appealing to the Law in Brazil for their own private and economic interests, completely disregarding fundamental human rights (health, dignity, freedom, protection of children and adolescents interests, among others), through the phenomenon known as "Judicialisation

OP-220-19 Conflicts of interest in tobacco control in India

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Background: Tobacco is a major public health issue in India with nearly 2500 deaths each day. The Government of India has introduced a tobacco control legislation called the Cigarettes and Other Tobacco Products Act (COTPA) in 2003. However, to-date the implementation of this law remains sub-optimal. One key reason is the conflicting interests within Government, with regard to tobacco. India is the second largest producer and sixth largest exporter of tobacco earning over Rs 2000 crores to the national exchequer. This research seeks to systematically enumerate such instances of conflicting interests within Government and analyze how they operate in the Indian context.

Design/Methods: To identify instances of conflicts of interest (CoI) a detailed review of various data was carried out. Media reports related to tobacco, documents generated by the tobacco industry, information retrieved from Govt agencies using the Right to Information (RTI) Act, 2005 and relevant websites were scanned. The retrieved information was analyzed through thematic coding.

Results: Conflicts of interest are rampant in tobacco control in India and can operate in different ways. The first and most problematic are the structural conflicts existing between policies/mandates of different parts of the Govt. For example, the Indian Tobacco Board (ITB) was instituted under the Union Ministry of Commerce in 1975 with a specific mandate to promote the tobacco industry, which has remained despite the recent tobacco-control commitments. Such structural conflicts can then engender many other secondary conflicts such as Union Ministers being part of ITB or public funds utilized to promote tobacco. Even in the absence of structural conflicts, Government agencies and officials have personal or professional interests in the tobacco industry despite their duty towards tobacco control. Some of these conflicts can lead to negative consequences for tobacco control with far-reaching effects such as the lax taxation of tobacco or the cross-sector leverage available to tobacco companies through diversification.

Conclusion: Varied strategies need to be adopted to manage conflicts of interest of different kinds. The mechanics of CoI extend beyond tobacco control to affect all public policy. A comprehensive law to address CoI, in addition to robust activism from civil society using legal and other tools is required to ensure greater transparency and mitigate the negative effects of CoI on public health.

OP-221-19 A major barrier to progress in tobacco control: pressures on tobacco control workers

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Tobacco Control Workers have pushes and pulls which collectively contribute to how they do their jobs. The conflict is between the needs of every worker's "de jure" boss (her/his supervisor) and the interests of the "de facto" boss (the people she/he serves in their geographic jurisdiction). There are 5 illustrative Tobacco Control worker examples in this model. Civil Servant, Civil Society Advocate, NGO Head, Health Minister & Professor. We studied the influencers of these workers to see how they influenced or pressured them for better or worse. Many of these covert or overt "lobbyists" try to influence them all, and hamper their ability to do their jobs efficiently and especially implement FCTC and MPOWER. The illustrative figure explains the essence of the model.

The abstract has universal applicability for all our Tobacco Control colleagues because our Tobacco Control roles are affected by where we are located in a public sector, private sector, or academic bureaucracy and the commitment of our boss and co-workers to our collective Tobacco Control cause.

The panelists will describe how best to address these issues in different contexts, situations, and milieus. They will show illustrative examples of what worked and what did not. Finally the authors will demonstrate how to address some of these problems in a proactive manner instead of in a reactive fashion.

The ultimate metric of whether any of our training and actions, on role delineation and values clarification was effective, will be the number, effectiveness and efficiency with which each Article of the FCTC, is implemented by that political jurisdiction or country.

OP-222-19 State-ownership of the tobacco industry: a "fundamental conflict of interest" or a "tremendous opportunity" for tobacco control?

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Background: Despite state-owned tobacco companies (SOTCs) accounting for over 40% of the world's tobacco production, the significance of state-ownership of the tobacco industry for tobacco control is not clearly understood by academics or policy-makers. This presents a number of challenges for future tobacco control policy.

Design/Methods: The main component of this project is an academic literature review of the significance of state-ownership of the tobacco industry for tobacco control. This is supplemented with an analysis of Article 5.3 of the Framework Convention on Tobacco Control (FCTC), published guidance to aid its implementation and minutes from the FCTC Conference of the Parties.

Finally, strategic proposals for the tobacco end-game were analysed to consider how this contemporary tobacco control debate may contribute to understanding the significance of state-ownership of the tobacco industry for tobacco control.

Results: Discussions of state ownership in the academic literature are both limited and characterised by disagreement and confusion as to strategic significance for tobacco control. This is exemplified by the variable interpretation of the term 'conflict of interest' and by a number of contesting policy proposals for countries with SOTCs. Comparison of the cases of China and Thailand highlights the diverse impacts of varying institutional arrangements for managing tensions between health goals and economic objectives.

In the FCTC Conference of the Parties, the management of interference by SOTCs has been afforded limited consideration. Existing published guidance on the management of interference by SOTCs lacks coherence.

Supply-side proposals for the tobacco end-game contribute to understanding a potential strategic value in state-ownership of the tobacco industry for tobacco control.

Conclusion: State-ownership does not preclude the implementation of effective tobacco control policies. Instead, the significance of state-ownership of the tobacco industry is dependent on the appropriate management of conflicting interests within government. If diverse interests can be managed appropriately, state-ownership of the tobacco industry may have broader strategic value for future tobacco control policy.

**OP-223-19 Partners, stakeholders or pariahs?
Comparing industry preferences for policy
engagement across tobacco, alcohol and
obesity**

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Objectives: The increasing prominence of non-communicable diseases (NCDs) in global health and development agendas and the ongoing reform of the World Health Organization are serving to increase linkages across tobacco, alcohol and obesity policies. Models of governance for tobacco, alcohol and processed food industries differ substantively, however, with partnership and stakeholder models widely used in relation to alcohol and food policy while the tobacco industry is excluded from involvement in health policy under Article 5.3 of the WHO Framework Convention on Tobacco Control. To assess challenges to the adoption of more coherent models of governance, we compared how tobacco, alcohol and food companies depict their role in the development and implementation of public health policy in Australia.

Design/Methods: We undertook thematic content analysis of 20 submissions from tobacco, alcohol and food companies and industry interest groups to Australia's Preventive Health Taskforce.

Main results: Although alcohol and food companies strongly reject comparisons with the tobacco industry, they appear to have learnt from its experience. Like the tobacco industry, they argue that commercial actors are legitimate stakeholders who have useful expertise to contribute to the development of public health policy. They also advocate partnerships with government to tackle health issues resulting from "problematic" consumption. These framings are used to argue against more effective and evidence-based approaches, and to portray corporations as socially responsible. Across all three industries, preferred responses include self-regulation of marketing and advertising and targeted education campaigns, with rejection of statutory regulation.

Conclusion: The increased integration of NCD agendas should be used to extend the Article 5.3 model to other industries rather than to erode the 'firewall' against tobacco industry interference. Strategic similarities between the tobacco, alcohol and processed food industries, and the vehemence with which the latter two reject comparisons with tobacco, speaks to the promise of policy coherence in addressing the commercial drivers of NCDs.

Conflicts of interest: none

THURSDAY, 19 MARCH 2015, 12:45-13:45 POSTER DISCUSSION SESSIONS

01. PATHWAYS TOWARD SMOKE-FREE GENERATIONS

PD-600-19 Smoking rationalising beliefs and its influencing factors among male smokers in China

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Background: According to Cognitive Dissonance Theory, rationalising beliefs among smokers may be an obstacle to smokers accepting health information and considering quitting attempts. However, such studies have not been conducted in China.

Design/Methods: Focus group interviews and individual interviews were conducted in three cities to collect smoking rationalising beliefs which became the basis of a rationalising beliefs scale. After a pre-test survey in the pilot study, the final questionnaire was completed by 3600 adult male smokers.

Results: The smoking rationalisation belief scale comprised 33 items, divided into different dimensions: smoking benefits beliefs, sceptic and bulletproof beliefs, social environment beliefs, harm reduction beliefs, cessation harms beliefs and "life's a risk jungle" beliefs. Older age was significantly associated with higher smoking rationalisation belief scores in 7 dimensions ($P < 0.001$). Stayed single, low personal monthly household income being allowed to smoke at home and in workplaces were positively associated with smoking rationalisation belief scores. Smoking rationalisation belief scores were significantly higher among those smokers who were heavily addicted to nicotine and had low intention to quit ($P < 0.001$). Smokers who had higher proportions of former smokers in their social environments, who were more frequently criticised for smoking by family members or friends, were more likely to have lower smoking rationalisation scores.

Conclusion: Smoking rationalising beliefs are common among Chinese smokers and are associated with a lower intention to quit. Social support around smokers and smoke-free home and workplace may have a positive impact in reducing smoking rationalising beliefs.

PD-601-19 Effect of health promotion and behaviour modification package on knowledge and attitude about tobacco use among dental patients in Delhi

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Background: According to projections by the WHO, the majority of tobacco-related deaths that can be prevented over the next 40 years will be among current tobacco users who can be persuaded to quit. This study was planned with objective to assess the effect of health promotion and behaviour modification (HPBM) package on knowledge and attitude about tobacco use among dental health care seeking patients in Delhi.

Methodology: A pilot study was conducted among dental patients with history of tobacco use in a government dental college, New Delhi, India. Initial knowledge and attitudes of 35 patients regarding tobacco use was determined using a validated questionnaire followed by a pretested health promotion and behaviour modification package designed in local language. It consisted of written, pictorial hand-outs/flipcharts and booklets, self-help material and aversion techniques via imagery scripts. It elaborated all about tobacco use, its consequences, the quitting process, withdrawal symptoms and management, benefits of quitting, etc. A minimum of 30 minutes of clinic-based one-to-one intervention was given which also included a 5 minute brief physician advice ("Five A's approach"). A post-test assessment was done immediately after this to find the difference in levels of knowledge of the tobacco users in pre-post period, percentages were analysed using McNemar test. Assessment of attitude was measured on Likert scale and paired T test was applied.

Results: The change in level of knowledge of the tobacco users before and after intervention was significant (p -value < 0.05). Questions like quitting is never possible for one's self before and after mean scores were 3.16 and 4.13 respectively, T test value was 9.8, quitting is never possible without using medicines, before and after mean scores were 2.77 and 3.77 respectively, t test value was 10.7 and quitting is possible by only changing the behaviour, before and after scores were 2.48 and 3.68 respectively, t test value was 10.1 (p -value < 0.05 was significant).

Conclusion: The study stated that such health promotion and behaviour modification packages are effective in improving knowledge and attitude of tobacco users regarding tobacco cessation. Such packages should be promoted on a larger scale in hospitals. However studies with a bigger sample size needs to be conducted to further strengthen the evidence.

PD-602-19 Economic burden of tobacco-related diseases in India

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Background: Understanding the economic burden of tobacco related diseases is crucial as it provides critical information regarding the magnitude of losses occurring to the society. Studies estimating the economic burden of tobacco-attributable diseases are limited in India. Two earlier studies though have examined both direct and indirect costs of tobacco-attributable diseases; they have become old and unable to explain the changing prevalence and population dynamics. The objective of this study is to estimate the economic burden of disease attributable to tobacco use in India and across the states using the most current and available data.

Design/Methods: For this study, three types of costs (1) direct medical cost of treating tobacco related diseases; (2) indirect morbidity costs; and (3) indirect mortality costs of premature deaths attributable to tobacco use were estimated. A prevalence-based attributable-risk approach applied to tobacco related costs by Rice et al. was used for estimating the direct medical costs and the indirect morbidity costs. To estimate the costs of premature mortality, the human capital approach was used and the expected value of lost future productivity caused by tobacco-attributable premature deaths was estimated. In this study four major diseases: cardiovascular, cancers, tuberculosis, and respiratory diseases were included.

Results: The total direct and indirect cost of diseases attributable to tobacco use was Rs 10,44,816/- million in 2011. Indirect cost constituted a major proportion of total costs contributing 84 percent. The cost of premature mortality was quite substantial, Rs. 7,30,057/- million, constituting 70 percent of the total costs. The cost by type of tobacco used shows that smoking attributable cost was much higher than smokeless tobacco. Total smoking attributable cost was Rs. 811,174.32/- million constituting 78 percent of the total costs. The male and female distribution shows that 90.75 percent of the total cost was borne by the males and 9 percent by the females. Additionally, the cost of premature mortality among females was lower compared to males.

Conclusion: The total economic burden was 12 percent more than the combined states' and central government expenditure on health care. This was 1.16 percent of GDP and was more than public expenditure and GDP ratio in 2011. The enormous economic burden could be prevented if stronger actions are taken for tobacco control by government.

PD-603-19 A cluster-randomised trial of a brief tobacco cessation intervention in low-income communities in India: quit rates after 4 weeks

B Sarkar,^{1,2} L Shahab,² M Arora,¹ J.S Ahluwalia,³ K S Reddy,¹ R West²

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Background: Tobacco use kills one million people in India every year and the country has 275 million tobacco users with more smokeless tobacco users than smokers. There is an urgent need to develop and evaluate affordable and scalable interventions to promote cessation of tobacco use in India including smokeless tobacco users. Most research has taken place in high income countries and on smokers. The objective of this study was to assess the efficacy of the intervention of a single session of quit advice and training in yogic breathing exercises versus control condition of very brief advice delivered pro-actively by outreach.

Design/Methods: It was a pragmatic, two-arm, community-based cluster randomised controlled trial of a brief pro-active tobacco cessation intervention focused on adult tobacco users in low-income communities. Each administrative unit of a low income urban slum in Delhi was considered as a cluster. Out of a total of 32 clusters, 16 were randomly allocated to intervention arm and 16 to control arm. A total of 1,214 tobacco users consented to take part. The outcome was self-reported quit rates on follow up 4 weeks after intervention. Clustering was taken into account for sample size calculation as well as for analysis by using complex samples logistic regression function in SPSS

Results: Based on follow up after 4 weeks, 16.2 percent of tobacco users quit tobacco use in the intervention arm versus 10.2 percent in control arm and the difference was statistically significant (OR 1.59 (1.31-2.25), P=0.009 F=7.68 (1, 31). F test is a variant of Rao-Scott adjusted chi-square which takes into account the clustering

Conclusion: This study provides an option of an effective, low cost, non-physician based, scalable quitting intervention for tobacco users in India and in any other country with limited access to physicians and medications. Serious consideration should be given to delivery of brief interventions via outreach in low income communities in India. Future research should assess the generalizability of these findings to different settings and attempt to find more effective variants

PD-604-19 Don't smoke tar to be a star**S Phansopkar,¹ A Mahuli,^{2,3} S Mahuli^{2,3}**

¹Public Health Dentistry, Dr D.Y. Patil Vidyapeeth's Dr D.Y. Patil Dental College, Pimpri, Pune, ²Public Health Dentistry, NIMS Dental College and Hospital, Jaipur, ³Public Health Dentistry, NIMS Dental College and Hospital, Jaipur, India.
e-mail: sushil3558r@yahoo.co.in

Background: "Tar" is defined as the nicotine-free, dry, particulate mass of tobacco smoke. The particulate fraction of cigarette smoke contains many harmful carcinogenic constituents, including metals, dioxins and some non-volatile nitrosamines. Measurement of tar is a crude measure of the relative toxic potential of tobacco combustion products. Tar levels of cigarette brands are measured by a standardised method involving a gas chromatography mass spectrometry. On the basis of these results cigarette brands have been classified as, for example, "high", "medium", and "low" yield cigarettes.

Objectives:

1. Demonstration of tar content from one cigarette with a simple experiment.
2. Display of tar content of all available cigarette brands (national / international) in Pune, Maharashtra, India.
3. Image analysis of the tar content was done to estimate the amount of tar based on hue.



Design/Methods: Empty water bottles, straws, paper napkins and various cigarette brands were used. Water is filled in the bottles and lit cigarette is placed over the hole on top of bottle. At the bottom another hole is opened and water is allowed to flow out to create suction. The paper napkin is tied to the open end and smoke is blown out and the tar is deposited in the paper napkin. Image analysis software was used to analyse the tar content of all the samples.

Results: Indian brands showed more tar content when compared to the international brands. Cigarettes without filters showed more tar content than the ones with filter.

Conclusion: This experiment demonstrates the amount of tar produced from smoking. But it is much less than actual human smoking behaviour and smokers have ways of increasing their intake, for example, by blocking ventilation holes and taking deeper or more frequent puffs.

PD-605-19 Tobacco terminators for tobacco-free society**V Yetapu,¹ RM Parmar,¹ J Mohan Gupta,¹ V Naresh Kumar¹**

¹Health and Education, VChangeU, Hyderabad, India.
e-mail: vijaybhasker@mail.com

Background: Youth are vulnerable to social and environmental influences to use tobacco, young people always been at the forefront of social change they are not just the tomorrow's future they must be the leaders of today. We have trained and created "Tobacco Terminators" with individuals who share common interest and desire to work with others towards Tobacco Free Society. The objective was to encourage youth and interested individuals who act as a catalyst in spreading tobacco awareness and providing solutions to quit the addictions among target group.

Design/Methods: We conduct training workshops to educate, support, and mobilize a generation of young leaders to raise the awareness about harms of smoking, chewing Tobacco on health, economy and environment. We certify the selected individuals as "Tobacco Terminator" after they successfully deliver a minimum of 10 sessions either in schools, colleges, universities, organisations and villages. Developed Live, 2D and 3D animated short films on Tobacco Awareness and we present them in our workshops for bigger impact with a national network of local teams, VChangeU propels young generations by deploying Tobacco Terminators to keep the youth away from tobacco for lifetime. Currently we have certified 6 Tobacco Terminators in 4 states of India.



Results: The certified members have covered 36 Schools, 14 Colleges, 3 Universities, 17 Organisations and 28 Villages within 2 years of our initiative. Awareness sessions conducted for 5856 school students, 4742 college students, 910 university students, 26790 employees in 4 states covering 18 districts of India. 3 of our Tobacco Terminators are ex-smokers and have become role models for youth to give up their tobacco addictions. They joined us during our presentation in colleges. Soon we will have 3 International Tobacco Terminators, who will be covering East Africa and USA.

Conclusion: We believe that our work can have a positive impact on the youth and in creating a better future for themselves as well as for the future generations. The

success of "Tobacco Terminator" project led to take the initiative of awarding the individuals who deliver 20 sessions with Change Maker and who deliver 40 sessions in a calendar year with Change Agent award for their contribution. As tobacco industry is interested in having young smokers by their direct and in direct marketing strategies, this initiative will deliver a greater impact in keeping the younger generation away from tobacco addictions.

PD-606-19 Daily tobacco use initiation in India: when do people start? An analysis of GATS (2009-2010)

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Background: According to the WHO, everyday 80-100,000 young people try tobacco use and a significant among these become lifelong users. Tobacco companies exploit the addictiveness of their product and ensure that they recruit minors to experiment their products. Tobacco use at younger age manifests a stronger addiction than those who initiate later. Preventing young people from experimenting, initiating and regular use is a vital strategy of tobacco control efforts. New initiatives and interventions will be shared in this symposium by the presenters. In India, one study in 1999 estimated that 5500 children initiated into tobacco use. Using more robust, nationally representative cross-sectional data we estimate the number of people who initiate into tobacco use in India.

Design/Methods: A secondary analysis of the disaggregated publically accessible data (the Global Adult Tobacco Survey, India 2009-10) was analysed for the adult population age 15 years and above.

Results: Our analysis find that 28% of daily smokers started smoking 11-20 years ago while 59% aged 15-29 years started smoking in last 5 years preceding the survey. 57% daily smokeless tobacco user started using smokeless tobacco in last 10 years and 75% aged 15-24 years started in last 5 years. From 2005-2009, in absolute terms 105961767 smokers and 245036586 smokeless users initiated into daily tobacco use.

Conclusion: Our estimates suggest that many more minors and youth initiate into tobacco use in India than previously estimated. This has serious policy and programme implications especially in terms of greater focus required on taxation, you focused strategies that reduce access and eliminating tobacco advertising, promotion and sales in India.

PD-607-19 Assessment of point of sale tobacco advertisements, promotion and sponsorship strategies in Bangalore City: a cross-sectional study

J Dsilva,¹ P Poojary,¹ J P,¹ K B Eshwarappa,¹ R J Singh^{1,2}

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Background: The Tobacco industry channels the vast majority of its marketing expenditures to the point of sale (PoS), making PoS advertising restrictions a critical strategy to subvert industry attempts to attract new, current and recently quit tobacco users. Youth experimenting with tobacco are more likely to have reported seeing tobacco advertisements in points of sale. The Cigarettes and other Tobacco Products (Prohibition of Advertisement and regulation of Trade and Commerce, Production, Supply and Distribution) Act 2003 is a social legislation in India to control point of sale Tobacco Advertisement, Promotion and Sponsorship. The objectives of this study were to assess the Tobacco Advertisement, Promotion and Sponsorship strategies in Bangalore City and to identify & assess the violations of TAPS norms in India.

Design/Methods: This Cross-sectional Study was done in Bangalore City of Karnataka State, India. The study investigators made a direct observation of points of sale in the City to assess the Tobacco Advertisement, Promotion and Sponsorship strategies and assessment of the violations of TAPS norms in India by using a structured, pre-tested checklist based assessment method.

Results: Out of the total 433 points of sale observed for tobacco advertisements, 120 (27.71%) PoS had displayed any kind of advertisements. Among them, 75 (17.32%) of the PoS had displayed advertisement boards, posters in 38 (8.78%), banners in 8 (1.85%), stickers in 9 (2.07%), LCD display in 3 (0.69%), danglers in 13 (3.0%), promotional gifts/offers in 15 (3.46%) and product showcases in 56 (12.93%) of the Points of Sale. Of the 75 PoS advertisement boards, 48 (64.0%) advertisement boards were backlit and the size of the boards exceeded 60x45 cm in 51 (68.0%) of the advertisement boards.

Conclusion: Nearly a quarter of the Points of Sale displayed advertisements of any type with most of the boards being backlit and exceeding the specified size. This suggests that stringent measures need to be taken by all the key stakeholders in order to contain the interference of the Tobacco Industry by promotion and advertising tobacco products.

PD-608-19 A school-based smoking prevention programme, 6-month post-intervention effect evaluation

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Objective: To examine the efficacy of smoking prevention programme on cognitions and weekly smoking behaviour in adolescents aged 13-15 years old.

Method: A randomised control trial was used. The experimental group (n= 698) received the intervention of five lessons; the control group (n= 683) received no smoking prevention information. Post-test data of baseline was collected 6 months after baseline to assess programme effects among baseline non-smokers.

Results: At post-test the intervention group reported a significantly more negative attitude than the control group (MT2-T1 = - 0.14; F = 9.83; p > .01), higher self-efficacy (MT2-T1 = 0.15; F = 16.23; p > .01), more action plan to remain non-smokers (MT2-T1 = 0.16; F = 9.30; p > .01) and less intention to smoke in the future (MT2-T1 = - 0.34; F = 29.46; p > .01). Smoking onset in the experimental group was only 3.2%, while in the control group it was 15.2%.

Conclusion: The prevention programme influenced both cognitions and smoking behaviour. Yet, future evaluation is needed to judge the efficacy of the programme for a longer period as well as the conditions favouring implementation of the programme at a national scale.

PD-609-19 Nutritional status for children under five in tobacco and non-tobacco growing families in Kiryandongo District, Uganda

R Maiteki,^{1,2} D Kadobera,^{3,4} A Bagonza,^{1,5} K Namusisi,^{6,7} J Bagonza,¹ F Tushemerirwe,¹ F Mubiru,⁸ F Ocen¹

¹School of Public Health, Makerere University, Kampala, ²School of Public Health/Dentistry, Makerere University/ Mbale Regional Referral Hospital, Kampala, ³CDC, Ministry of Health/CDC, Kampala, ⁴School of Public Health, Makerere University, Kampala, ⁵School of Public Health/ Pincer, Makerere University, Kampala, ⁶Monitoring / Evaluation, Centre for Tobacco Control in Africa(CTCA), Kampala, ⁷School of Public Health, Makerere University, Kampala, ⁸Biostatistics, Makerere University, Kampala, Uganda. e-mail: rmaiteki@gmail.com

Background: In Kiryandongo district, there has been an observed parallel increment of households engaging in tobacco growing activities and malnutrition and its complications in children. This study was set to determine the

nutrition status and associated factors, among children under five years in tobacco growing and non-tobacco growing households in Kiryandongo district.

Design/Methods: Across sectional study that employed a quantitative method was conducted in Kiryandongo District; where 492 children aged 6 to 59 months were selected from 492 households using multi-stage cluster and proportion to sample size sampling techniques. The analysis was done using descriptive statistics, Pearson chi-square and a logistic regression model.

Results: In tobacco growing households, children had GAM, 10.3 CI (6.5-14.1), MAM, 6.2 CI (3.1-9.2) SAM, 4.1 CI (1.6-6.6). 38.3% of children from tobacco growing households were stunted compared to 27.6% and 33%, of non-tobacco growing households and the national stunting figure respectively. 23 % were underweight and 11% were wasted. 60.8% and 62% of tobacco growing households respectively out of the 492 households scored poor household food security and poor wealth index (Proxy measure of socio-economic status). At the multivariate analysis, tobacco growing (OR1.39 95% CI 1.11-2.14 P=0.031), secondary education level of household head(OR 0.46 95%CI 0.25-0.83 P=0.01), common childhood illness (OR 0.58 95%CI 0.34-0.98 P=0.044), gender of the child(OR 0.59 95%CI 0.40-0.87 p=0.008) and age of the household head (35-44years) (0.59 95%CI 0.36-0.95 p=0.03) are significantly associated with stunting (p<0.05). It was also found out that dietary intake (OR 0.33 CI 0.16-0.66 P=0.002), breast feeding (OR 4.53 95%CI 1.29-16.0 p=0.019), food resource availability (OR 14.5 95%CI 1.95-107.73 P=0.009) significantly determine underweight (p<0.05).

	Non-Tobacco growing household	Tobacco growing household
All	27.6	38.3
Boys	34.2	40.6
Girls	21.3	35.5

Key

Acceptable	Poor
Critical	Serious

According to the WHO, Stunting is acceptable (less than 20%) / poor (20%-30%) / serious (30%-40%) / critical (greater than 40%);

Conclusion: There is need to encourage the public to diversify production resources. Government should put policy and control measure on children exposure and involvement in tobacco activities. Mothers should be enlightened about the importance of breast feeding and dietary intake to reduce the high prevalence of stunting and underweight among children.

PD-610-19 Children learning about second-hand smoking (CLASS): a pilot cluster-randomised controlled trial

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²Health Sciences, University of York, York, ³Public Health, Leeds City Council, Leeds, United Kingdom.

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Background: Exposure to second-hand smoke (SHS) is harmful to children's health and increases their risk of acquiring lower respiratory tract and middle ear infections, significant reduction in lung functions, invasive meningococcal disease, and new cases, recurrent episodes, and increased severity of asthma. Since the introduction of comprehensive smoking bans in enclosed public and work places in many countries, homes and cars are the most likely places for children to be exposed to SHS. In Bangladesh, exposure to SHS is also a serious threat to children's health. We developed a school-based intervention to encourage children to negotiate smoking restrictions with adults in their households. In this abstract, we describe the findings of a pilot trial of the above intervention in Bangladesh, which examines whether this approach has the potential to increase smoking restrictions at home.

Design/Methods: A pilot cluster randomised controlled trial of the smoke-free intervention (SFI) was conducted in 24 schools in Mirpur, an urban area within Dhaka.

Using simple stratified randomisation, schools were randomly allocated to: Arm A (SFI only), B (SFI plus reminders) and Arm C (the control group). Only year-five children (10-12 years old) in the consenting schools participated in the study. Outcomes including 'smoking restrictions at home' and its 'social visibility' i.e. not smoking in front of children at home, were assessed through questionnaire-based children's surveys at baseline and at weeks 1 (post intervention in Arms A and B), 12 (post intervention in Arm B), 27 and 52.

Results: At year 1, the odds of observing 'smoking restrictions at home' in Arm A were 4.8 (95% CI: 2.6- 9.0) - an increase from 57.7% (128/222) to 84.6% (148/175) and in Arm B were 3.9 (95% CI: 2.0- 7.5) - an increase from 72.1% (189/262) to 89.2% (182/204), times more likely compared to Arm C when controlled for baseline levels. We observed an increasing trend (3.8; p-value <0.0001) in homes becoming smoke-free with increasing intensity of the intervention (Control < Arm A < Arm B). At the same time, a decreasing trend (-5.13; p-value <0.0001) was also observed in social visibility at homes.

Conclusion: This pilot informs the methods to conduct a future definitive trial to evaluate the effectiveness of SFI. Its findings also suggest that SFI has the potential to make children aware of the harms of second-hand smoke and motivate them to negotiate smoke-free environment in their households.

02. PROTECTING HEALTH POLICIES FROM INDUSTRY INTERFERENCE

PD-611-19 Challenging tobacco industries' innovative tactics: Classmate Spell Bee 2014

S C Alexander.¹

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Background and challenges to implementation: ITC Classmate launched season 6 of 'Classmate Spell Bee 2014' in the beginning of 2014. Tamilnadu People's Forum for Tobacco Control (TNPFTC) was successful in Lobbying with the Tamilnadu School Education Department to ban the participation of Educational Institutions in the Competitions. The state level ban ensured that students from different educational institutions were prevented from being part of the competitions.

Intervention or response: The method used to challenge Classmate Spell Bee Competition was to use the Government Order 242 and Lobby with the School Education Department to bring out a ban on the competitions. The 242 Government Order issued by School Education Department restricts educational institution association with any tobacco company. The forum demanded that

Educational Institutions must not participate in the competitions through its students or its faculties.

Results and lessons learnt: On 25 Feb, 2014; The Tamil Nadu School Education Department "banned all the Educational Institutions from participating in the Tobacco promotions events by Indian Tobacco Company Ltd through organizing "Classmate Spell Bee" competitions". On 30 May, 2014 the Central Board of Secondary Education (CBSE) brought out a circular which "strongly advised that no school affiliated to CBSE is permitted to allow its students to participate in the events sponsored by any firm or a subsidiary of a firm which promotes the use of tobacco in any form." The School Education Department's ban on Classmate Spell Bee Competition encouraged other educational authorities to enforce restrictions on Tobacco Industries from associating with educational institutions.

Lessons learnt: Tobacco Industries use different strategies to create their impact among their potential future consumers i.e., the children. Using an existing Government Order that restricts Tobacco Industries from being associated with Educational Institutions helped to bring out the ban in an expedite manner.

Conclusions and key recommendations: At the state level, the challenge on the Competitions was successful.

In Henceforth, the combat actions must be scaled up to the National Level. As a step towards this, the civil society must build a National Movement and stop the Classmate Spell Bee competition 2015 at the beginning itself.

 School Education Department,
Secretariat, Chennai – 9.

Letter No.5399/SE.5(1)/2014- 1, dated 25.02.2014

From
Thiru. S.Vedarathinam, M.A.,
Deputy Secretary to Government.

To
The Director of School Education/
The Director of Elementary Education/
The Director of Matriculation Schools
Chennai-6 (w.e)

Sir,

Sub: School Education – Banning all the Educational Institutions from participating in the Tobacco promotions events –Orders– Issued- Violation of G.O.(Ms.) No.242, School Education, dated 26.09.2012 by Indian Tobacco Company Ltd., through organizing "Classmate Spell Bee" competition – regarding.

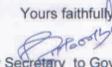
Ref: 1. G.O.(Ms.) No.242, School Education, dated 26.09.2012.
2. From the State Convener, Tamilnadu People's Forum for Tobacco Control, Chennai – Letter dated 11.02.2014. (copy enclosed)

I am directed to invite attention to the G.O.cited, wherein it has been ordered that "No educational institutions is permitted to participate through its students or its faculties in the events /Sponsorship/ gift/ prizes / scholarship or any other activities that promote any tobacco company either through the use of (tobacco) company or brand name, emblem, trademark, logo or trade insignia or any other distinctive features is connected with its tobacco or non-tobacco products or services in such a way that the tobacco products and the non-tobacco products or service are likely to be associated" (copy enclosed).

2) The State Convener, Tamilnadu People's Forum for Tobacco Control has now reported that Indian Tobacco Company Ltd., was violated the above Government Orders through organising "Classmate Spell Bee" Competition among the school going children.

3) In this connection, I am directed to request you to communicate the above said Government Order to all Educational Institutions under their control and instruct them to adhere the Government Order strictly.

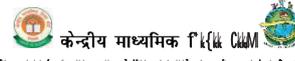
4) An action taken report may be sent to Government.

Yours faithfully

for Deputy Secretary to Government.

Copy to : The State Convener,
Tamilnadu People's Forum for Tobacco Control
Flat No.8, Starling Apartments, 39, Akbarabad 2nd Street,
Kodambakkam, Chennai-24

Email: director@cbse.gov.in
Website: www.cbseacademic.nic.in

Tel: 011-23212603
Tele Fax: 011-23234324



केन्द्रीय माध्यमिक शिक्षक बोर्ड
(केंद्रीय माध्यमिक शिक्षक बोर्ड) (के.ए.सी.बी.ई.)
शिक्षा सदन, 17, संस्थान क्षेत्र, रौस रोड, नई दिल्ली-110002
CENTRAL BOARD OF SECONDARY EDUCATION
(An Autonomous Organization under the Union Ministry of Human Resource Development, Govt. of India)
"Shiksha Sadan", 17, Institutional Area, Rouse Avenue, New Delhi-110002.

CBSE/Dir(Arti)/2014

Circular No. Acad.-14/2014
Dated: May 30, 2014

All Heads of Schools
affiliated to CBSE

Subject: Sensitization for tackling Tobacco Epidemic -regarding

Dear Principal,

In continuation to our circular No. 09/2006 dated 31.5.2006; Cir. No. 29/2007 dated 20.6.2007; Cir. No. 27/2008 dated 24.06.2008; Cir. No. 33/2008 dated 01.09.2008; Cir. No. 49/2008 dated 6.11.2008; Cir. No. 18/2009 dated 19.01.2009; Cir.No.04/2012 dated 24.04.2012 and Cir. No. 13/2014 dated 08.05.2014 and with reference to Health Manuals (4 volumes), Life Skills Manuals and Environment Education Manuals and Adolescent Education Programme Manuals, the Board wishes to highlight the fact that tobacco consumption remains a serious health issue in our society and among all the steps that could be taken to prevent the consumption of tobacco the most productive is perhaps to prevent young persons from acquiring the habit of consumption of tobacco.

There are powerful social, environmental, advertising, and marketing factors responsible for initiating and sustaining tobacco use among youth. Nevertheless, the Board still considers that this epidemic can be prevented by a sustained multi-pronged campaign involving community at large. In this context, the role of schools affiliated to CBSE assumes paramount significance. They need to ensure that there continues to be the widest possible exposure to harmful effects of tobacco and anti-tobacco campaigns in schools by involving students in myriad activities under Health and Wellness Club, Eco Clubs and various co-curricular activities as part of their annual calendar.

It has come to the notice of the Board that some tobacco promoting firms are finding some innovative ways to be involved with the school children. It is, therefore, strongly advised that no school affiliated to CBSE is permitted to allow its students to participate in the events sponsored by any firm or a subsidiary of a firm which promotes the use of tobacco in any form. Schools/Students should not accept any prize or scholarship instituted by a tobacco promoting firm. It is recommended that schools should not allow any institution using brand name, emblem, trademark, logo or trade insignia or any other distinct feature directly/indirectly connected with tobacco products to be associated with students.

As suggested in Boards' Circular no 04/2012, it is worth reminding that

- Schools may display Posters with information about the harmful effects of tobacco at prominent places in the school. Students should be encouraged to make their own posters on tobacco control themes.
- A copy of the Cigarette and other Tobacco Products Act (COTPA) 2003 needs to be available with the Principal/ Head of School/ Institution. (It can be downloaded from the website of the Ministry of Health & Family Welfare – www.mohfw.nic.in)

The Board has also advised schools to organize various competitions to create awareness against tobacco. Schools are once again directed to comply with and organize events to spread the message of protection from tobacco and its prevention Peer Educators and Counsellors of schools may be involved in these activities in mission mode.

Looking forward to your cooperation,

With best compliments and regards,

Yours sincerely,

Sd/-
(Dr. Sadhana Parashar)
Director (Academics, Research, Training and Innovation)

Distribution:

Copy to the respective Heads of Directorates, Organizations and Institutions as indicated below with a request to disseminate the information to all the schools under their jurisdiction:

- The Commissioner, Kendriya Vidyalaya Sangathan, 18-Institutional Area, Shaheed Jeet Singh Marg, New Delhi-110016.
- The Commissioner, Navodaya Vidyalaya Samiti, B-15, Sector-62, Institutional Area, Noida-201309.
- The Director of Education, Directorate of Education, Govt. of NCT of Delhi, Old Secretariat, Delhi-110 054.
- The Director of Public Instructions (Schools), Union Territory Secretariat, Sector 9, Chandigarh-160 017.
- The Director of Education, Govt. of Sikkim, Gangtok, Sikkim – 737101.
- The Director of School Education, Govt. of Arunachal Pradesh, Itanagar –791 111
- The Director of Education, Govt. of A&N Islands, Port Blair - 744101.
- The Director of Education, S.I.E., CBSE Cell, VIP Road, Jungle Ghat, P.O.744103, A&N Islands
- The Secretary, Central Tibetan School Administration, ESS Plaza, Community Centre, Sector 3 Rohini, Delhi-110085.
- All Regional Directors/ Regional Offices of CBSE with the request to send this circular to all the Heads of the affiliated schools of the Board in their respective regions.
- All Associate Professor & Additional Directors/ Advisors/ Consultants
- All Additional Director/ Joint Director/ Deputy Director/ Assistant Director, Vocational Cell, CBSE
- The Research Officer (Technology) with the request to put this circular on the CBSE website.
- All Assistant Professor & Joint Directors, CBSE
- All Assistant Professor & Deputy Directors, CBSE
- The Deputy Director (Examination & Reforms), CBSE
- The Assistant Librarian, CBSE
- The Public Relations Officer, CBSE
- The Hindi Officer, CBSE
- PS to Chairman, CBSE
- PS to Secretary, CBSE
- SO to Controller of Examinations, CBSE
- PS to Director(Special Exams and C.T.E.T), CBSE
- PA to Professor & Director (Academics, Research, Training & Innovation), CBSE
- PA to Director (Information Technology)
- PA to Director (EDUSAT)

Director (Academics, Research, Training and Innovation)

PD-612-19 Second-hand smoke exposure among adolescents in West Africa

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Background: Of 7,000 chemicals in second-hand tobacco smoke (SHS), 250 are toxins and over 50 are carcinogens. Although SHS exposure kills 600,000 worldwide annually, only 16% of world's population is covered with comprehensive smoke-free policies. Indeed, over 60% of those exposed to SHS worldwide are children and adolescents. There, we aimed to estimate magnitude and identify determinants of SHS exposure among adolescents in West Africa.

Design/Methods: We utilised Global Youth Tobacco Survey from 9 countries (Cape Verde, Cote d'Ivoire, Ghana, Guinea, Mali, Mauritania, Niger, Senegal and Togo) involving 17,353 school-going adolescents. The outcomes were SHS exposure inside and outside home. Explanatory variables were age, gender, parental and peer smoking, knowledge about harmful effects of SHS exposure, exposure to anti-smoking media messages, and receptivity of anti-smoking education in schools. Country-specific weighted logistic regression models were conducted to identify factors associated with SHS exposure among adolescents in West Africa. Average marginal effects (AME) converted into percentages were reported.

Results: Prevalence of SHS exposure inside home ranged from 13.9% in Cape Verde to 48.5% in Mali, and outside home ranged from 27.4% in Cape Verde to 81.4% in Mali. Parental and peer smoking were significantly associated with increased odds of SHS exposure inside ($p \leq 0.001$) and outside ($p \leq 0.01$) home. Compared to adolescents whose parents or peers did not smoke, the excess probability of SHS exposure for those with smoking parents or peers who smoked inside home ranged from 24% in Cape Verde to 39% in Togo and outside home ranged from 9% in Senegal to 26% in Mauritania.

Conclusion: With substantial number of adolescents exposed to SHS, parents and youth should be educated about health/psychosocial implications of SHS exposure, and for governments to adopt comprehensive smoke-free policies consistent with the Article 8 of the WHO Framework Convention on Tobacco Control to protect the vulnerable population for such exposure.

PD-613-19 Initiative to protect policies from tobacco industry interference in Bangladesh

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Background: Bangladesh has taken several notable policy initiatives to reduce tobacco use in last few years including establishment of tobacco tax cell, amendment of the TC law and continuous effort for implementing the Tobacco Control (TC) law etc. On the contrary, Tobacco Industries (TIs) are also taking different tricky steps to market their products especially targeted for the policy makers. As instance, just before the amended TC law was placed in the national parliament, TIs offered tree plantation to the parliament secretariat. They liaised with finance ministry and provide deceptive information about the proposed law and have been succeeded to change few provisions of the law. Just before the budget session TIs met MPs, Chairman-National Board of Revenue and Finance Minister and opposed to increase Tax on Tobacco Products. They also met the Secretary, M/O Law to make changes in the TC Rules and to delay the process for passing the rules.

Design/Methods: Tobacco Control Advocate raises voice against TIs activities. They met most of the influential Ministers, MPs and decision Makers and shared the actual status of the proposed amendment, benefits of raise in tobacco tax etc. Other strong campaigns were organized through street campaigns, letter, post card, and social and main stream media. Series of seminars/ workshops were organized to motivate and aware people.

Results: Since TC law (amendment) committee was formed in 2009, it was a long battle. But through our continuous movements and interventions, Bangladesh Government has passed the amended TC law. Pictorial health warning, Ban on direct and indirect TAPS, restricted CSR and sales to and by minors has become possible in the proposed law. Tobacco Tax Cell has been established in NBR, 1% health surcharge has also been imposed on tobacco products.

Conclusion: TC rules are stuck with M/O Law, 1% health surcharge has been imposed but distributions of this resource for Tobacco control is still a huge challenge. However, this battle teaches us to plan united, so that the people's power can resist industries influence.

PD-614-19 Nepal's struggle in countering tobacco industry interference

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Background: Tobacco epidemic in Nepal is attributable to start of large scale commercial production and import of cigarettes and smokeless forms. Following decades of campaign by academia and civil society, government initiated tobacco control efforts. This was augmented with

recent ratification of Framework Convention on Tobacco Control (FCTC) and promulgation of tobacco control act in 2010. This study was conducted to explore how Nepal progresses towards countering tobacco industry interference.

Design/Methods: Based on earlier works we used qualitative techniques – guided conversation and key informant interviews among policy makers, programme managers, academics, and civil society representatives; documentary review of policies, plans and programmes implemented by the Ministry of Health and Population over the past two decades; and analysis of published and unpublished works related to tobacco epidemic and its control attempts.

Results: Tobacco use existed in very limited forms and scale until domestic production, distribution and promotion of cigarettes started in 1961. Within two decades tobacco use manifested as a major public health problem. In early 1990s, ban on tobacco advertisement through electronic media was implemented. A corresponding rise in advertisement through print media, and more recently promotion under corporate social responsibility activities was observed. Co-ordinated activities for the ratification of FCTC and promulgation of tobacco control act were interrupted by tobacco industry over the period between 2003 and 2010. The industry and its front groups filed legal cases against the government, which were dismissed by the Supreme Court after 26 months in January 2014. At present, tobacco control enforcement activities such as pictorial health warnings (75%) on tobacco packets' surface and prohibition of smoking in public places are scaling up from the capital city to peripheral areas. Effective implementation of tax increment on tobacco products as per the FCTC and control of cross-border illicit trade has encountered industry interference by influencing government's decision processes in economic and trade sectors.

Conclusion: Nepal's tobacco control programme has achieved impressive results in terms of overcoming legal impediments. Full implementation of FCTC by overcoming tobacco industry interference remains a major challenge ahead, warranting effective co-ordination among state and non-state actors.

PD-615-19 Litigation as tobacco control tool in Nigeria

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Background: Dying customers have forced Big Tobacco to look in the direction of the young people.

Design/Methods: Using litigation as a tobacco control tool in Nigeria is a recent phenomenon. The first suit against a major tobacco company was filed by the former Attorney General of Lagos State, Prof. Yemi Oshinbajo on April 30, 2007 on behalf of the Lagos State Government and an environmental rights group, Environmental Rights Action/Friends of the Earth Nigeria. The suit was against five tobacco companies; BAT Nigeria Limited, International Tobacco Ltd, BAT Plc, BAT (investment) Ltd

and Phillip Morris International. The suits were the first of its kind in 5 states in Western Africa in 2007; Lagos, Oyo, Gombe, Federal Government Ogun, Ekiti. Ondo and Akwa Ibom have followed suit. Sometimes in 2006, Lagos State Government received the reports of a survey conducted in 11 state-owned hospitals in the metropolis. Findings showed that everyday 2 people died from a tobacco-related disease; the 2007 statistics have shown these figures increase by about 300%. Also in 2006 alone, there were a total of 9527 cases of tobacco related-diseases recorded in these hospitals.

Results: The defendants have hired some of the best lawyers to try and prevent the suits from going to trial. The lawyers have raised technical objections which have in no way diminished the merits of the cases in order to frustrate the suits. Recently, PMI also tried to introduce a non-party into the suit in order to stall for time.

Conclusion: Nigerian judges have seen through the ploy of the industry. Judges in Oyo & Kano states have thrown out PMI's application for a change of name, calling it irresponsible and acting in bad faith with the view to delay legal processes. The claimants have also received favourable rulings in motions pending on service. Currently, all matters have gone to the Appeal Courts and the Plaintiffs have succeeded against the defendants. The Ogun State's appeal has proceeded to the Supreme Court.

PD-616-19: A Review of tobacco industry interference in the Philippines

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Background: While the tobacco industry has been utilising similar strategies around the world to interfere in tobacco control, there has been little effort to measure the response of the government or its ability to respond to these strategies. The purpose of the research is to define the measures and elements that contribute to the ability of the tobacco industry to interfere with policymaking in the Philippines through the Tobacco Industry Interference Index. The tool was developed by the Southeast Asia Tobacco Control Alliance (SEATCA). It is composed of 20 questions, designed based on specific situations most applicable to the Southeast Asian nation's context that the Article 5.3 Guidelines seeks to address.

Design/Methods: Data gathering, consultations and interviews with resource persons from the government and civil society organisations in the Philippines to review the relevant evidence to support the answers and identify the appropriate rating that will be given per question. The period covered for this research is from 2009 to 2013.

Results: Strong interference of the tobacco industry is present in all branches of the government. The Philippines received a high rating in the level of tobacco industry interference because the government is allowing the participation of the tobacco industry in policy development has participated in CSR activities of the tobacco industry and unnecessarily interacts with the tobacco industry. On

a positive note, the Philippines has instituted preventive measures, such as policies that implement Article 5.3 and has been conducting activities and trainings that aim to raise awareness and prevent tobacco industry interference.

Conclusion: The Philippines has become a trailblazer in its tenacious effort to implement Article 5.3 despite the odds stacked against it. Because we are facing strong opposition from the industry, it becomes more important to implement stringent rules. Continuing to raise awareness and implement Article 5.3 policies help in the denormali-

sation of tobacco industry interference. Lack of transparency in dealings with the tobacco industry remains a problem. Thus, the provision requiring disclosure of all interactions with the tobacco industry should be strictly enforced. Equally important is monitoring the responses of the tobacco industry to the implementation of the Article 5.3 policies so that the public health community can effectively address and implement other preventive measures.

TOBACCO INDUSTRY INTERFERENCE INDEX						
Unless otherwise provided, the scores correspond to the following: 0 Not applicable: 1 Never 2 Rarely (less than 10% of the time) 3 Sometimes (10-40% of the time) 4 Frequently (40-75% of the time) 5 Always (75-100% of the time)						
I. Tobacco Industry Participation in Policy Development						
Indicators	0	1	2	3	4	5
1. The government accepts, supports or endorses any offer for assistance by or in collaboration with the tobacco industry in setting or implementing public health policies in relation to tobacco control ¹						X
*1 no incident 2 receives/ accepts/ acknowledges 3 supports or endorses 4 uses assistance/ repeats arguments 5 allows such assistance or collaboration to influence decisions on policy						
2. The government accepts, supports or endorses <u>policies or legislation drafted</u> by or in collaboration with the tobacco industry.						X
*1 no incident 2 receives/ accepts/ acknowledges 3 supports or endorses 4 uses assistance/ repeats arguments during debates 5 allows such draft to influence final policy						
3. The government allows/invites the tobacco industry to sit in government interagency/ multi-sectoral committee/ advisory group body that sets public health policy.						X
4. The government nominates or allows representatives from the tobacco industry (including State-owned) in the delegation to the COP or other subsidiary bodies or accepts their sponsorship for delegates. (i.e. COP 4 & 5, INB 4 5, WG).			X			
II. Industry-related CSR Activities						
Indicators	0	1	2	3	4	5
5. The government (its agencies and officials) receives contributions ² (monetary or otherwise) from the tobacco industry (including so-called CSR contributions).					X	
6. The government agencies or its officials endorses, supports, forms partnerships with or participates in so-called CSR activities organized by the tobacco industry.						
*1 acknowledges 2 endorses or supports 3, participates (through officials) 4 forms partnership 5. Supports/ partners with AND participates						
III. Benefits to the Tobacco Industry						
Indicators	0	1	2	3	4	5
7. The government accommodates requests from the tobacco industry for a longer time frame for implementation or postponement of tobacco control law. (e.g. 180 days is common for PHW, Tax increase can be implemented within 1 month).					X	
8. The government gives privileges, incentives, exemptions or benefits to the tobacco industry (e.g. reduced income tax rates or property tax exemption, duty free imports of machineries and capital assets, subsidies for tobacco production, delayed implementation of excise tax increase, other incentives granted to foreign investors, duty free tobacco distribution in government owned facility or shop).			X			
IV. Forms of Unnecessary Interaction						
Indicators	0	1	2	3	4	5
9. Top level government officials meet with/ foster relations with the tobacco companies such as attending social functions and other events sponsored or organized by the tobacco companies or those furthering its interests.						X
1 Never 5 Yes (even if only 1 incident in the past 2 years)						
10. The government accepts assistance/ offers of assistance from the tobacco industry on enforcement such as conducting raids on tobacco smuggling or enforcing smoke free policies. (Including monetary contributions for these activities)						X
1 Never 5 Yes (even if only 1 incident in the past 2 years)						

11. The government accepts, supports, endorses, or enters into partnerships or agreements with the tobacco industry. 1 Never 5 Yes (even if only 1 incident in the past two years)						X
V. Transparency						
Indicators	0	1	2	3	4	5
12. The government does not publicly disclose meetings/ interactions with the tobacco industry in cases where such interactions are strictly necessary for regulation.	X					
VI. Conflict of Interest						
Indicators	0	1	2	3	4	5
13. The government does not prohibit contributions from the tobacco industry or any entity working to further its interests to political parties, candidates, or campaigns or to require full disclosure of such contributions 1 Never 5 Yes						X
14. Retired senior government officials form part of the tobacco industry (former Prime Minister, Minister, Attorney General)				X		
15. <u>Current government officials</u> and relatives hold positions in the tobacco business including consultancy positions						X
0. Technical officials necessary to manage SOE 1 Low to mid level public health officials 2. Non-tobacco control high-level public health official 3. Tobacco control related official (agriculture, customs) 4 tobacco control official in health ministry 5.any high level official (Minister, Prime Minister)						
VII. Preventive Measures						
INDICATORS	0	1	2	3	4	5
Preventive Measures (1. Yes 2. Yes but partial only 3. Policy/ Program being developed 4. Committed to develop such a policy/ program 5. None)						
16. The government has put in place a procedure for disclosing the records of the interaction (such as agenda, attendees, minutes and outcome) with the tobacco industry and its representatives.		X				
17. The government has formulated, adopted or implemented a code of conduct for public officials, prescribing the standards with which they should comply in their dealings with the tobacco industry.		X				
18. The government requires the tobacco industry to periodically submit information on tobacco production, manufacture, market share, marketing expenditures, revenues and any other activity, including lobbying, philanthropy, political contributions and all other activities.			X			
19. The government has a program / system/ plan to consistently ³ raise awareness within its departments on policies relating to FCTC Article 5.3 Guidelines.		X				
20. The government has put in place a policy to disallow the acceptance of all forms of contributions/ gifts from the tobacco industry (monetary or otherwise) including offers of assistance, policy drafts, or study visit invitations given or offered to the government, its agencies, officials and their relatives.		X				

¹ "Offer of assistance" may include draft legislation, technical input, recommendations, and oversees study tour

² Political, social financial, educations, community, technical expertise or training to counter smuggling or any other forms of contributions

³ For purposes of this question, "consistently" means: a. Each time the FCTC is discussed, 5.3 is explained. AND b. Whenever the opportunity arises such when the tobacco industry intervention is discovered or reported.

PD-617-19 Challenges to FDA regulation of tobacco in the Philippines: a case study on the Graphic Health Warning Law of 2014

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Background: The Philippines is set to enact its Graphic Health Warning (GHW) Law in July 2014. The original versions of the bills from the Senate and the House of Representatives expressly identified the Food and Drug Administration (FDA) as the key implementing agency along with the Department of Health (DOH). However, as a result of intense pressure from law-makers allied with the tobacco industry, the final version of the bill approved by Congress is silent on the role of the FDA, yet gave critical roles to the Department of Trade and Industry and the Inter-Agency Committee – Tobacco (IACT), which includes a representative of the tobacco industry as member. This gap further threatens the role of the FDA in tobacco regulation, as its regulatory power has already been legally assailed by the tobacco industry since 2011 in a case pending in the Supreme Court and has resulted in tobacco continually evading FDA regulation.

Intervention: Research and analysis in line with direct technical assistance rendered to the DOH, FDA, and legislators during the formulation of the law.

Results and lessons learnt: The role of the FDA in the enforcement of the GHW Law is proper and indispensable in light of its mandate, infrastructure, technical expertise and experience in regulating products that have an impact on health. The FDA has the jurisdiction to render decisions and impose sanctions, including seizure, destruction, cancellation of authorisations, fines, closure, etc. The role of the FDA becomes more apparent in light of the health objectives of the GHW Law and especially when contrasted with the limited mandate and capacity of other agencies tapped by the law to implement.

Conclusions and key recommendations: The Committee designated by the GHW law to promulgate its implementing rules and regulations should address the gaps in the law and clarify the role of the FDA in enforcement. The government should also strictly construe the limits of the IACT in exercising its mandate under the GHW Law to monitor compliance and institute complaints for violations, in light of the IACT's limited powers and structure, and its continued membership of the tobacco industry in view of the Philippines' obligations under Article 5.3 of the FCTC. The DOH, as one of the lead implementing agencies of the GHW Law and the principal agency to which the FDA is attached, should also protect and engage the FDA in all stages of the formulation of the implementing rules and actual implementation.

PD-618-19 Article 5.3 issues in the Philippines' Graphic Health Warning Law of 2014

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Background and challenges to implementation: The Philippines is set to enact its Graphic Health Warning (GHW) Law within July 2014. As a result of intense pressure from lawmakers allied with the tobacco industry, the version of the bill that was approved by Congress has features that contravene the Philippines' obligations under Article 5.3 of the WHO FCTC.

Intervention or response: Research and analysis in line with direct technical assistance rendered to the DOH, FDA, and the principal authors of the GHW Law during the formulation of the GHW Law.

Results and lessons learnt: The original versions of the bills from the Senate and the House of Representatives expressly identified the Department of Health (DOH) and the Food and Drug Administration (FDA) as the key implementing agencies of the GHW Law. However, the version of the bill that was approved by Congress omitted the FDA but identified a number of other government agencies to implement the GHW Law. The Inter-Agency Committee – Tobacco (IACT) is designated to monitor compliance and institute the appropriate actions against violations. The designation of the IACT runs counter to the Philippines' Article 5.3 obligations because the IACT includes a representative of the tobacco industry as member, as well as the National Tobacco Administration, which is mandated to promote the viability of the industry. The Department of Trade and Industry (DTI), which also chairs the IACT, is designated by the GHW Law to hear all complaints filed for any violations of the law. The DTI and the DOH have also been designated to jointly lead the Committee that shall promulgate the implementing rules and regulations of the law, which shall be issued after public consultations with "stakeholders" that specifically include farmers and industry representatives.

Conclusions and key recommendations: In light of the Philippines' obligations under FCTC Article 5.3 and considering its various administrative issuances that implement Article 5.3 in the bureaucracy, the role of the IACT in the implementation of the GHW Law must be strictly construed given the IACT's limited power, structure, and problematic composition. The tobacco industry representative should not be allowed to participate in further policymaking and implementation of the GHW Law. The Philippines should also enact a law that, at the minimum, expressly removes all representation of the tobacco industry and its interests in the IACT and any other regulatory body or function.

PD-619-19 Exposure to tobacco advertisement, promotion and sponsorship among youth in China: results from the largest ever Global Youth Tobacco Survey

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Background: Research indicates that tobacco advertisement, promotion and sponsorship (TAPS) encourages people to initiate smoking, especially youth. However, information is scarce regarding TAPS exposure among Chinese youth. From 2013 to 2014, China conducted the largest Global Youth Tobacco Survey (GYTS) ever in history to monitor tobacco use and track tobacco control measures among youth. The survey provided both national and province level representative data on a wide range of topics, including TAPS exposure.

Design/Methods: The target population is students enrolled in middle schools (typically age 13-15). Using a multistage complex survey design, 336 counties/districts (PSUs) were selected nationwide with stratification by 31 province and urban-rural status. Three schools were sampled from each PSU with one class selected from each grade for every school. In total, 1,020 schools were surveyed with a sample size of 155,117 students and a response rate of 98.0%. Data were weighted to the student population by grade and urban-rural status within each province. Students were asked whether they were exposed to various TAPS activities in the past 30 days.

Results: Overall, 48.5% of the students were exposed to at least one of the 8 TAPS activities. Traditional venues still rank high with the highest percentage of exposure reported for seeing advertising on TV (21.3%), followed by on billboards (20.1%) and at points of sales (17.5%). The percentage was 15.6% for internet and 13.6% for newspaper and magazines. Exposure to free cigarette samples was relatively rare at 2%. Boys were significantly more likely to be exposed to TAPS in all 8 categories described. In addition, more boys reported seeing actors smoking in movies/TV/videos than girls (boys: 71.2%, girls: 67.9%). The TAPS exposure rate was significantly higher among smokers than non-smokers, regardless of gender, in all categories measured. However, there was no significant gender difference for non-smokers.

Conclusion: Despite the ban of tobacco advertising on TV, and in newspaper and magazines in China, a large percentage of young students still notice tobacco advertising from these venues as well as outdoor billboards and internet. Student smokers were exposed to TAPS significantly more often than non-smokers. It is important to ban all forms tobacco advertising in China, as mandated by WHO FCTC, to help prevent youth from initiating smoking.

PD-620-19 Protecting CoP from tobacco industry infiltration is key for global tobacco control success

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Background and challenges to implementation: Article 5.3 of the Framework Convention on Tobacco Control (FCTC) obligates parties to take measures to protect their respective public health policies with respect to tobacco control from commercial and other vested interests of the tobacco industry in accordance with national law. This is in recognition of the tobacco industry's long-held history of attempts at undermining tobacco control efforts.

Intervention or response: On the other hand, recent events have shown an increasing push for the tobacco industry to undermine tobacco control not only at national level but more at global policy formulation level. The increasing demand by front groups such as International Tobacco Growers Association (ITGA) to participate at Cop meetings attest to this. More worrying is the composition of respective country delegates to the cop meetings. This presentation makes a case for the review of the Rules of Procedure of the Conference of the Parties to the WHO Framework Convention on Tobacco Control to offer effective protection to this governing body from infiltration by tobacco industry spies camouflaged as (consultant) delegates of parties at Cop meetings. The paper urges that protecting the apex body of global tobacco control from tobacco industry interference is central to the realization of the aim of the treaty.

Results and lessons learnt: Describe the results and impact of the project. Explain the potential application or benefit to other programmes. Describe what worked and what did not work and the evidence that led to this determination.

Conclusions and key recommendations: Cop should review the Rules of Procedure for Cop to ensure that parties comply with strict requirement to eliminate tobacco industry-related personnel from appointment to Cop delegations.

PD-621-19 Implementing article 5.3 of the FCTC in a local government setting

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Background: Article 5.3 places an obligation on Parties to the FCTC to protect health policy from the commercial and vested interests of the tobacco industry. While this obligation applies to all tiers of government, local government are often less aware of this commitment and therefore less likely to ensure they are compliant. In April 2013 local councils in England became responsible for the delivery of smoking cessation and tobacco control in addition to their existing enforcement responsibilities which

included age of sale, illicit tobacco and smoke-free legislation. As their involvement in tobacco control has grown, relationships with the tobacco industry have become more problematic.

Public health challenge: Historically some local councils have had relationships with the tobacco industry that could be seen as inconsistent with public health responsibilities. ASH (UK) in partnership with Newcastle City Council developed the Local Government Declaration on Tobacco Control in response to this problem. The Declaration included a number of commitments to good local tobacco control including compliance with Article 5.3. The document was endorsed by the national Public Health Minister and other high profile national bodies and local councils were invited to sign up to the Declaration at the highest level within the council. The Declaration has been an important tool to raise the profile of Article 5.3 with councils, affirm their commitment and give them an opportunity to make a public statement about protecting health policy.

Results: The tobacco industry has been lobbying local councils not to sign the Declaration arguing that it will inhibit a local authority's normal relationship with the industry. This reflects changing practice among signatory councils. A growing number of councils are developing formal policies to ensure Article 5.3 is implemented locally and the Declaration has proved a useful platform from which to support councils to develop their policies in relation to the tobacco industry. Over a third of the English councils with responsibility for public health have now signed the Declaration.

Conclusion: Using a mechanism which allows a local government body to publicly affirm its commitment to protecting health policy can be a useful means of implementing Article 5.3. This has been important during a time when the tobacco industry has been attempting to influence local council staff in relation to the campaign for standardised tobacco packaging.

PD-622-19 Drivers of smoking among TB patients in Republic of Macedonia: results from a cross-sectional study

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Despite the established evidence of proven and cost-effective means to combat the deadly tobacco epidemic as the leading global cause of preventable death, it continues to kill around 6 million people, most of the deaths occurring in low- and middle-income countries. Tobacco smoking interacts with M tuberculosis complex in promoting infection and disease, thus being dual public health threat. Understanding national trends in prevalence and consumption is critical for prioritizing actions, particularly among vulnerable groups. The main objective of the survey is to analyse the smoking habits of TB patients in Republic of Macedonia (RM), aimed at complex analysis of social determinants that determine smoking status, in order to provide evidence and recommendations for targeted interventions. Cross-sectional study was conducted in the period March – December, 2013, on 315 TB patients registered in the period July, 2012 – June, 2013. Data is extracted from the module on lifestyle from World Health Survey questionnaire used for the survey. Smoking habits are assessed by collected data on current smoking status, type of tobacco product use and number of smoked cigarettes/day. Face-to-face interview was performed by trained DOT nurses; all data on variables is based on self-reported information. Variables significantly associated with smoking at univariate level were included in multiple logistic regressions, to assess the relationship between smoking and age, gender, place of residence, region, educational and employment status as categorical explanatory variables. The total study population is 315 respondents (96% of all registered TB cases), 50.9% live in urban areas, are predominantly male (63.2%) and of Albanian ethnicity (50.6%). 35.6% smoke regularly every day and additional 10.4% smoke, but not every day, on average 19.73 cigarettes/day \pm 9.8SD, in a range from 3 to 60. Multivariate logistic regression suggests that main predictors of smoking status are education (OR=0.784, CI=0.643-0.955, $p=0.016$), gender (OR=3.257, CI=2.281-4.649, $p<0.001$) and unemployment (OR=0.806, CI=0.683-0.950, $p=0.010$) and smoking is almost 4 times higher in patients who consume alcohol (OR=3.79, CI=2.58-5.58, $p<0.01$).

Conclusion: Our study has identified the main drivers of smoking habits among TB patients in RM and suggests that interventions should be directed taking into consideration the gender, education status and employment status of the patients.

03. MASS MEDIA TARGETS AND MESSAGES

PD-623-19 Exposure of Aboriginal and Torres Strait Islander smokers to anti-tobacco information and its association with attitudes, beliefs and quit-intentions

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Background: The prevalence of daily smoking among Aboriginal and Torres Strait Islander peoples is over double that of non-Indigenous Australians. To tackle this, local campaigns were funded in 2009 and Australia launched its first national Indigenous Anti-Smoking Campaign in 2011, alongside existing strategies. Here we describe the association of exposure to warning labels, news stories and advertising (mainstream, targeted and local) with knowledge, attitudes and quit-intentions of a national sample of Aboriginal and Torres Strait Islander peoples.

Design/Methods: A national stratified cluster sample of 1,613 Aboriginal and Torres Strait Islander smokers was surveyed in 2012/13.

Results: Almost all (89.3%) smokers had noticed warning labels in the last month. In the last 6 months, 60.7% recalled a news story and 84.9% recalled smoking-related advertising and information. Approximately half (50.9%) reported exposure to advertising that featured an Aboriginal or Torres Strait Islander person or artwork (targeted advertising), and 17.6% had seen advertising that featured an Aboriginal or Torres Strait Islander person or artwork from their community (local advertising). There was a dose-response relationship between frequency of exposure (to warning labels, news stories or advertising) and being concerned about health or wanting to quit. Smokers who reported often noticing warning labels (OR 4.10, 95% CI: 2.60-6.47), news stories (OR 2.84, 95% CI: 1.92-4.21) and advertising (OR 4.20, 95% CI: 2.79-6.32) were more likely to want to quit, compared with those who never noticed these types of information. Smokers who often noticed advertising were significantly more likely to believe that society disapproves of smoking (OR 1.82, 95% CI: 1.25-2.66) compared with those who never noticed advertising. Additional influences were found for targeted and local advertising: smokers who recalled any targeted advertising (OR 1.50, 95% CI: 1.16-1.95) or local advertising (OR 1.71, OR: 1.20-2.43) were significantly more likely to hold

the view that community leaders where they live disapprove of smoking, compared with those who only recalled mainstream advertising.

Conclusion: More frequent exposure to warning labels, news stories and advertising is associated with wanting to quit, as well as higher concern for self and others. Advertising that features local Aboriginal and Torres Strait Islander people or artwork may offer additional benefits over mainstream advertising.

PD-624-19 Impact of capacity building in generating greater media attention on tobacco control: recent trends in tobacco-related media coverage in Bangladesh

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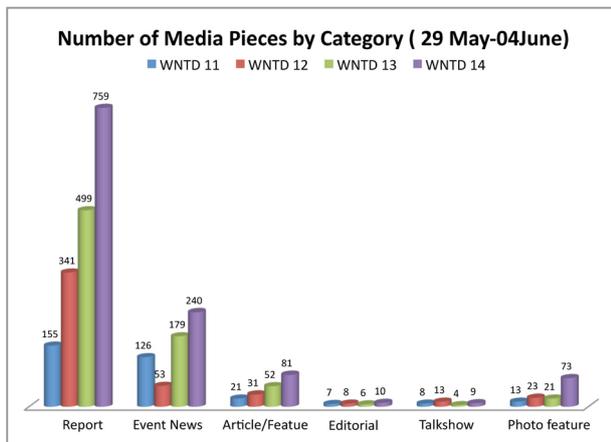
Background: The vibrant mass media in Bangladesh, including both print and electronic, play vital roles in raising mass awareness and influencing policy-makers over different socioeconomic, cultural and development issues. Unfortunately tobacco control issues did not get ample media attention despite 57,000 tobacco-related deaths each year. In fact, it remained a marginalized issue in Bangladeshi media until the very recent past. Given the above context, PROGGA initiated its earned media initiative in 2010 to establish a stronger media support base through building capacity of journalists on important tobacco control policies including tobacco control legislation and tobacco taxation. Under the initiative, it trained over 300 journalists working nationwide in different print and electronic media. The trained journalists have been followed up regularly to publish and broadcast tobacco control related media pieces on their respective media. Consequently, the training with regular follow-up has had a significant impact on increasing media coverage on tobacco control issues that effectively supported the ongoing tobacco control advocacies in Bangladesh. The present study was tried to demonstrate the impact of capacity building initiative in generating greater media attention on tobacco control issues based on the media monitoring information and analysis.

Design/Methods: A comparative analysis of media coverage on tobacco control issues for a week (29 May to 4 June) marking the World No Tobacco Day of 2011, 2012, 2013 and 2014 will be compared to know the impact of capacity building and regular follow up with trainees.

Results: The study witnesses a massive change in the number of media pieces on tobacco control issues over the years. Remarkably the media pieces did not only deal with the event news, fairly covered all other issues related to advocacy priority (i.e. tobacco control legislation and tobacco taxation) and the trend is continuing. There were upsurges in the number of reports, features/ articles, editorial etc. in 2014 comparing to 2011 (graph).

Conclusions: Despite all constraints, PROGGA's earned media initiative has resulted considerable impact on gen-

erating greater media attention for important tobacco control advocacy in Bangladesh.



PD-625-19 How media monitoring helps in tobacco control advocacy in Bangladesh

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Background: In recent time, media has been playing an important role in the tobacco control advocacy in Bangladesh particularly for stronger tobacco control policies including tobacco control law and tobacco taxation and its implementation. Media monitoring has been made as an integral part of the media strategy for tobacco control in the country so that strategic initiatives can be taken based on the trends of tobacco control in the media. The present study was carried out to illustrate how the media monitoring was become an important source of information for the tobacco control groups of Bangladesh in devising and revising their advocacy strategies on a continuous basis.

Design/Methods: The media monitoring work done by PROGGA followed a structured monitoring format. The organisation has been conducting regular media monitoring since 2011 to track the trends in media coverage and accordingly undertake appropriate strategies to influence the media coverage. A total of 72 media, including 52 print and on-line newspapers and 20 TV and radios, are being regularly monitored. This represents almost all the regularly published/broadcast media at the national level and the major media from the regions. The monitoring is done using a well-developed format that enables PROGGA to analyse the tobacco-related media coverage weekly, monthly and quarterly. These analyses provide important inputs for strategizing the capacity building and follow-up activities of PROGGA with the media. Moreover, the analyses are important sources of tracking the tobacco industry tactics.

Results: The results of the media monitoring are used in a very strategic way to feed the tobacco control groups with important directions about the need for particular actions. For example, if an influx of media reports on a particular industry activity is seen and can be linked with

some notable tobacco control measures, the tobacco control groups are alerted about the possible risks and thus they can counteract. The media reports also provides important information on what the policy makers are saying about tobacco control, which helps a lot in reviewing the strategies and messages that the tobacco control groups use.

Conclusions: Despite all constraints, the day to day coverage and the trend generated from media monitoring has contributed significantly in strategic decision on tobacco control advocacy in Bangladesh.

PD-626-19 Knowledge regarding the six most effective tobacco control measures: a study with medical students from the University of São Paulo, Brazil

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Background: The World Health Organization (WHO) has developed a package of six evidence-based components for the Framework Convention on Tobacco Control (FCTC) implementation named MPOWER with recommendations to Monitor tobacco use; Protect people from tobacco smoke; Offer help to quit; Warn about tobacco dangers; Enforce bans on tobacco advertising and Raising taxes. Aspiring physicians will play an important role in decreasing smoking prevalence. The objective of this study was to examine medical students' knowledge regarding MPOWER issues and curricular change over smoking cessation teaching between the 3rd and 6th year.

Design/Methods: Students from the University of São Paulo School of Medicine (USP), Brazil were invited to complete a self-administrated questionnaire comprised of questions from the Global Health Professionals Students Survey and additional modules. Evaluation was among 3rd year of 2008 and 6th year of 2011 (class 1) vs 3rd year of 2009 and 6th year of 2012 (class 2). Pearson's chi-square test or Fischer's exact test ($p < 0.05$) was used comparing the positive responses.

Results: We evaluated 377 questionnaires completed by class 1 ($n=211$) and class 2 ($n=166$). Table 1 shows that the majority of the respondents knew about the importance of routinely registering smoking status in medical charts to monitor the prevalence of tobacco use and related diseases. Over 90% of the aspiring physicians of class 1 and 2 agreed to a total ban of smoking in enclosed public places to protect people. There was a great knowledge improvement from the 3rd to 6th year in both classes regarding the topic of offering smoking cessation training ($p < 0.0001$). More than 90% of all medical students were warned

and taught about the health risks of smoking, resulting in a significant knowledge increase in class 1 ($p < 0.05$). Overall, future physicians have a good perception about the importance of enforcing a total ban of tobacco advertising, promotion and sponsorship. With respect to the effectiveness of raising taxes to reduce smoking prevalence, there was a knowledge gain among medical students from class 2 ($p < 0.05$).

Conclusion: The data gathered during this research revealed that medical students at the USP have a relatively high awareness in MPOWER key measurements and significant knowledge gain on smoking cessation training. However, it is necessary to give more emphasis to the raising tax subject as it is an important measure in decreasing smoking prevalence.

Table 1: MPOWER issues related to medical school curricula				
MPOWER Issue	3rd 2008	6th 2011	3rd 2009	6th 2012
	n/N (%)	n/N (%)	n/N (%)	n/N (%)
	p*		p*	
Monitor: Registry smoking status in medical chart	100/101 (99.01%)	107/110 (97.27%)	104/105 (99.05%)	59/61 (96.72%)
	ns		ns	
Protect: Total smoking ban in enclosed public places	92/100 (92%)	105/109 (96.33%)	97/105 (92.38%)	60/61 (98.36%)
	ns		ns	
Offer: Received smoking cessation training	10/101 (9.90%)	107/109 (98.17%)	21/105 (20%)	56/61 (91.80%)
	<0.0001		<0.0001	
Warn: Taught about health risks of smoking	93/101 (92.08%)	108/110 (98.18%)	101/105 (96.19%)	59/61 (96.72%)
	<0.05		ns	
Enforce: Total ban of advertising, promotion and sponsorship	83/101 (82.18%)	86/109 (78.90%)	84/104 (80.77%)	51/61 (83.61%)
	ns		ns	
Raise: Rising taxes is effective to reduce smoking prevalence	71/101 (70.30%)	72/107 (67.29%)	61/105 (58.10%)	45/58 (77.59%)
	ns		<0.05	
n/N: positive response/total respondents; *p value was calculated by Chi-square association test, fixing the significance level in $p < 0.05$. ns: not significant				

PD-627-19 Investigating tobacco use in top Hollywood movies, 2008-2011

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Background: Cinema as an art form reflects society within which they are made, but also influences life and social structures. The Surgeon General concluded that there is a causal relationship between depictions of smoking in the movies and smoking initiation among young people. Considering the importance of this topic, the present study explored the prevalence of tobacco use in scenes from movies nominated for the Academy awards (Oscar) from 2008 to 2011.

Design/Methods: The inclusion criteria were: films which had been nominated in one or more of the following categories - best film, best actor or best actress - from 2008 to 2011, with scenes showing drug consumption either in a single scene lasting more than 10 seconds and/or throughout the film and/or effect of substance abuse (not necessarily portray the drug use itself), in English language. We excluded animation films and scenes which did not show consumption or any clear effects of it. We used survey settings to control for over- or under-estimation of the prevalence of a variable in given year or movie. Comparisons

were performed between tobacco use scenes and other drugs use scenes. Firstly, we carried out univariate logistic regression models for each of the 36 variables. Then we selected variables for a final multivariate model.

Results: In our sample of 515 scenes which present any drug use, tobacco use was associated with: scenes from historical movies, only one person smoking, elderly not smoking, and smoking in nature, on the street or at work; when compared with the use of other drugs. On the other hand, the use of tobacco has not been associated with: scenes from movies with high opening gross, men smoking, and a central role in the scene; compared with the use of other drugs.

Conclusion: There is a long history of association between cigarette smoking and movies. Giving the findings from recent studies that demonstrate the influence that movies can have on smoking behaviours in their audiences, especially in young people, it is important to monitor the recent trends. Nowadays, the use of tobacco in scenes from Hollywood movies has different characteristics compared to the use of other drugs. Tobacco has been presented as a drug of lonely use, in outside home environment, dissociated with elderly. From our findings, smoking has performed far from male ideal, and the central role within the movie scene, features that were most associated with cigarette use in films erstwhile.

Results of the analysis for tobacco use in 52 movies (n = 515 scenes) indicated to the Oscar, 2008-2011.

	Tobacco use scenes			Other drugs use scenes			Univariate regression models			Multivariate regression model		
	n	%	SE	n	%	SE	OR	95%CI	p	aOR	95%CI	p
Movie profile												
Runtime	94	40.7	0.10	105	36.9	0.10	1.16	0.60-2.25	0.633			
Budget	100	43.3	0.10	155	54.6	0.10	0.53	0.34-1.17	0.144			
Opening Gross	58	11.2	0.10	112	21.7	0.10	0.51	0.24-1.08	0.079	0.53	0.28-0.98	0.046
Historical	115	49.8	0.10	93	32.8	0.09	2.03	1.12-3.69	0.020	2.85	1.59-5.14	0.001
Filme Gender	95	17.4	0.09	90	18.4	0.09	1.26	0.67-2.39	0.451			
Oscar prize	131	56.7	0.10	147	51.8	0.10	1.22	0.65-2.26	0.518			
Users profile												
Men	172	74.5	0.06	252	88.7	0.03	0.37	0.17-0.76	0.009	0.30	0.12-0.77	0.013
Women	92	39.8	0.07	144	50.7	0.06	0.64	0.37-1.10	0.105			
Adolescents	9	3.9	0.03	10	3.5	0.02	1.11	0.36-3.36	0.849			
Young adults	105	45.5	0.07	158	55.6	0.06	0.66	0.38-1.15	0.145			
Middle-age adults	129	55.8	0.08	179	63.0	0.06	0.74	0.37-1.46	0.383			
Elderly	14	6.1	0.03	32	11.3	0.03	0.50	0.17-1.46	0.203			
One people	169	73.2	0.05	108	38.0	0.04	4.44	2.92-6.74	<0.001	2.80	1.67-4.69	<0.001
Two people	30	13.0	0.02	67	23.7	0.02	0.48	0.32-0.71	<0.001			
Three people	11	4.8	0.02	27	9.5	0.02	0.47	0.18-1.24	0.126			
More than three people	15	6.5	0.02	75	26.4	0.04	0.19	0.10-0.36	<0.001			
Non-users profile												
Men not using	154	67.0	0.05	157	55.3	0.05	1.63	0.97-2.75	0.061	0.99	0.51-1.91	0.986
Women not using	100	43.5	0.05	135	47.5	0.04	0.84	0.56-1.27	0.426			
Adolescents not using	33	14.3	0.06	22	7.8	0.03	1.98	0.94-4.18	0.071	1.55	0.60-3.98	0.354
Young adults not using	115	49.8	0.04	127	44.8	0.05	1.22	0.83-1.79	0.289			
Middle-age adults not using	105	45.6	0.06	113	39.8	0.05	1.26	0.76-2.07	0.353			
Elderly not using	38	16.5	0.05	30	10.6	0.03	1.66	0.92-2.99	0.086	2.28	1.15-4.51	0.019
One people not using	67	29.0	0.03	56	19.7	0.03	1.66	1.01-2.74	0.047	0.69	0.39-1.23	0.212
Two people not using	33	14.3	0.03	39	13.7	0.03	1.04	0.57-1.89	0.877			
Three people not using	17	7.4	0.02	14	4.9	0.01	1.53	0.64-3.64	0.327			
More than three people not using	68	29.5	0.05	74	26.1	0.04	1.18	0.74-1.88	0.468			
Place of use												
House	83	35.9	0.04	133	46.8	0.04	0.63	0.45-0.88	0.008	0.70	0.40-1.24	0.222
Bar	16	6.9	0.02	37	13.0	0.02	0.49	0.30-0.81	0.007	0.67	0.28-1.59	0.367
Restaurant	12	5.2	0.02	37	12.7	0.03	0.37	0.21-0.66	0.001	0.54	0.22-1.34	0.185
Nature	29	12.6	0.04	13	4.6	0.01	2.99	1.28-6.99	0.013	2.48	1.09-5.65	0.030
Street	29	12.6	0.03	17	6.0	0.02	2.25	0.99-5.12	0.052	4.02	1.15-14.04	0.030
Driving	13	5.6	0.02	6	2.1	0.01	2.76	0.98-7.71	0.052	1.80	0.53-6.09	0.335
Work	47	20.4	0.05	49	6.7	0.02	3.56	1.78-7.11	0.001	3.58	1.75-7.29	0.001
Situation of use												
Dating/Sex/Erotic	17	7.4	0.02	43	15.1	0.04	0.44	0.27-0.73	0.002	1.11	0.57-2.16	0.744
Violence	19	8.2	0.03	20	7.0	0.02	1.18	0.53-2.61	0.672			
Difficult situations	81	35.1	0.03	91	32.0	0.05	1.14	0.76-1.71	0.502			
Central role in the scene	11	4.8	0.02	69	24.3	0.04	0.15	0.07-0.33	<0.001	0.10	0.03-0.30	<0.001
Total	231	44.8	0.03	285	55.1	0.03						

PD-628-19 Household response to cigarette gifting and sharing in Zhejiang, China: a repeat cross-sectional study

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Background: The aims of current study were to assess the prevalence of cigarette gifting and sharing, and to evaluate relationship between second-hand smoke exposure (SHS) and cigarette gifting and sharing in Zhejiang.

Design/Methods: A repeat cross-sectional survey was conducted with adults in Zhejiang, China between 2010 (N=2112) and 2012 (N=2279). At both waves the same questionnaire were used, respondents were asked the questions on residence, smokers in family, smoking rule inside home, household have cars, and cigarette gifting and sharing.

Results: The findings revealed that more than half of respondents (54.50% in 2010, 52.79% in 2012) reported they were exposure to second-hand smoke. There was (54.73% in 2010, 47.04% in 2012) of respondents reported they share cigarette with others, and (14.91% in 2010, 14.17% in 2012) of respondents reported they give cigarette to others as a gift. There was a significant decrease in cigarette sharing from 2010 to 2012, no matter whether the household have tobacco exposure, but the cigarette gifting was no significant decrease, except for the household with no SHS.

Conclusion: Compare to household with no SHS, cigarette gifting and sharing in household with SHS were relatively serious. Strengthened smoke-free household building is necessary to change public's tobacco custom in Zhejiang, China.

Cigarette gifting and sharing of adults' household, Survey (2010) and Survey (2012)

Cigarette gifting and sharing	Total sample						Household with smoke exposure						Household with no smoke exposure					
	Percentages				Test of differences by year*		Percentages				Test of differences by year†		Percentages				Test of differences by year†	
	2010		2012		AOR	P value	2010		2012		AOR	P value	2010		2012		AOR	P value
	N	%	N	%			N	%	N	%			N	%	N	%		
Cigarette Sharing	1156	54.73	1072	47.04	0.61	0.00	846	73.50	795	66.08	0.56	0.00	310	32.26	277	25.74	0.69	0.00
Cigarette Gifting	315	14.91	323	14.17	0.92	0.32	214	18.59	232	19.29	1.01	0.90	101	10.51	91	8.46	0.73	0.05

*p Values are based on logistic regressions, testing differences 2012 vs 2010 after controlling for residence, family smoking rules, household have cars, family smoker amounts and household with SHS.

†p Values are based on logistic regressions, testing differences 2012 vs 2010 after controlling for residence, family smoking rules, household have cars and family smoker amounts.

AOR, adjusted ORs.

PD-629-19 Impact of curriculum change on knowledge, attitude and practice of tobacco use among dental students in Chennai, India

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Background: Analyses of the tobacco control content of the undergraduate dental curriculum in India reveal that although the negative effects of tobacco are incorporated in some way in the curricula from the time it was formulated, it was only after the Dental Council of India (DCI), the apex body controlling the quality of dental education in India, modified the existing curriculum in the year 2007, tobacco counselling was systematically incorporated in the dental undergraduate curriculum along with relevant skills and competence surrounding anti-tobacco counselling. Keeping this in view, the present study was

undertaken to assess the knowledge, attitudes and practices of undergraduate dental students and to compare the present scenario with that of their counterparts who had graduated prior to the implementation of the curriculum changes by the DCI.

Design/Methods: A cross-sectional survey was conducted on all the third year dental students of the 8 participating dental colleges in Chennai, and data was collected using Global Health Professional Survey (GHPS, 2006) questionnaire. The dental college response rate was 57.14% and the student response rate was 89.3%.

Results: A total of 146 female and 270 male students participated in this study. 5.2% of the males currently smoked cigarette and a mere 2.4% (Females = 0.7%) reported of currently using any form of tobacco other than cigarette. These values were significantly lower to those reported earlier by Singh G et al in 2005. 91.3% of the study participants felt that their school enforced the ban on use of tobacco products in their college campus. More than 95%

of the study population reiterated the importance of the ban on sale and use of tobacco products in public places. In sharp contrast to 10.5% reported in 2005, 82.2% reported of receiving formal training in smoking cessation approaches during their dental training programme. 59.6% and 50% were also aware of the use of nicotine replacement therapy and use of antidepressants in tobacco cessation programmes.

Conclusion: Within limitations of this study, it can be concluded that a significant reduction in the current use of tobacco products coupled with an improvement in the knowledge towards tobacco control practices were observed among the Indian dental students. Inclusion of tobacco control content in the dental curriculum in the year 2007 could be an important factor which could have contributed to this positive change.

PD-630-19 Innovative mass media campaign for tobacco control in India

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Background Tobacco is a significant public health concern in India. Traditional mass-media campaigns focused on the graphic health effects of tobacco have done little to curb youth tobacco use. Despite strong warnings, youth continue to see tobacco as cool –role models in media strengthen this imagery. Salaam Bombay Foundation has developed three campaigns with a focus on empowering messages with the goal of reaching high-risk youth with messages they can relate to.

Methods In 2008, the Quit Tobacco Movement was launched. Inspired by the Quit India Movement, the campaign used freedom struggle imagery to promote freedom from tobacco. The campaign included street plays, rallies and poster exhibitions displayed at railway stations and prominent public places. Popular TV and radio stations covered the campaign. The Proud to be Tobacco Free Campaign focused on effective implementation of India's Tobacco Control Law. The goal was to empower individuals to take action for tobacco law implementation. Radio and outdoor media hoardings were used to encourage people to make Mumbai a tobacco-free city. In 2011, Life Se Panga Mat Le Yaar (Don't mess with life) was launched using a celebrity ambassador to counteract positive images of tobacco in popular cinema. Street plays and rallies were launched at prominent public places. Audience engagement was created through radio and social media.

Results An evaluation of Life Se Panga Mat Le Yaar found no fatigue after multiple viewings and high comprehension of the message. The in-programme capsule achieved reach of 165,000 to 227,000 people through radio stations. YouTube views topped 1,500. The campaign earned print media attention in Times of India and Hindustan Times.

Conclusions Using empowering messages in youth-centric media helps to generate high tobacco awareness. The effectiveness of the campaign rests in utilising each media appropriately to reach the target group.

PD-631-19 Integration of tobacco control in Masters of Public Health curricula of India

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Background: Tobacco is the single largest cause of preventable death among adults globally, as it is in India. Despite this alarming situation, there is very minimal inclusion of tobacco in formal education systems, including the medical discipline, in India. The present study analysed the extent of integration of tobacco control related content in Masters of Public Health (MPH) curricula of various institutes in India.

Design/Methods: This cross-sectional study was conducted during January 2011 to May 2011 in all colleges of the country offering a MPH course. The colleges were enlisted using various internet search engines (Google Scholar, Pubmed, Medline), other published literature and snowball technique. A 50 items semi-structured questionnaire was designed, posted and e-mailed (followed by hard copy) to the Person-In-Charge of the MPH programme. Descriptive statistics were used to profile the tobacco control content in respective institutions. All data entry and analysis was conducted using SPSS (version 16) for windows.

Results: The duration of the MPH course was two years in all institutes and had accreditation with some affiliated body. Tobacco related diseases were covered under 'non communicable diseases' section by every institute. However, a mere 41.4% of institute's had faculty who had received specialized training in tobacco control. More coverage was given to health risks and effects of smoking as compared to cessation interventions (5 A's), symptoms of withdrawal and pharmacological treatments. Only 25% of institutes were in process of introducing tobacco courses into their curricula. Lack of expertise and administrative barriers were cited as perceived major problems in inclusion of tobacco control in MPH curricula.

Conclusion: It can be concluded that tobacco control is not receiving adequate attention in public health curricula in India. There is a need for coordinated efforts in the area of tobacco control so as to reduce morbidity and mortality from tobacco induced diseases.

PD-632-19 Impact of anti-smoking campaigns to discourage Malaysian adolescents from smoking: findings from the ITC Malaysia Survey

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Background: Article 12 of the WHO Framework Convention on Tobacco Control (FCTC) emphasises on strengthening and promotion of public awareness on tobacco issues through education and public awareness programmes. Malaysia as a ratified party of the FCTC has implemented several anti-smoking media campaigns, among them, “Don’t Break My Heart” launched in 2008, and “Sign of Time” in 2010. This paper examines the impact on adolescent smoking in Malaysia from “Don’t Break My Heart” and “Sign of Time” campaigns.

Design/Methods: The study data were obtained from the Wave 5 International Tobacco Control (ITC) Policy Evaluation (ITC) Malaysia Survey (May 2011-Jan 2012), a component of a prospective longitudinal cohort survey. 928 adolescents aged 13 to 17 were randomly sampled using a multi-stage cluster sampling design. Respondents were asked through self-administered questionnaires if they had noticed the “Don’t Break My Heart” and “Sign of Time” campaigns and whether they believed that these campaigns would prevent them from smoking.

Results: The percentage of adolescents who reported having noticed the campaigns “Don’t Break My Heart” and “Sign of Time” was 78.6% and 67.9% respectively. 76.2% of the adolescents believed that the “Don’t Break My Heart” campaign discouraged them from smoking while 64.1% held similar belief for the “Sign of Time” campaign. Multivariate analyses revealed that noticing the campaign “Don’t Break My Heart” (OR=13.31; 95%CI: 7.22-24.55, p<0.001) and “Sign of Time” (OR=13.08; 95%CI: 5.99-28.55, p<0.001) numerous times were positively associated with discouraging adolescents from taking up smoking.

Conclusion: Anti-smoking media messages delivered through these campaigns were well-received by adolescents and have discouraged them from taking up smoking. Educational media campaign such as Tak Nak TV campaign should be continued as to denormalise tobacco culture in Malaysia.

PD-633-19 Male smokers’ and non-smokers’ responses to television advertisements on the harms of second-hand smoke in China, India, and Russia

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Background: Mass media campaigns can play an important role in strengthening support for smoke-free policies and reducing exposure to second-hand smoke (SHS). Identifying anti-SHS advertisements that are effective in diverse cultural contexts may allow for resource sharing in low and middle-income countries.

Method: A convenience sample of 481 male cigarette smokers and non-smokers in three high tobacco burden and culturally dissimilar countries (India, China and Russia) viewed and rated five anti-SHS ads. Multivariate logistic regression analyses were conducted for Message Acceptance, Negative Emotion, Perceived Effectiveness, and Behavioural Intentions.

Results: Smokers and non-smokers in all countries consistently rated the strong graphic health harm ads as the most effective, and the ‘informational’ ad as the least effective overall: the graphic ad Baby Alive was at least 1.8 times more likely than the informational ad Smoke-free works to receive positive ratings on all four outcomes (all p<0.001).

Conclusion: Graphic, health harms messages about SHS exposure have the greatest universal appeal and are the most effective in motivating changes in behavioural intentions. Similarity in reactions between smokers and non-smokers, and across countries, suggests that resource sharing and the use of a single graphic ad targeted at smokers and non-smokers would be cost-efficient strategies.

PD-634-19 Initial development of a multilingual distance learning curriculum: lessons learnt

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Background and challenges to implementation: Global Bridges is an international network of healthcare professionals dedicated to advancing evidence-based tobacco dependence treatment. In the past four years Global Bridges has trained over 3,300 healthcare professionals from 66 countries in face-to-face workshops. The reach of this training could be dramatically expanded by leveraging new technology in a distance-learning programme. While there are many such programmes in English, there are very few in other languages. Global Bridges collaborated with regional partners in Jordan and Latin America, and instruc-

tional design experts at the University of Toronto Centre for Addiction and Mental Health (CAMH), to develop basic distance-learning modules in Arabic and Spanish.

Intervention:

- An evaluation of existing English-language programmes was conducted by learning experts at Towson University (Maryland, USA).
- A virtual team in 5 countries developed modules in Arabic and Spanish, based on learning from Towson's evaluation.
- New modules were evaluated and refined through user pilot testing, and separately by the Towson University team.

Results and lessons learnt:

- Most current English-language programmes did not meet basic instructional design standards for distance education,
- Regional Expert/pilot user testing of Global Bridges modules identified issues with language consistency, which were corrected.
- Expert review of the Arabic and Spanish modules identified issues with internal alignment, navigation and evaluation. In particular, the content was judged to be insufficiently aligned with the learning objectives identified at the beginning of the project

Conclusions and key recommendations:

- Emphasise learning objectives throughout development and ensure they are aligned with content and clearly communicated as the learner moves through the module.
- Content must be adapted for cultural variability as well as simply language, while remaining faithful to instructional design principles. This was the most challenging aspect of the transformation from a basic English-language template to Arabic and Spanish. Many concepts, idioms, expressions, and even medical terms do not translate directly from one language (or culture) to another and need to be considered carefully by the multilingual team. While we employed a back-translation check step, this still did not eliminate all transformation problems.

PD-635-19 Intended and unintended effects of a national mass media second-hand smoke campaign: socioeconomically disadvantaged parents' accounts

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Background: While smoke-free legislation and shifting norms in many European countries have reduced second-hand smoke (SHS) exposure, many children still have high levels of exposure in homes and cars. Children from disadvantaged homes are particularly at risk as their parents are more likely to smoke and to smoke in the home. Little is known about what shapes home smoking practices of dis-

advantaged parents of young children or their responses to SHS mass media campaigns. This is the first qualitative study to explore disadvantaged parents' responses to a national mass media SHS campaign in Scotland which urges parents to smoke outside their home to protect children.

Design/Methods: Semi-structured individual interviews with 25 disadvantaged parents, mostly mothers, of children aged 1-3 years in Scotland in winter 2013/4, using an innovative floor plan method to prompt accounts. Follow-up interviews in summer 2014 explored participants' responses to a national mass media campaign which ran spring 2014. Parents were recruited through Early Years Centres which support vulnerable families. Interviews were analysed thematically.

Results: Disadvantaged parents reported attempts to protect their children from SHS and from the perceived future health and financial burdens entailed in becoming smokers. All parents attempted to protect their children from SHS, using strategies which reflected their changing accommodation, limited domestic spaces, complex social relationships, increasing child mobility and awareness more than parents' level of risk awareness. Responses to the national mass media SHS campaign varied; while some parents reported changes to their smoking but most responded with guilt and frustration at being asked to make changes they perceived impossible within their current circumstances.

Conclusion: Challenging domestic living circumstances and relationships, and the increasing mobility and awareness of children in the first few years are key barriers and levers for smoke-free disadvantaged homes. Future mass media campaigns should target grandparents and fathers as well as mothers, include cessation advice and acknowledge disadvantaged parents' existing motivations and attempts to protect their children from both SHS and becoming smokers to avoid further stigmatisation of parents, particularly mothers, already burdened by intersecting disadvantages.

04. TRACKING AND INVESTING IN NCD PREVENTION

PD-636-19 Argentina Global Adult Tobacco Survey: Main findings

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Background: The Global Adult Tobacco Survey (GATS) is the world standard to systematically monitor tobacco consumption and the main indicators for tobacco control. The objective was to monitor tobacco epidemic in adults in Argentina with a standardized tool suggested by the World Health Organization.

Design/Methods: A globally standardised methodology was implemented in Argentina in 2012 to gather information on tobacco use (smoking and smokeless), cessation, second-hand smoke (SHS), economics, media, and knowledge, attitudes and perceptions towards tobacco use. A multi-stage stratified cluster sample design was used to produce representative data both at national and regional level. Survey information was collected electronically by using handheld devices. There were a total of 6645 that completed individual interviews, with an overall response rate of 74,3%..

Results: Tobacco smoking prevalence was 22.3%, with a higher rate in men (29.6%) than in women (15.7%). A total of 73.6% of the smokers had planned or was planning to quit, and 48.6% had made a quit attempt in the previous year. Among adults working in enclosed places 31.6% were exposed to SHS, and 33% were exposed at home. Besides, 75.8% obtained anti-cigarette smoking information on mass media, while 41.9% noticed advertising at cigarette stores.

Conclusion: A decrease in tobacco use was observed in Argentina. The survey allowed a better understanding of tobacco epidemic in Argentina and also a comparison with other countries in the world..

PD-637-19 Smokeless tobacco product prices and taxation in Bangladesh: findings from the ITC Bangladesh Survey

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Background: The ITC Bangladesh Survey conducted in 2009 found tobacco use prevalent among 43.2% of the adult population aged 15+. While smoking prevalence was 22%, the prevalence of smokeless tobacco use was 29.8%,

implying that there are more smokeless tobacco users than smokers. Despite its potential threat to public health, very little is known about tax and price policy in controlling smokeless tobacco use in the country.

Design/Methods: Data analysed are from Wave3 ITC Bangladesh Survey, a nationally representative cohort sample of tobacco users and non-users aged 15+. Data on retail prices of cigarettes, bidis and smokeless tobacco products were collected using a supplementary price protocol. This paper used both descriptive and regression methods. The descriptive analysis looks at the price distribution of cigarette, bidi, zarda and gul using the univariate Epanechnikov kernel density estimation while regression analysis involves estimation of the demand function for the most widely used smokeless tobacco products, using two-step method. First, using logit estimation, we estimate the prevalence of zarda use as a function of the prices, individual and household characteristics. Second, using ordinary least squares (OLS) estimation, the intensity of zarda use is estimated as a function of the same variables as in the first step of prevalence estimation.

Results: The price elasticity of lower-priced brands of zarda is -0.64 and higher-priced brands is -0.39. It implies that 10% increase in the price of zarda can reduce zarda consumption by 6% for cheaper brands and 4% for more expensive brands. It shows that a tax increase that can induce price increase is expected to significantly reduce the prevalence of smokeless tobacco use among the Bangladeshi population. The cross price elasticity of zarda with respect to cigarette price is estimated to be 0.35 implying that a 10% increase in cigarette price with zarda price unchanged can increase the consumption of zarda by 3.5%. That means if both cigarette and zarda prices are increased by 10%, zarda consumption will reduce by 2.5% (-6% + 3.5%). The positive impact of cigarette price increase partially offsets the negative impact of zarda price increase.

Conclusion: This paper argues that increasing tax on smokeless tobacco products simultaneously with the tax increase on smoked tobacco products can significantly reduce the prevalence of smokeless tobacco use in Bangladesh.

PD-638-19 Clustering of tobacco and other risk factors of non-communicable diseases in Bangladeshi adults: an analysis of STEPS survey 2013

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Background: Use of tobacco does not happen in isolation of other risk factors of non-communicable diseases (NCDs). There is a tendency of clustering of major risk factors. However, little is known about clustering of these risk factors in Bangladeshi people. This study was con-

ducted to examine the extent to which Bangladeshi adults have clustering of NCD risk factors.

Design/Methods: This nationally representative study was done in 3,700 (1700 men and 2000 women) individuals aged 25 years or older selected from rural and urban households of all seven divisions of Bangladesh. Selected variables were in line with steps 1 and 2 of WHO stepwise surveillance except alcohol.

Results: Subjects were 40 years old on average (standard deviation 15 years). Forty-three percent of them used tobacco in any form (men 59%, women 33%). Almost 92% did not consume adequate fruit and vegetables (5 servings or more). Thirty seven percent had low physical activity level (<600 MET-minutes/week). One-quarter (26%) were overweight (body mass index ≥ 25 kg/m²). Twenty-three percent had hypertension (blood pressure $\geq 140/90$ mmHg or medication) and 5% had documented diabetes. Ninety-nine percent had at least one, 75% had at least two, 37% had at least three, 12% had at least four, and 3% had at least five risk factors. Tobacco was an important component of clustering. This clustering of risk factors suddenly dropped down to a fairly low level at a threshold of three risk factors. Using this threshold as a cut-off point, clustering of risk factors was associated with age, sex, low education, urban residence, and hypertension.

Conclusion: Use of tobacco has declined compared to previous national study. Clustering of up to three risk factors is very common in Bangladeshi adults. Although individual risk factors should be addressed in appropriate way, people should be warned about additional dangers related to their clustering. Should a risk factor be detected, opportunistic approach of screening should be used for other risk factors of NCDs.

PD-639-19 Knowledge, attitude and practice and risk perception on smoking and smokeless tobacco among female garment workers in Bangladesh

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Background: Information on knowledge, attitudes and practice (KAP) and risk perception of female workers about smokeless tobacco (SLT) use are lacking in Bangladesh. This study was done to determine the KAP and risk perception of tobacco use among female garments workers in Bangladesh.

Design/Methods: The study was done in purposively selected 400 female garments workers aged 15 years and above selected from Dhaka city. Data were collected using a pre-designed semi-structured questionnaire by face to face interview and were analysed by using SPSS 17, Chicago, USA.

Results: Respondents were 400 female workers with mean age of 21 years. Though none of them were smoker, 9.5%

were current smokeless tobacco users. Among the user, all of them used zarda and 7.9% used gul. Tobacco addiction level for SLT use by Modified Fagerstrom test among the respondents Low (score less than 4), medium (score 4-6) high (score 6 or more) were 22 (57.9), 13 (34.2) and 3 (7.9) respectively. More than 95% respondents knew and believed that smoking causes stroke, heart attacks, lung cancer and COPD whereas 94% and more than 90% knew and believed that SLT use causes oral cancer and CVD. Half of the respondents knew about the tobacco control act in Bangladesh. Health care providers asked about smoking and smokeless tobacco use in 4.7% and 19.5% cases respectively. 3.9% were advised to quit smokeless tobacco use. Danger of using tobacco and quitting benefits were noticed mainly in television and posters, followed by newspaper. Advertisement or sign of promotion of tobacco product (53.2%, 34.2% and 28.0% and 17.8% cigarette, zarda, biri and gul respectively) seen in point of sell and then television. In 10.2% and 34.0% home, smoking was allowed or had no rules. Workplaces were smoke-free. Among the respondents, 90% showed negative attitudes towards tobacco use, 60% SLT users showed negative attitudes. 52.6% SLT users had intention to quit but not within next 12 months. Seven of every ten respondents favour for increasing taxes on tobacco products.

Conclusion: In spite of high knowledge and negative attitudes female garments workers were using smokeless tobacco, though the prevalence was much less compared to national female SLT use prevalence. Strong tobacco control law implementation in industries can reduce tobacco use among the workers.

PD-640-19 Help seeking for tobacco by children: are we prepared to meet their treatment needs?

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Background: Adolescent smoking and substance use is a global issue and affects all subsets of adolescents. Substance use at a younger age interferes with normative age appropriate development and makes the children more vulnerable to several health and psychosocial consequences. The National Commission of Protection of Child Rights (NCPCR) funded a first large scale, multi-site survey focusing on pattern, profile, and correlates of substance use (including tobacco) among child population in India. The present communication informs on treatment needs and help seeking behaviour of tobacco using children.

Design/Methods: Using an innovative method, NGOs working in the area of substance use and NGOs working especially for the street children recruited a large sample size of 4,024 children (boys and girls both) using multiple methods from 29 states/UTs and 135 sites in cities / towns representing all regions in India. Information was filled on a questionnaire designed to the objectives.

Results: Tobacco use was reported by 83.2% children having an average age of 15.6 \pm 2.01 years, and initiation age of 12.26 \pm 2.60 yrs. (range 4-18). Among them Alcohol

(59.8%), Cannabis (69.4%), Inhalants (29.4%), Pharmaceutical opioids (15.2%), Heroin (6.5%), Pharmaceutical sedatives (5.9%) and Opium (3.3%) was also reported. Though 71.6% opined that its use is harmful; more than one third did not know where to get health services if they needed help, 67.5% had never looked for help; 44.1% did not think they had a problem and needed help; 27.7% felt a problem but could quit on own; 24.2% wanted to quit and needed help for quitting.

Conclusion: The study highlighted the pressing need of initiating programmes for prevention and treatment. It recommended sensitization of state governments and important stakeholders that prevention programmes must target multiple settings and multiple risk factors particularly vulnerable children such as children of substance users, children injecting substances, street children, child labourers and any other category most at risk. Prevention in schools should include universal prevention programmes such as education and life skill programmes. School going children who are at risk should have access to professional counselling in the school setting.

PD-641-19 Risk factors profile for noncommunicable diseases among adult urban population of Puducherry in India

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Introduction & Objectives: Almost two third of all deaths worldwide are due to non-communicable diseases (NCDs), which are primarily associated with tobacco use, alcohol consumption, physical inactivity, unhealthy diet, obesity and raised blood pressure and are largely preventable. Despite the increasing burden of in NCDs and their risk factors in India, information on the prevalence of preventable risk factors is restricted to some areas. This study was done to assess the prevalence and distribution of various risk factors for non-communicable disease in population of an urban area of Puducherry, in South India.

Methodology: This population-based survey was conducted using the "WHO STEPwise approach to surveillance of non-communicable diseases" (STEPS) methodology. All the eligible subjects in systematic randomly selected households were interviewed. Standardised protocols were used to assess major behavioural risk factors (tobacco use, alcohol consumption, unhealthy diet and physical inactivity) and physiological risk factors (overweight, abdominal obesity and raised blood pressure) for NCDs. Means and proportions were calculated for measured variables and chi square test was applied to find the associations.

Results: Among 569 study subjects interviewed, almost half (48%) were aged less than 40 years and 52% (n=295) were men. The prevalence of various risk factors was; tobacco use (13.4%), alcohol consumption (14.2%), physical inactivity (51.5%), unhealthy diet (86.5%), overweight

(36.0%), obesity (21.3%), abdominal obesity (63.3), hypertension (25.3%) and pre-hypertension (47.8%). Tobacco use and alcohol consumption was significantly more prevalent among males (P value <0.05). Almost half of the study subjects were having two or more risk factors.

Conclusion: Present community based study reveals the high burden of NCDs risk factors in urban population of Puducherry and the burden was particularly higher among male. This also reiterates the need to address these issues comprehensively as a part of NCDs prevention and control strategy. Further, multi-sectoral efforts like ban on sale or raising the tax on alcohol and tobacco products, health education and communication activities, enabling environment for people to engage in physical activities and other measures to lower the burden of NCDs risk factors in community have to be encouraged.

PD-642-19 Investing in NCD prevention and control through policy interventions: insights from India

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Background: Non-Communicable Diseases (NCDs) such as cardiovascular disease, diabetes, cancer and chronic respiratory disease is on the rise in low and middle income countries leading to 80% of NCD deaths. They share four risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets. NCD burden will rise sharply in India from 40.4% of NCD-attributable deaths in 1990 to a projected 66% by 2020. The United Nations (UN) in the post 2015 UN Development agenda listed NCDs as one of the top priority. This study reviews policy interventions related to four major risk factors as 'parallel factors' in India, and tobacco control (TC) policy interventions leading as best practice, amongst all.

Design/Methods: A review of policy interventions directed at major risk factors to fight NCDs in India & the most effective policy interventions as successful examples.

Results: In the developed countries, policy interventions have greater impact at population level for multiple risk factors of NCDs as compared with treatment or individual preventive interventions. Policies on four broader 'parallel' risk factors are scattered in India. 'Tobacco use' is being restricted by provisions of Federal Legislation (COTPA) and specific state led policies. In comparison to other factors (as listed below), TC has an effective policy mechanism and efficient public health practices, whereas harmful use of alcohol goes unabated and primarily controlled by State led policies, with no concrete federal guidelines. 'Physical inactivity' and 'unhealthy diets' are not paid heed in any federal legislative developments or state led policies, they are limited to school curriculums/ focused activities or targeted groups such as healthy ageing for old, monitoring exercises during training camps, etc. TC policy interventions act as best practices for other sectors to learn from

Conclusion: A few concrete policy interventions on major risk factors of NCDs, i.e. TC policy systems act as a model

for framing successful policies for other risk factors. The results of the study will be vital for advocacy for policy based interventions, Government action/prioritization of policy interventions for NCDs prevention for all risk factors, thus reducing NCDs related burden in the country.

PD-643-19 Smoking and dental caries experience in Indonesian men: analysis of Basic Health Survey 2007

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Background: Though studies that evaluate the association between smoking and dental caries experience have been done in other countries, such a study is relatively rare in Indonesia. This study is aimed to evaluate the association between smoking and dental caries in Indonesian men.

Design/Methods: This cross sectional study used secondary data from Basic Health Survey (BHS) 2007 by Ministry of Health. Data on socio-demographic characteristics and smoking behaviour were collected by well-trained interviewers who also examined number of decayed, missing and filled teeth or DMFT. 228,563 respondents were used as samples of the study. The inclusion criteria were males aged 12 – 60 years whose smoking status is never smoker or regular smoker. The exclusion criteria were they who have no data on DMFT. Smoking intensity was measured by exponential function of average number of cigarette smoked per day and duration of regular smoking in years or Brinkman Index (BI). High dental caries experience was defined as DMFT \geq 6. Adjusted odds ratio (OR) was calculated by logistic regression analysis to estimate association between BI and DMFT \geq 6 among study men.



Results: From among 228,563 male respondents selected, 47.3% were never smokers and the rest 52.7% were regular smokers. 20.2% of these respondents have DMFT \geq 6. The proportion of DMFT \geq 6 was significantly associated with the following variables: living in Kalimantan area (OR =4.43), have older age (OR of 51-60 years = 11.52); length of education \leq 9 years (OR = 1,32); non formal occupations (OR = 1,24); frequency of tooth brushing \leq once a day (OR = 1,87), smoking intensity which is elaborated

as BI 200-399 (OR=1.50); BI 400-599 (OR = 1.66); BI \geq 600 (OR = 1.96).

Conclusion: The proportion of DMFT \geq 6 among Indonesian men aged 12-60 years increased with the smoking intensity (BI). Indonesian Dental Association -together with other health Association- should encouraged Indonesian Government to ratify WHO FCTC into Indonesia national law. Indonesian dentists should perform screening of tobacco smoking and quit smoking counselling to their patients.

PD-644-19 Metabolic changes after smoking cessation: cause for concern?

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Background: While much of the interest in the relationship between weight change and smoking cessation has focused on weight gain, several studies have also reported differences in the metabolism of ex-smokers. The aim of this study was to evaluate the changes after smoking cessation of the components of the metabolic syndrome as well as insulin, weight and body mass index (BMI).

Methods/design: A group of 48 smokers who attended a Tobacco Cessation Clinic, 24 women and 24 men, mean age of 49.4 \pm 10.9 years were included; they smoked a mean of 19.92 \pm 9.26 cigarettes per day and had smoked 33.23 \pm 17.89 packages per year during 33.4 \pm 10.69 years. All participants were included in a treatment group based on Cognitive Behaviour Therapy; the target quit day was scheduled for week 3 through abrupt cessation. Abstinence was confirmed with exhaled CO levels. Blood pressure (BP), weight, and waist circumference were evaluated weekly. Blood samples were taken on week 1 (still smoking) and 10 (seventh week post cessation). Glucose, triglycerides (TGC), high density lipoproteins (HDL-C), and insulin were determined in duplicate. We include a control group of 96 healthy non-smokers who attended a check-up unit, paired by age and sex in a 1:2 ratio.

Results: Weight and BMI found in heavy smokers were not lower when compared with non-smokers, both groups showed a BMI over 25. Smokers showed higher blood pressure (BP), TGC, insulin and lower levels of HDL-C than non-smokers. Comparing male vs female smokers, the first had more cardiovascular risk. Waist circumference was smaller in women than in men, but the mean value exceeds the limits established by the International Diabetes Federation. After cessation TGC and insulin showed an appreciable increase in men older than 55 years, in contrast a decrease was observed in women. Weight and BMI showed a statistical increase at the end of the treatment in both sexes.

Conclusion: Apparently smokers reach an “equilibrium” which is break up by abrupt cessation, generating a series of metabolic alterations, more important for men older than 55 years and with pre-existing chronic diseases; those changes in turn could jeopardize their health. In this group cessation must be gradual, accompanied by pharmacotherapy, monitoring weight and the components of the metabolic syndrome through laboratory studies and with close clinical follow up. Smoking cessation is always the best decision but in some men we must worry about the outcome.

PD-645-19 Progress of tobacco control policy in Europe: a one-dimensional process?

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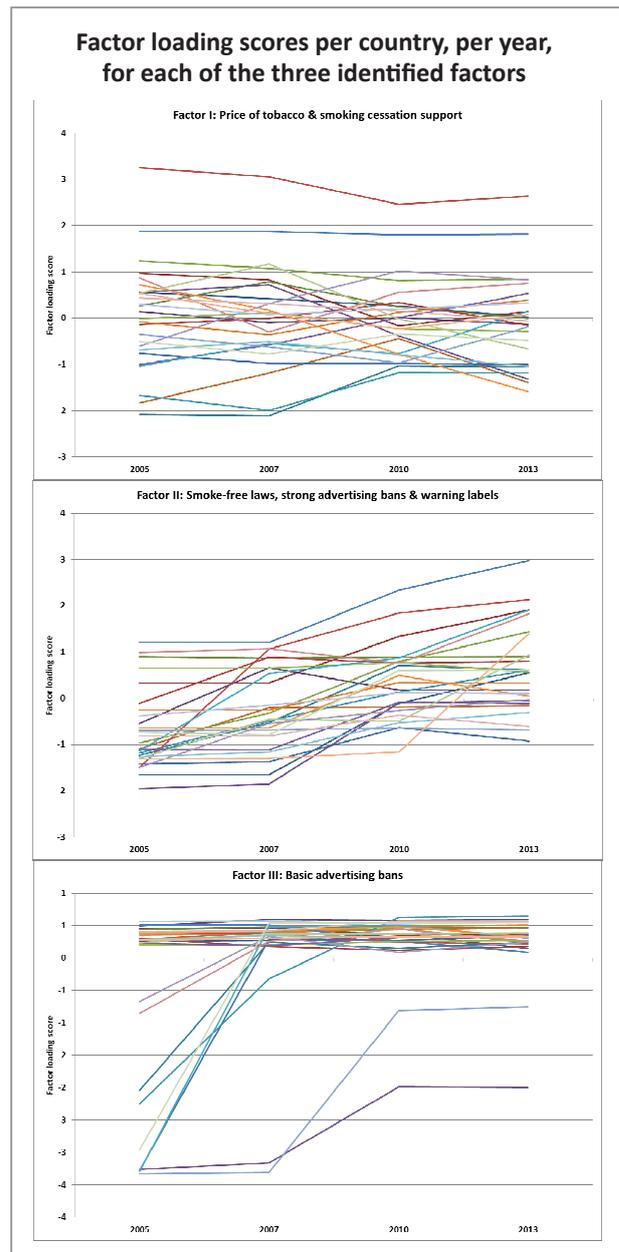
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Background: Since the initial publication of the Tobacco Control Scale in 2006, it has become an important tool to monitor tobacco control policy in Europe. However, the progress measured by the TCS is one-dimensional, while developments in Europe imply this might be more complicated. The aim of this paper is to assess whether progress in tobacco control in Europe consists of different components.

Design/Methods: We used data from all 27 EU member states for 2005, 2007, 2010 and 2013, from the original TCS publications with recalculated scores, based on the 2013 methodology. The scores for 11 separate policies of the TCS related to prices, smoke-free laws, advertising bans, warning labels and smoking cessation support were entered into a principal components analysis, with an oblique rotation (oblimin).

Results: The final model contained three factors. The first factor captures joint variance in the price of tobacco and cessation support. This factor shows the most variance between countries, with the UK and Ireland leading the pack in all years, whereas other countries showed both improvements and setbacks. The second factor captures joint variance in the smoke-free laws, most advertising bans and warning labels. This factor shows strong variance over time, where most countries improved from negative scores in 2005 and 2007 to positive scores in 2010 and 2013, with a few exceptions. The third factor captures joint variance in the ban on advertising both outdoors, in print media and in cinemas. Most countries have stable, positive scores on this factor, five countries caught up with these other countries by about 2007 while in 2013 only Germany and Greece lagging behind.

Conclusion: With our study of trends in European countries, we have identified three distinct components of the Tobacco Control Scale. With these components we provide a new, more informative instrument to monitor progress in tobacco control policy in Europe, complementary to the TCS.



PD-646-19 Environmental tobacco smoke as a risk factor to increasing respiratory childhood infection and pneumonia in the South-West region of Nigeria

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Background: There is consistent evidence that children exposed to environmental tobacco smoke (ETS) have higher incidence of asthma, ear- and throat disease, worsening of asthma symptoms and lung symptoms as cough, wheezing and pneumonia. A child exposed to ETS has about 30% higher risk of absence from school due to illness. Evidence clearly implicates (ETS) as a cause of lung cancer, excess respiratory disease, and cardiovascular disease mortality in non-smokers. Few studies have looked at the interaction of tobacco use or ETS exposure with occupational and ambient air pollution (both indoor and outdoor) in contributing to chronic obstructive pulmonary disorders in developing countries, or the importance of ETS as a risk factor for the already high burden of childhood respiratory infections.

Objective: The objective of this study is to consider exposure to Environmental Tobacco Smoke as a risk factor to increasing respiratory childhood infection and pneumonia in the south west region Nigeria.

Method: A descriptive cross sectional study was carried out in 5 states (Ogun, Lagos, Akure, Oyo and Ekiti). A multistage cluster random sampling was employed to select 450 families in each state. Data was collected using structured questionnaires by trained interviewers.

Result: About 2113 records were available for analysis. There were 1298(60.7%) males and 815(38.1%) females aged 10 and below. A Majority, 807(38.0%) live with both parents, 213(10.0%) live with mother alone while 265(12.5%) live with relatives. The prevalence of children exposed to ETS in the southwest region Nigeria was 73.2%, the study further revealed that 28.5% of children in this region with respiratory childhood infection are exposed to environmental tobacco smoke and 18.4% pneumonia cases are attributed to ETS. However, (122, 14.7%) parents or relatives don't see a problem with using tobacco products. It is also clearly stated that about 46.9% cases of respiratory childhood infection and pneumonia combined are caused by ETS in the south west region Nigeria.

Conclusion: Since environmental tobacco smoke has this much negative effects on children in the south west region Nigeria. Efforts should be tailored towards protecting children from ETS to reduce the rate of children exposed to ETS, thereby curbing or reducing respiratory childhood infection and pneumonia in Nigeria

PD-647-19 Establishing a health promotion fund in a lower-middle income country: early lessons from the Philippines

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Background and challenges to implementation: There is an epidemiologic shift in the burden of disease in the Philippines: the past decades showed a steady decline in deaths attributed to communicable diseases, while non-communicable diseases (NCDs) are becoming the top killers of Filipinos. The social and economic effects of this NCD crisis are catastrophic – a significant majority turn to the government for help. The Philippine government is now faced with a critical dilemma on how to allocate very scarce resources in context of a poor nation dreaming of Universal Health Care. This policy paper sets out the general background and the strategic need for Health Promotion (HP) in a lower-middle income country (LMIC) facing an NCD crisis. It explores historical developments in HP, culls evidence on the benefits and enumerates the challenges of investing in HP in a LMIC.

Intervention or response: Experts and representatives from the Philippine Department of Health, World Health Organization, the academe, and the civil society were consulted through workshops and meetings. Related literature was reviewed to establish evidence on the effectiveness and relevance of HP in a LMIC. Key informants involved in successful HP models in other countries were consulted. The best practices for existing HP in the Philippines were documented. The results of these consultations and research became the basis for early efforts to establish a HP Fund in the Philippines.

Results and lessons learnt: HP is the most cost-effective intervention for a NCD crisis. Best HP strategies from local government units, private institutions, and civil society organisations could be replicated on a national level. These interventions range from establishing groups composed of elderly citizens implementing local ordinances to the possibility of establishing walking lanes and parks in a low-resource setting, among others. The role of HP in the health system must be clearly defined.

Conclusions and key recommendations: In the short term, the Philippines must strengthen the capacity of the National Center for Health Promotion. In the intermediate period, research on health promotion has to be conducted to ensure policies and legislation for health promotion are backed by evidence. In the long-term, the ideal scenario for Health Promotion in the Philippines is for the establishment of a Health Promotion Fund. The results of this study could be the framework for efforts to establish an HP Fund in other LMICs.

05. ILLICIT TRADE AND COUNTER MEASURES

PD-648-19 Impact of chewing tobacco ban in Chennai, India

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Background: Chewing Tobacco was banned in India and came into effect in the state of Tamilnadu, from May, 2013. The current study is to find out the impact of the ban in Chennai city on the availability, supply, sale and price of the banned products.

Design/Methods: Stratified Simple Random Sampling method was used to identify the shopkeepers. Chennai city is divided into 15 administrative zones; one main road and one busy street branching from the main road were identified from each zone. An investigator observed 6 different randomly chosen shops in each zone (permanent, platform and bunk shop) for 30 minutes during peak hours. If any sale of banned products were noticed, then the investigator collected the data after obtaining oral consent from the shopkeeper. A total of 90 shopkeepers, 30 from each type of shop were interviewed from January to April, 2014.

Results: All the shopkeepers were aware of the ban and hence no open displays of banned products were found. The products were procured from whole sale market (58.9%) or supplied by agents (41.1%). Shopkeepers reported difficulty selling the products (83.3%) and were subjected to government raids (81%). There was a significant reduction in the number of sachets sold per day after the ban (pre (85.56±50.72), post (63.3±40.68), t(89)= 6.37, p=.005). The per sachet price of the top 4 products have reportedly increased drastically (MDM (33% to 300%), Hans (20% to 166%), Manikchand (37% to 166%)). The price of unpackaged chewing tobacco (Mava) increased up to 100%. Despite the increase in price, reduction in sale coupled with penalty charges have led to losses as reported by shopkeepers (67.8%). Despite the ban on sale of tobacco products within 100 yards of educational institutions, 23% of the shops surveyed were near educational institutions.

When enquired about their opinion on ban, shopkeepers responses were “there is no difference”, “no effective enforcement”, “ban is of no use unless production and supply is stopped”, “smoking has increased”, “price has gone up and loss to the consumers.

Conclusion: Though the ban had an impact on demand reduction, the availability and accessibility continues. Stringent enforcement is required to maximize the impact.

PD-649-19 Consumer brand preference of tobacco products in Mizoram, India

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Background: As tobacco control measures intensify in Mizoram, a Northeast Indian state with the highest consumption rate of tobacco in the country, it is expected that demand for illicit tobacco products will increase through the well-established smuggling route, the porous international border the state shares with Burma to the east. Especially for price-sensitive users, increased taxation on Indian cigarettes and tobacco products may only shift brand preference to local (unbranded) and illicit foreign products without having any real influence on absolute rate of tobacco consumption. It is therefore imperative to find out the current brand preference of tobacco users in the state.

Design/Methods: Cross-sectional primary data collection through survey using questionnaires in Aizawl. 707 (468 males and 239 females) tobacco users between the ages 14-72 were interviewed.

Results: 67.8% (n=480) respondents used smoked form of tobacco out of which 91.8% (n=441) were males. 41.3% (n=292) were current users of smokeless tobacco and 88% (n=221) were females. 57.3% (n=275) of smokers preferred Indian cigarettes and 51% preferred Silk Cut to other brands. Foreign brands were consumed by 30% (n=143) of all smokers. Farstar is the most popular brand (59%). 60% of all smokeless tobacco consumers used Sahdah (local tobacco mixed with lime put in between the gums and the buccal mucosa). 82% of all smokeless tobacco users preferred local products to manufactured products.

Conclusion: At present, Indian cigarettes are preferred over foreign cigarettes by most Mizo smokers. Farstar (foreign) and Silk Cut (Indian) cost the same (Rs. 30 for a pack of 10), however other foreign cigarettes available in the market are much cheaper. Stricter regulations including ban on sale of foreign cigarettes must be enforced to prevent brand switching due to price factor. Coordination with law enforcement agencies is warranted to regulate local tobacco factories and sale of such products.

PD-650-19 The multi-sectoral approach on tobacco control: best practice from the field in Tamilnadu

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Background: Tamilnadu comes under phase I state for implementation of National Tobacco Control Programme (NTCP) since 2007 with the objective to create public awareness about the harms of tobacco use and institutionalise enforcement through effective implementation of national legislation. The implementation of NTCP requires well-coordinated multi-sectoral action to ensure synchrony of efforts and synergy of effect among various stakeholders groups responsible for different activities. In Tamilnadu, collaboration with multi sectoral partners resulted in strengthening the implementation of tobacco control.

Intervention and lesson learnt: The following are the intervention based responses in the field in Tamilnadu:

- Enforcement mechanism formed in collaboration with health, police, education and local bodies etc for inspecting the public places and take action against the violations under COTPA, 2003 at State, district, block and village levels.
- Food safety department banned all forms of chewable tobacco products in Tamilnadu.
- Education department established a policy in declaration of all educational institutions as 'Tobacco Free', and in order to disallow the tobacco company from targeting youth and children, school education department passed government order banning all the educational institutions from participating in the tobacco promotional events.
- Health department monitors tobacco control laws as well as established regulations in issuing sanitary certificates with 'Tobacco Free Rules'.
- Bidi which was tax exempted earlier was imposed 14.5% VAT by commercial tax department.
- Several village panchayats unanimously passed a resolution to ban the entry and consumption of tobacco products.
- Public transportation is smoke free. They have also banned indirect advertisement of tobacco products in public transports.
- Postal department released special cover about ill-effects of tobacco use.
- Embassies declared their workplaces as 'Tobacco Free Premises'.
- Media advocacy and support serves as an effective tool in spreading mass awareness campaigns and monitoring tobacco control.
- 6 villages entirely banned sale and use of tobacco products.
- Tobacco cessation centres established at primary health centre.

Conclusion: To conclude, no one does tobacco control alone. Many instances have proven that collaboration with multi-sectoral partners provided a way for effective implementation of tobacco control. With these effective partnerships, Tamilnadu is marching forward to create a tobacco-free generation.

PD-651-19 Effective GO-NGO collaboration is a key for success in tobacco control: a case study from Himachal Pradesh in India

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Background and challenges of implementation: Himachal Pradesh (Pop: 7 million, Area: 55,673 km²) is a state in northern part of India. Despite the Indian tobacco control legislation (COTPA), the state was been facing huge tobacco burden. More than one-fifth of adult population in the State is tobacco user. State was not covered under India's National Tobacco Control Programme; as a result the state had major resource constraints in terms of manpower, finance and technical expertise. However, an effective collaboration between the state government, HPVHA, a local NGO, and The Union, an international organisation, worked very well and state became a model for tobacco control in India.

Intervention or response: HPVHA generated massive awareness among general public about the issue and strategically carried out political advocacy with policy makers. The Union provided funding and technical assistance. Government issued relevant circulars, notified squads and simplified the enforcement procedures. Government also authorized HPVHA officials to issue notice to the violators.

Results and lessons learnt: Collaborated efforts resulted in setting up of an institutional framework for implementation of tobacco control policies. Stringent enforcement was carried out across the state. Till May 2014, more than 80,000 violations has been reported and near Rs 9 million has been collected as fine amount which is further utilised for tobacco control activities. TAPS violations at points of sale are nearly rooted out from the state. First conviction in the country under for TAPS violations, pictorial health warnings on tobacco packs and gutkha ban was carried out in the State. HPVHA successfully countered the tobacco industry's attempt to open the 1st bidi factory in the state. Himachal Pradesh was declared "smoke-free state" based upon the results of compliance survey in July 2013 by Health Minister of the state. The WHO awarded HPVHA and State government in the year 2011 and 2012 respectively for effectively implementing tobacco control policies.

Conclusion and key recommendations: A synergistic and complimentary approach, mutual trust and strategic collaboration between Government and NGOs are always

vital for successful implementation of any public health initiative as demonstrated in State of Himachal Pradesh. This model can be replicated in other states in India or other developing countries with similar settings.

PD-652-19 Illicit cigarette consumption and government revenue loss case study: East Java and Central Java Province, Indonesia

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Background: The goal of this study is to determine the magnitude of illicit cigarette consumption and the associated excise tax revenue loss in Indonesia. Unlike other ASEAN countries that report significant cross-border illicit cigarette trade, Indonesia's main concern is illicit domestic cigarette production.

Design/Methods: The household survey was conducted on November, 2010 till January 2011. The total number of respondents in East and Central Java Province was 2,394. The interviewers collected empty pack from the respondents to be identified by the researchers whether the pack was illicit or not.

Results: A household survey revealed that 4.8 percent of respondents possessed an illicit cigarette pack - 2.3 percent in Central Java and 7.2 percent in East Java. Smokers that owned an illicit cigarette pack were mostly older (65 years and above), lived in a rural area, had low education (below elementary), low income, and smoked more cigarettes per day compared to those who possessed a licit cigarette pack. Prices of illicit cigarettes are very low, with most in the lowest price band of Rp 1,000 to Rp 4,000 per pack range (US\$ 0.1-0.4). In 2010 it is estimated that the government loss between Rp 198 billion (USD 21.9 million) and Rp 587 billion (USD 65.3 million), or between 0.3% and 0.9% of the total excise revenue, due to illicit cigarette production in these two provinces where 29% of the Indonesian population live.

Conclusion: We conclude that the scope of the illicit cigarette consumption is small compared to the other countries in South East Asia. The illicit cigarette was mostly consumed by low income and low educated people. The existence of illicit cigarette that especially produced by small scale industries has provided more choice for the smokers so that they are easily to switch to illicit cigarette if the legal cigarette price hikes. The government should take stringent measures to curb with illicit cigarette, so that the government loss could be reduced. Further research on cross-border illicit cigarette trade especially in border areas needs to done to complement this study.

PD-653-19 Corruption and illicit cigarette demand: panel data analysis

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Background: Illicit cigarettes consumption has serious implication on government tobacco control measures. It undermines tax and price policies and other tobacco control measures such as youth access laws or mandatory health warning labels. On average the share of illicit cigarettes consumption is higher in low and middle countries compare to higher income countries. Tobacco industries claim that increase legal cigarettes price due to higher cigarettes tax lead to increase availability of illicit cigarettes. However, studies show that there are other factors than tax and price which are more important determinants of illicit cigarettes consumption.

Design/Methods: Secondary Data Analysis for 73 countries from year 2008-2012. Applying Traditional Panel Data Analysis using Random Effect.

Results: Control of corruption and real price of legal cigarettes after tax are significant variables in determining world illicit cigarettes consumption. However, the coefficient for control of corruption (-1.77) is elastic compare to inelastic coefficient (0.67) for real price of cigarettes after tax. Increase 10% control of corruption leads to 17.7% reduction in illicit cigarettes consumption; meanwhile increase 10% in real price of cigarettes after tax only increase 6.7% of illicit cigarettes consumption. Thus more effort by the governments to improve control of corruption will have stronger impact on reduction of illicit cigarettes consumption. However the effect of real income in this study is insignificant in determining illicit consumption.

Conclusion: Argument that tax increases which leads to higher legal cigarettes price is a main determinant that raise illicit cigarettes consumption is not true in this study. Better control of corruption is an important determinant that leads to reduction in illicit cigarettes consumption. Therefore more effort by the governments in corruption control should be able to reduce demand for illicit cigarettes.

PD-654-19 Measures to control the tobacco supply chain in the Southeast Asia Region

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Background: Elimination of illicit trade is an important component of global tobacco control. This has been recognized when Parties to the FCTC adopted the Protocol to Eliminate Illicit Trade in Tobacco Products to prevent the undermining effect that illicit trade has on price and tax measures, health objectives, and the economy. This research examines the implementation of key measures to control the supply chain and help in eliminating illicit trade in tobacco products in the ASEAN region, specifically, (1) excise tax stamps (2) tracking and tracing technologies (3) licensing systems.

Design/Methods: Secondary data analysis and interviews with resource persons from the government and civil society organisations in Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand, and Vietnam.

Results: Research and analysis show that there are varying degrees in the implementation of the measures to control the supply chain in the countries in the ASEAN. For example, most countries have some form of excise tax stamps to monitor payment of excise tax. But, the form and technology depends on the capability and the situation in each the country. Licensing systems are present in countries that participated in the research but the requirements do not cover all the commercial activities in the manufacture and distribution of tobacco. Most countries also do not have a tracking or tracing mechanism in place, which also identifies a need and a technical and financial gap that needs to be addressed.

Conclusion: Considering that the region is a destination and transit point for illicit trade in tobacco products, countries in the ASEAN should consider reviewing and revising their policies to address the gaps in implementation, strengthen enforcement of measures, and coordinate efficiently to address the issue of illicit trade in tobacco products. Lack of capacity to implement measures to control the supply chain is a hindrance. But, the issue of illicit trade crosses boundaries and mutual cooperation among countries and the transfer of technical, scientific, and legal expertise is a necessary component. Lack of capacity of countries also becomes an entry point for the tobacco industry to provide assistance for implementation. Hence, concurrent with capacity building, there is a need to strictly implement measures to prevent tobacco industry interference through policies that prohibit unnecessary interactions or partnerships with the tobacco industry.

PD-655-19 Economic costs attributable to smoking in Tanzania

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The study presented here estimates the total health cost attributable to smoking in Tanzania. Cost is classified as direct and indirect and is based on a survey conducted at a referral University hospital in Dar es Salaam, Tanzania. A sample of 123 patients -59 outpatients and 63 inpatients - were interviewed. 76.8 percent of the surveyed patients are aged 40 years and more. Assuming a 2% prevalence rate of cardiovascular-cancer disease and a population of 49.2 million (2013) in Tanzania, we estimated that there are 940 thousand cardiovascular patients in the country. The proportion of ever-smokers among the surveyed patients was found to be 25 percent yielding 240.4 thousand patients who suffer from tobacco induced cardiovascular diseases. The age distribution of these patients reveals that 71% of the patients as being aged 40 years and above. Age standardised per capita annual expenditure per patient is esti-

mated to be 420 US dollars and total annual expenditure was estimated to be 118.7 million US dollars. Inpatient cost was 23.4% higher than outpatient while direct cost was 55.2% higher than indirect cost. On a per capita basis more direct and indirect cost is incurred on males compared to females; more is spent on the elderly (40 or more years) compared to the youth (less than 20 years). When compared with the mean annual household income of the surveyed population, the smoking induced per capita expenditure constitutes 35% of annual income. The above total cost may be an underestimate; health professionals in Tanzania suspect that the 2 percent prevalence rate may be low. Besides, many patients suffering from smoking related diseases belong to low income group; they may not have access to health facilities and are unreported. Other smoking-related diseases such as hip fracture and gum diseases are not included. The effect of second hand smoking within a household (mean household size is 5.3 persons) is also not considered. For a poor country like Tanzania, an annual smoking induced total healthcare cost of 118.7 million dollars is substantial.

PD-656-19 An analysis of purchase price of legal and illicit cigarettes in low- and middle-income countries

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Background: Illicit trade of tobacco products is a global problem that undermines tobacco control policies. The urgency of this problem is evidenced by the adoption of The Protocol to Eliminate Illicit Trade in Tobacco Products to the FCTC in 2012. The present study describes differences in average purchase price of legal and illicit cigarettes in 9 low- and middle-income countries.

Design/Methods: The study used data from a surveillance study on tobacco packaging and labelling conducted in 2013 in which one of every available unique cigarette pack was systematically purchased in 9 countries. Cigarette packs from Bangladesh, China, India, Indonesia, Mexico, Philippines, Thailand, Turkey, and Viet Nam were organised into "legal" and "illicit" cigarettes based on the presence of health warning labels issued by the country in which the pack was purchased. Linear regression was used to compare the average purchase price between legal and illicit packs within each country, controlling for the number of sticks in each pack.

Results: Out of a total of 1,678 unique cigarette packs collected in 9 countries, 26.1% of the packs were deemed to be illicit, ranging from none in Indonesia to 70.7% in Bangladesh. Of the illicit packs, many packs were void of any type of health warning and others displayed the incorrect health warning for the country in which it was purchased.

Results reveal that by country, the purchase price of illicit packs in Bangladesh, India, Thailand, and Viet Nam was significantly higher than the average price of legal packs ($p < 0.001$). The largest difference between average purchase price of legal and illicit packs (\$1.95 USD) was found for packs purchased in Bangladesh. The inverse relationship was found for packs purchased in Turkey, where the average purchase price of legal packs was \$1.65 USD more than the average price of illicit packs.

Conclusion: We found significant country-level differences in the nature of the global illicit trade problem vis-a-vis cigarette purchase price. In countries with an abundance of low-cost legal cigarettes and where affordability is generally increasing due to lack of tax increases and increased purchasing power, there may be reasons other than high price that are driving the sale of illicit cigarettes. Further research is needed on the price and features of illicit packs in order to combat the problem and ensure the public health benefits from tobacco control policies are not weakened.

PD-657-19 Who smoked illegal cigarettes in Uruguay between 2006 and 2012: findings from ITC-Uruguay surveys

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Background: The Uruguayan tobacco products market could be characterised by the existence of three products, factory-made legal cigarettes, factory-made illegal cigarettes, and roll-your-own tobacco. This study is aimed to identify the characteristics of smokers of illegal cigarettes and what changes have occurred between 2006 and 2012 with this type of smoker. Characterise people who purchase illegal cigarettes and determine which consumers' characteristics are associated with those who more likely change to illegal cigarettes.

Design/Methods: Data were analysed from the three administrations (Waves 2006, 2008, 2010 and 2012) of the International Tobacco Control Policy Evaluation (ITC) Uruguay Survey. Data collection took place during the major tax increases in Uruguay. Methods of descriptive statistics, cross correlations and econometric models were used to determine consumer's characteristics of illegal cigarettes brands.

Results: In 2006 older women and men with less education and have lower income prefer cheaper tobacco products like illegal cigarettes. The proportion of women that consumed illegal cigarettes follow an increasing pattern up to their 40's and then decreased, and this pattern is the same in 2012. Women in their 40's are the higher proportion of smokers of illegal cigarettes, reaching 23%. In 2006 the proportion of men below their 30's that consumed illegal cigarettes was a minority; men below their 30's were 7% and those between their 30's and 40's were 10%. In 2010 both age groups of men were 20% each, i.e., young men started to smoke illegal cigarettes. People living in border cities near Argentina and Brazil are more likely to consume illegal cigarettes.

Conclusion: Some smokers change their purchasing behaviour to minimise the effect of relative price increases by switching to cheaper cigarettes, such as illegal cigarettes undermining the tobacco taxation policy. The strategies used by smokers to minimise their spending on tobacco products depend on their socioeconomic characteristics like gender, age, education, marital status or where they live. In order to strengthen the tobacco control policy in Uruguay cessation programmes should increase their scale and focus on targeted groups taking into account where they live and socio-economic characteristics of these people. Moreover ratify and implement the protocol of illicit trade of tobacco products is necessary in order to counteract the increased consumption of illegal cigarettes.

PD-658-19 Working with regulatory services to maximise tobacco control delivery

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Background: The UK has a comprehensive range of tobacco control measures to regulate the licit tobacco market including prohibition of sales from vending machines, point of sale retail display legislation, age of sale restrictions, probable legislation around standardised 'plain' packaging and improved product labelling and warnings as part of the forthcoming revised European Union Tobacco Products Directive. This is enforced by a range of bodies including the Trading Standards (TS) service of local government. TS are responsible for market surveillance of consumer goods and have increasingly championed tobacco control activity in the licit and illicit markets. FRESH, the UK's first regional tobacco control programme has worked to increase TS knowledge and understanding of the need for tighter regulation and to support effective local enforcement of current regulations across all 12 TS departments in the North East of England.

Design/Methods: Reducing tobacco promotion, reducing sales and access to licit and illicit tobacco and wider tobacco regulation have been key components to the FRESH comprehensive tobacco control programme since its launch in 2005. FRESH has provided a range of resources, training and strategic guidance to TS around various regulatory issues and on an annual basis has supported each department with delivery planning. In parallel to this, FRESH has worked to develop a common understanding amongst regulatory colleagues of the need to go further and to recognise that this consumer product, whilst legal to use, will continue to kill half of its long term users. In 2014 FRESH launched a dedicated new Tobacco Regulation Forum to increase momentum around this area.

Results: All 12 local government councils in the North East have an annual tobacco control delivery plan in place which includes work across various tobacco regulation issues and TS are part of each of the 12 local tobacco alliances. The Forum is providing a unique opportunity for current regulators to share effective practice and explore 'end game' thinking and what their contributions could

be around future new radical regulation. There is growing support for protecting regulation from the vested interests of the tobacco industry.

Conclusion: Regulatory colleagues play a crucial role in wider tobacco control efforts to reduce prevalence and

narrow health inequalities. They can provide a unique perspective and should be actively engaged in discussions around 'end game' for tobacco.

06. STEPS IN DEVELOPING THE CASE FOR TAX REFORM

PD-660-19 Differences in survival probability in patients with tobacco-related cancers assisted at the Brazilian National Cancer Institute (INCA)

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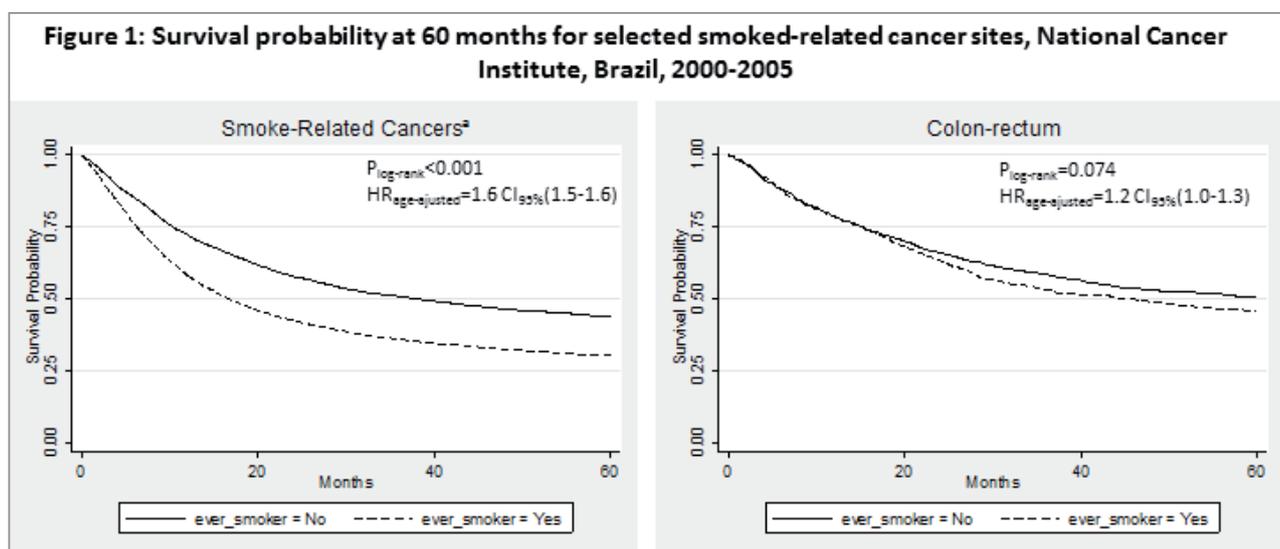
Background: Oropharynx, larynx, oesophagus, stomach, kidneys, urethra, bladder, uterus, colon and rectum and trachea, bronchus and lung were listed in "The health consequences of smoking-50 Years of Progress," as sites of cancers related to use of tobacco. In Brazil, the prevalence of smoking is decreasing, but part of the magnitude of past exposure reflects the current incidence of tobacco-related cancers. In addition, other comorbidities related to smoking can affect the survival of cancer patients. The aim of this study is to compare the probability of survival at 60 months among never-smokers and ever-smokers patients with tobacco-related cancers.

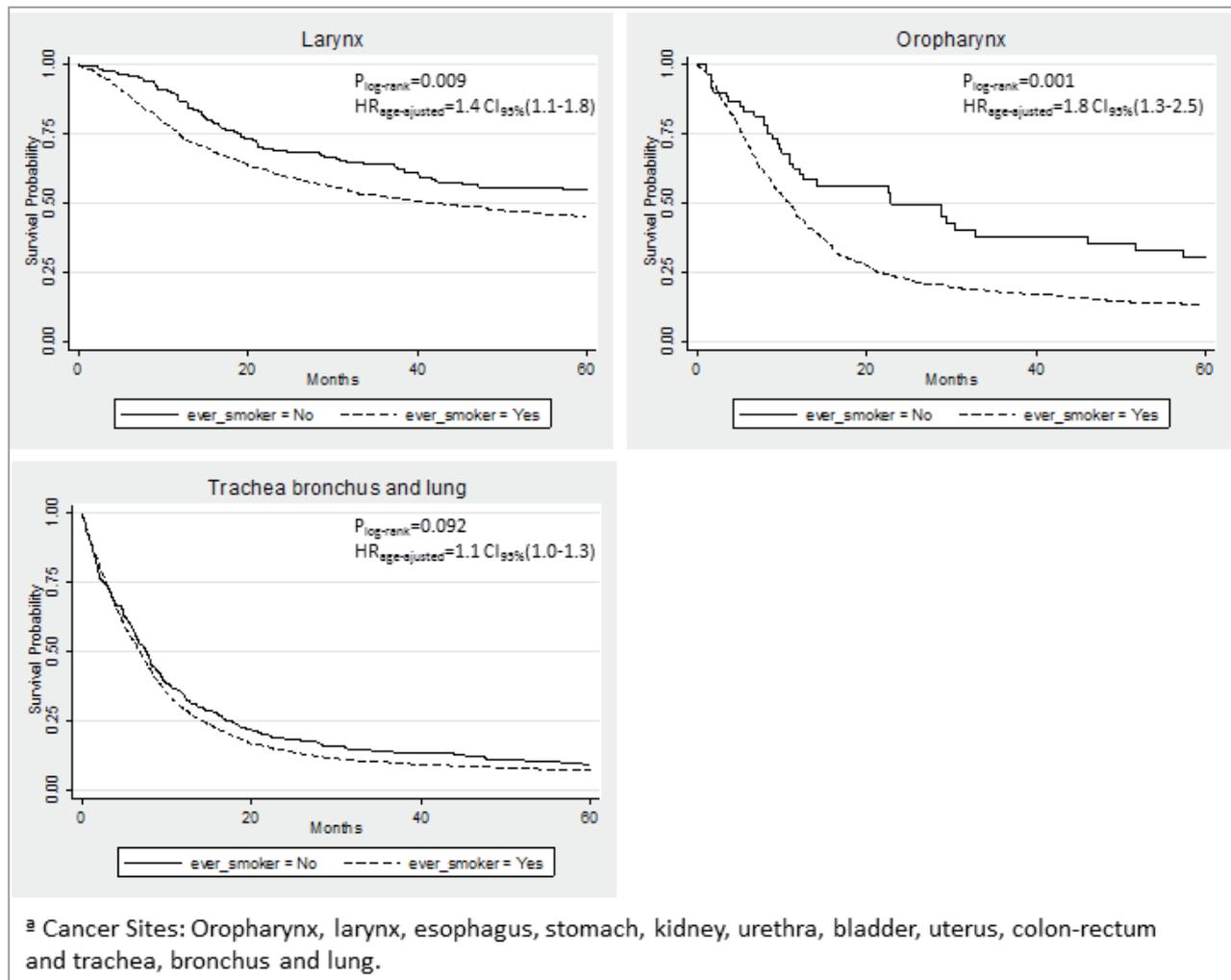
Design/Methods: A cohort study was carried on among 14,220 patients with tobacco-related cancers assisted at INCA, diagnosed from 2000 to 2005, aged 30 years old or more, aiming to establish the survival probability at

60 months (SP60). Data were collected from the Hospital Based Cancer Registry (HBCR) database. SP60 was calculated using the Kaplan-Meier estimator by cancer site and smoking status. The log-rank test was used to determine the existence of statistically significant differences ($p < 0.10$) between the estimated curves by smoking status. Cox models were developed to estimate the age-adjusted Hazard Ratios for cancer sites considering smoking as the exposure.

Results: The prevalence of all ever-smokers ranged from 41% (colon and rectum and uterus) to 93% (oropharynx). Statistically significant differences in SP60 between smokers and non-smokers were observed for: colon-rectum, oropharynx, larynx and trachea, bronchus and lung cancers. For all cancer sites studied, SP60 estimate was lower among ever-smokers compared to never-smokers. The largest difference was observed for oropharynx cancer, where the SP60 for ever-smokers is 56% lower than the same estimates for never-smokers. The results of age-adjusted Cox models indicate that the risk of death over 60 months by any of cancer sites studied, is always higher for ever-smokers compared with never-smokers (Figure 1).

Conclusion: The findings of this study support the existence of harmful effects of smoking on the survival probability after tobacco-related cancers diagnosis. The results point out that there is a potential to increase the probability of survival even after tobacco-related cancers diagnosis. Thus, to improve tobacco-related cancers survival, it is prudent to encourage all smokers quit smoking.





PD-661-19 Inequalities in impact of tobacco control policies in Brazil

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Background: Smoking prevalence in Brazil is highly related to socioeconomic situation (SES). Low SES groups have higher smoking rates and lower quitting rates. There is good evidence of what are effective measures in reducing smoking prevalence and consumption. These measures are endorsed on WHO-FCTC Articles. Nevertheless there is a lack of evidence on the equity impact of tobacco control measures an important knowledge to improve health of the poorest. This study addresses the impact of tobacco control measures according to educational level in Brazil.

Design/Methods: Percentage of people's with restriction rules at home, cessation treatment, awareness in warning health labels and tobacco advertisement were calculated by education level (≤ 7 and 8-11 of schooling and at least one year of university). Data came from Global Adult Tobacco Survey (GATS), conducted in 2008 in 39,427 individuals and households. As an indicator of the health impact of tobacco consumption and policies we estimated Lung Cancer (LC) mortality rates in Brazilian population 25 years or older according to educational level (less than 8 years and 8 or more) in the period between 2001 and 2011.

Results: Lower education level people have higher compliance to smoking at home and higher exposure to SHS at work than people from higher education level. Current smokers and ex-smokers from higher education groups were less advised to stop smoking when visiting a doctor or a health care facility in the past 12 months than their counterparts. Awareness of either pro- and anti-tobacco media messages and health warnings on tobacco packs were lower among lower education level group. Inequality of tobacco control policies impact is clearly portrayed in mortality rates by LC according to education. The differ-

ence in the risk of dying from this disease was at least 2 times higher among persons less than 8 years of schooling compared to 8 years or more of schooling during all the years analysed. In 2011 it was 3.8 times higher for lower than highest education group.

Conclusion: Tobacco control policies are less effective among people with lower education. Smoking cessation approach seems to be the only exception perhaps due to Public Health System cessation programme. Strengthening tobacco prevention measures focusing on the population of lower socioeconomic level is the only way to decrease inequalities in health caused by smoking.

PD-662-19 International tobacco control policy evaluation project (ITC project): summary of recent findings

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Background: The ITC Project was created in 2002 as an international research and evaluation platform for measuring and understanding the psychosocial and behavioural impact of tobacco control policies and other population-level interventions (e.g., mass media campaigns). The longitudinal design also allows for studies of the natural history of tobacco use and of the factors that affect quitting vs. continued smoking/tobacco use. The ITC Project is now a consortium of over 100 researchers across 22 countries inhabited by over 50% of the world's population and over 70% of the world's tobacco users (Canada, United States, United Kingdom, Australia, Ireland, Republic of Korea, China, Thailand, Malaysia, New Zealand, India, Bangladesh, France, Germany, The Netherlands, Mexico, Uruguay, Brazil, Mauritius, Zambia, and Kenya).

Methods: The primary research method is the longitudinal cohort survey. In each of the 22 countries, probability samples of tobacco users are surveyed every 1-2 years, using an extensive survey instrument that includes questions that are identical/functionally equivalent across all countries. In each country, the cohort includes cigarette smokers; in countries where there is significant use of other tobacco products, there are versions of the ITC survey for those products (e.g., in India and Bangladesh, there are bidi and smokeless tobacco surveys, in addition to the cigarette version). All ITC surveys are guided by the same conceptual model, which incorporates theory-driven measures of policy impact from each of the FCTC policy

domains (e.g., health warnings, smoke-free, TAPS, price/tax, cessation, regulation, education). The longitudinal design with quasi-experimental controls provides strong possibilities for rigorous evaluation of policy impact.

Results: Since the 2012 WCTOH, the ITC Project has published over 100 journal articles, 11 national reports, and 5 policy reports. This paper summarises key findings over the past 3 years on the impact of FCTC policies in the domains of health warnings, smoke-free, price/tax, and new findings on e-cigarettes.

Conclusions: ITC findings provide consistent evidence that the FCTC article guidelines lead to substantial increases in policy effectiveness. The ITC Project offers an example of how an evidence-gathering system can provide a foundation for strengthening tobacco control and for countering tobacco industry claims designed to dissuade governments from taking strong action in tobacco control.

PD-663-19 Daily cigarette consumption and gender reversal in India: what went wrong?

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Background: Daily female cigarette smokers out puffs their male counterparts in India only as per the first wave of Global Adult Tobacco Survey (GATS) in 14 countries. This unusual gender reversal of average daily cigarette consumption has been questioned in the pretext of poor survey design and data quality. Current study further explores conceptual issues leading to gender reversal in Indian context.

Methods: GATS syntax, code-book, GATS reports of 14 countries and literature were reviewed to understand definition and usage of different types of cigarettes. GATS Data sets were re-analysed to explore reasons for gender reversal.

Results: GATS syntax "If R smokes more than 2 kinds of cigs less than daily, does not smoke any other tobacco products (D,E,F,G) and has reported smoking tobacco daily" as a second condition of daily smoking is erroneous. Review indicates poor definition and non-consideration of effect of simultaneous use of other tobacco products are the major reasons of gender reversed (Male-6.1, Female-7) estimation of cigarettes smoked per day (CPD) in India. Further GATS estimation was suggested to be invalid due to poor study design and very rough data quality of self-reported daily cigarette consumption. India is the only one country where in dual use of manufactured and rolled cigarettes among females (unlike males) are 4 and 1.3 times higher than their individual usages of these cigarette types respectively, more so in rural settings. Interestingly most users (62-75%) of rolled cigarettes had reported equal frequency in consuming other comparable smoking products. When effect of simultaneous use of other tobacco product was neutralized mean CPD didn't show gender reversal (male=6.5 vs. female=3.5). Product

specific and exclusive use analysis indicated mean CPD among males remain consistently higher than their female counterparts across all 14 countries.

Conclusion: Gender reversal in CPD estimation in GATS-India is a Simpson's Paradox. Product specific CPD analysis with due consideration of multiple tobacco usage is necessary to avoid such mistakes in future analysis. Nevertheless reported rampant violations of validity in GATS-India and syntax needs detailed attention.

PD-664-19 Short-term impact assessment of the tobacco tax reform in the Philippines

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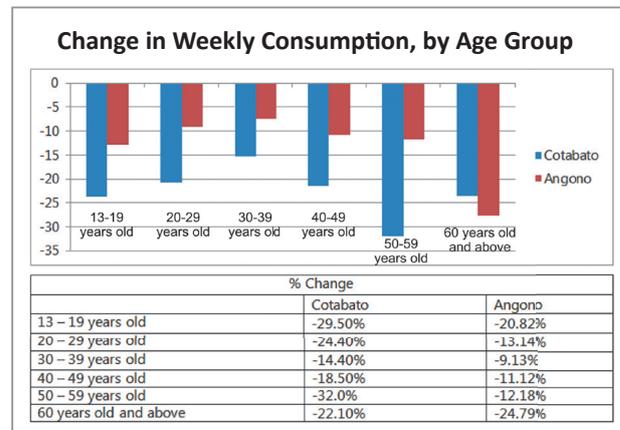
Background: With its three-fold aims—(1) restructuring alcohol and tobacco taxation in the Philippines, (2) increasing government revenues for public services (especially for Universal Health Care Programme), and (3) reducing tobacco consumption and smoking prevalence, the Sin Tax Law or Republic Act 10351 was successfully passed in December 2012. Despite the success, Action for Economic Reforms recognises that vested interests may undermine the law and pose threats of reversal, and firmly believes that active monitoring is crucial. Not long after the passage, media-men anti-Sin Tax articles speculate that the law might have only been causing smokers to shift to lower-priced cigarettes and not reducing consumption. Partly to clarify this, a study to assess the short-term impacts of law to smokers was conducted. The objective of the paper is not only to know changes in smoking levels and quit-rate, but also explore changes in brand and variant preferences, frequency, and mode of consumption.

Methodology: The paper provides qualitative and quantitative information on the changes in the brand and variant preferences, frequency and mode of consumption, and prices Filipino smokers faced in December 2013—one year after the passage of the law. The instruments used in the paper are a combination of area-representative surveys that then used questionnaire-based interviews (conducted Cotabato City, a low income class city, and in Angono, Rizal, a high income class area in the Philippines), and a series of sectorial Focus Group

Discussions (with participants from various sectors: urban poor, students [public and private schools], out-of-school-youth, and call-centre agents). Respondents were asked questions both about their 2012 and 2013 consumption. The FGDs complement the surveys by exploring other aspects of smoking.

Results: After one year of Sin Tax Law implementation, the frequency and number of cigarette sticks consumed, across all age, civil status, gender, and religious brackets, decreased on the average. With 55% and 75% increase in the per-stick price of cigarettes faced by smokers in low- and high- income samples, the drop in weekly cigarette consumption averaged to 11 to 23 sticks, respectively. The percentage of smokers who quit was 2 to 8% of the sample, and not a considerable portion of those who downshifted

increased their consumption. The FGDs validated these conclusions as well and provided other important insights on the law.



PD-665-19 Does tobacco influence household spending patterns? Evidence from Zambia

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Background: Tobacco use is the leading cause of premature death in the world. According to the World Health Organization, 5 million people per annum die from tobacco related deaths (WHO, 2010) including about 600,000 from passive smoking (Ober, et al., 2010). There is another aspect to the cost of tobacco use that is separate from the mortality and morbidity costs, namely that tobacco use tends to crowd-out (or displace) the consumption of other commodities. This additional cost has received little attention in the economics of tobacco control literature. This paper adds to the literature on the crowding out effect of tobacco in the context of Zambia.

Design/Methods: We use instrumental variables regression that allows us to account for the possible endogeneity of the decision to smoke to tease out the causal impact of tobacco expenditure on household spending decisions. We make use of the 2006 round of Zambia's Living Conditions Monitoring Survey (LCMS) which was a nationally representative survey of 20,000 households. The analysis is done separately for the full sample, urban and rural households and by income group.

Results: For the full sample, we find that food, school, water and electricity are crowded-out in the sense that tobacco smoking households tend to allocate less expenditure to these categories than non-smoking households. There are some regional and income group differences however: for instance in urban households only school, water and electricity are crowded-out whereas in rural households only food and water are crowded-out. When it comes to income groups, food and school are crowded-out for the poorest 50% of all households whereas housing and water are crowded for the richest 50% of households. In all specifications alcohol is crowded-in quite significantly in the

sense that tobacco smoking households allocated a larger share to alcohol than non-smoking households.

Conclusion: Our work shows that the costs of tobacco consumption in Zambia are likely to be more than the direct costs associated with mortality and morbidity. Our results show that a broader accounting of tobacco's costs in Zambia should include, for example, the costs associated with under nutrition and under investment in education by households.

PD-666-19 Determinants of smoking initiation in South Africa using survival analysis

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Background: Higher tobacco taxes may either prevent people from starting to smoke, or delay onset. Other than two studies on Vietnam, all studies that consider smoking onset have been performed in high income countries. The importance of the current study is that it considers a middle-income country. Smoking is rapidly moving from the developed world to the developing world. Associated with this move in tobacco consumption is a rapid increase in non-communicable diseases. Within this context it is useful to understand what the determinants of smoking initiation are, and if these determinants imply certain policy responses, what these responses should be.

Methods: The data was drawn from three waves (2008, 2010 and 2012) of the National Income Dynamics Study (NIDS). The analysis was performed using survival analysis. We investigate smoking onset behaviour of 19 922 individuals aged between 15 and 48 years. Based on the international literature and the constraints of the NIDS survey, the following potential determinants of smoking onset were investigated: age, gender, population group, price of cigarettes, geographic location (urban/rural), socio-economic status, whether or not the respondent's mother was alive when the respondent was aged 15, literacy and parents' smoking behaviour.



Results: Smoking initiation in South Africa typically takes place in the late teenage years and early twenties. Smoking initiation amongst males is much higher than amongst females. For both males and females, the probability of starting smoking is highest amongst the mixed-race population. African females have a very low uptake of smoking. Males are more responsive to price changes than females. Depending on the specification, a R1 increase in the price of cigarettes reduces the risk of smoking onset by between 1.0% and 2.8% for males. For females the impact of price on smoking initiation is insignificant. Males and females who have a parent who smokes are twice as likely to initiate smoking compared to children where neither

parent smokes. Children of parents with limited education are more likely to start smoking than children of parents with more education. Literate people are less likely to initiate smoking than illiterate people.

Conclusion: Tobacco taxation should remain a major public policy instrument to discourage smoking. Further increases in the excise tax on cigarettes are likely to discourage smoking habit and to delay onset for those who decide to start.

PD-667-19 Gender differences in the effect of neighbourhood socioeconomic context on smoking among South African adults: policy implications

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Background: In addition to the influence of an individual's socioeconomic status, the neighbourhoods in which people live may influence health-related behaviours. Establishing evidence for such effects has implications for planning community-level interventions particularly because the industry may target certain neighbourhoods, yet only limited information is available on the effect of neighbourhood socioeconomic context on smoking in South Africa. This study therefore sought to determine the influence of the socioeconomic context in which people lived on their smoking behaviour and explore the potential gender differences of contextual influences.

Method: This study involved a representative sample of South African adults (≥ 16 years) who participated in the 2010 (n=3,112) and 2011 (3,003) South African Social Attitude Survey (SASAS). The 2009 General Household Survey (n=25,548 households) was used to obtain the socioeconomic characteristics of the neighbourhoods where SASAS participants lived, including proportion of households with access to tap water, access to flush toilet and the level of employment in the area (3-item deprivation index; =0.84). Information obtained from SASAS included participants' tobacco use status and socio-demographic characteristics, including participants' self-rated socioeconomic status within the society. Data analysis included a multi-level Poisson regression analysis.

Results: Of the respondents who participated in the 2010/2011 survey, 19.1% (n=1276) were current smokers (29.6% men and 9.7% women). Smoking was more prevalent among those living in areas in the upper-third socioeconomic position (SEP) than in areas in the lower-third SEP (22.9% vs. 13.5%). The neighbourhood socioeconomic context had a greater influence on the prevalence of smoking among women than among men. In particular, the gender gap in smoking prevalence was higher among those living in areas in the lowest-third SEP (24.6% men vs. 4.6% women) than among those in areas of highest-third SEP (31.5% men vs. 15% women). Overall, smoking was more likely among those with less than

high school education than among those with greater than high school (OR=0.68; 95%CI=0.56-0.82).

Conclusion: The findings suggest a greater neighbourhood socioeconomic contextual influence on women than men and highlight the need for community-level interventions targeting the least educated living in areas of highest socioeconomic position in South Africa.

PD-668-19 Cigarette price and brand loyalty in Zambia: findings from the ITC Zambia Survey

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Background: Little is known about cigarette pricing and brand loyalty in sub-Saharan Africa. This study examines these issues in Zambia, using the International Tobacco Control (ITC) Zambia Survey.

Design/Methods: The ITC Zambia Wave 1 (2012) Survey was analysed for current smokers of factory-made (FM) cigarettes. Concurrent users of roll-your-own (RYO) cigarettes were compared to smokers of FM-only cigarettes using bivariate analysis. Multivariate logistic regression models examined predictors of brand loyalty and reasons for brand choice.

Results: Regular brand use was 75% (FM-only) and 64% (FM+RYO). Compared with FM-only smokers, concurrent users of RYO cigarettes were, on average, older (28% vs. 20% age \geq 40 years), low income (64% vs. 43%), and had lower education (76% vs. 44% <secondary). Mean price across FM brands was ZMW0.50 (USD0.08) per stick. Smokers were significantly less likely to be brand-loyal (>1 year) if they were 15-17 years old, compared to 40 to 54 years old; if they had moderate (vs. low) income; and, if they paid ZMW0.50 per cigarette (vs. <ZMW500). Brand choice was influenced mostly by friends, taste, and brand popularity. Popularity was less important when education level was high but more so with high income. Price was more commonly reported as a reason for brand loyalty among FM+RYO smokers and those \geq 55 years or higher addiction levels.

Conclusion: Price variations are fairly small across cigarette brands and levels of brand loyalty are high despite low income. Future research is needed on longitudinal trends to evaluate the effect of tobacco control policies in Zambia.

PD-669-19 Attitudes regarding tobacco control policies in Georgia: results of a 2014 national survey

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Background: Given the growing tobacco use epidemic in Georgia, strides are being made to curtail this epidemic. In 2006, Georgia ratified the Framework Convention on Tobacco Control, albeit with relatively little progress in implementing many of the related policies. We aimed to examine the attitudes toward tobacco control policies in Georgia.

Design/Methods: This study was a national household survey of 1163 Georgian adults aged 18-65 years conducted in spring 2014. A multi-stage, clustered sample design was used to produce representative data with stratification done by region. We assessed sociodemographics, tobacco use behaviour and other health-related information, and attitudes toward tobacco control policies.

Results: Our sample was an average of 42.41 (SD=13.58) years old; 51.1% male; 43.2% urban; 64.7% married; and 40.0% employed at least part-time; with an average monthly household income of 637.50 (SD=1642.92) GEL. Overall, 30.3% were current (past 30 day) smokers (53.2% of men, 6.3% of women). Regarding smoke-free environments, 14.3% had complete smoke-free home policies; 38.0% had partial; 11.5% had complete smoke-free car policies; and 30.4% had partial. Moreover, 85.7% supported complete smoke-free policies in workplaces, 70.7% in restaurants, 62.4% in bars, 72.6% in outdoor common areas of multiunit complexes, 69.2% in individual apartments, 66.7% at parks/playgrounds/beaches, 85.3% in public transportation, and 85.3% in private vehicles when children are present. In response to the recent 15 Tetri cigarette tax increase, 24.1% reported it was too high, 23.8% about right, 15.2% too low, and 36.9% had no opinion/didn't know; 36.2% were in favour of a future cigarette tax increase. The proportion in support of mandating store-owners who sell cigarettes, cigarette manufacturers, and cigarette importers to obtain licenses were 62.4%, 65.9%, and 64.9%, respectively. Additionally, 75.9% were in support of banning cigarette advertising, and 79.0% were in support of mandating pictorial health warning labels on cigarette packs.

Conclusions: There is relatively high support for smoke-free policies, advertising bans, and health warning labels. Developing public health messaging to increase public support for increased cigarette taxes and smoke-free policies in certain locations (e.g., bars, outdoors) may facilitate movement toward increased tobacco control.

PD-670-19 Assessing the potential impacts of tax reform in Vietnam: a projection model

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Background: After 6 years since the last tobacco tax increase in 2008, Vietnam is revising its excise tax law that would see another tobacco tax reform. One of the main objectives of this reform is to reach the national strategy on tobacco control target of reducing male smoking prevalence from 49.4% currently to 39% in the year 2020. In the draft law, currently proposed by the Ministry of Finance, the excise tax on cigarettes (ad valorem only) would increase from 65% on ex-factory price to 75% in July 2015 and to 85% in 2018. What potential impacts of the tax roadmap proposed by the Ministry of Finance will have on tobacco consumption and government tax revenue? Will it help Vietnam to reach the national strategy target?

Design/Methods: An Excel projection model is used to estimate the potential impacts of tax increase. Firstly, it projects annual cigarettes retail price increase, taken into account both tax rate increase and inflation. Secondly, the model projects annual per capita income increase, using

official economic forecast. Consumption impacts is then projected annually, taken into account price effect with price elasticity of -0.5, income effect with income elasticity of 0.2, and also population growth at 1% per year. Smoking prevalence and the reduced number of smokers is projected from the change in consumption, with the assumption that tax policy would have 50% impacts on tobacco control. Finally, government revenue is also projected using estimate on consumption and average tax per packs.

Results: - The tax roadmap proposed by the Ministry of Finance is very weak because it failed to take income growth into consideration. It would have almost no impacts on consumption because the increase in price is still less than the increase in per capita income. - To reach the national target of reducing male smoking prevalence from 49.4% currently to 39% in 2020, the excise tax on cigarettes should increase from 65% to 105% in 2015, to 145% in 2018, and should increase after that to keep the affordability constant or decrease. - In any scenarios, tax increase would increase the government tax revenue.

Conclusion: To recommend a tax roadmap enough to reduce consumption by a certain level, Vietnam should take into account the income effect, in addition to just price effect, or should base on an affordability benchmark. Further improved projection model should also address the issue of switching from more expensive brands to cheaper brands, or illicit cigarettes.

07. TOBACCO USE AND MOTIVATING USERS TO QUIT

PD-671-19 Tobacco advertising and press coverage of smoking and health in 19 years of Argentinean newspapers

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Background: Argentina is the unique Latin America country without ratifying the Framework Convention on Tobacco Control (FCTC). Newspapers are a main way to depict pro and against tobacco related messages. Thus, it is key to know the extent and content of the tobacco messages to develop an adequate advocacy response. Media advocacy can increase news coverage of tobacco issues and can play a central role in ratifying of the FCTC. Objective: to describe and compare the extent and content of tobacco related images (advertisement or not) and articles published in the largest Argentinean newspapers.

Methods: We developed a cross sectional study. We systematically chosen issues four month from each year of the three main national newspapers since 1995 to 2013 and recorded the number of tobacco images (advertisement or not) and tobacco-focused articles. We compared the day of publication, extension and placement within each item. As well, to analyse articles we collected the main theme, the mention of the hazards of smoking and classified them as pro or against tobacco control. To analyse non-ad images we collected the section of the newspaper and if a cigarette brand appeared. For ad-images we documented the cigarette brand. Categorical variables were compared with Chi square.

Results: 3804 images and articles from 6148 different issues were identified. Non-ad images were the most frequent item 72.81%, followed by articles, 20.19% and ads 7.57%. All of these were published mainly on Sunday, the largest circulation day. Significantly, the non-ad images were the most common, 19.3%, followed by the ads, 5% and the articles, 3.6% (p=0.000). Comparing the extension, the non-ad images occupied significantly more space: 6.4% had one page or more and articles 3% and the ad images had 2.7% of the same extension (p=0,000). Ten percent of the articles appeared in the front page. The main topics of the articles were about legislation 38.4% (including FCTC, 12.5%) and health 33.7%. Only 24.9% mentioned the hazards of smoking. Pro tobacco control

articles were 64.8% and 35.2 were against or indifferent. Ad appeared until 2012 and the most advertising brand was Marlboro (27.1%). Non-ads were published in the sport section 34.8% and, noteworthy in 20.2% the Marlboro brand was discernible, inclusive after the partial ban.

Conclusion: it is imperative to develop media advocacy strategies to increase pro tobacco control messages and put in agenda the ratification of the FCTC.

PD-672-19 Short-term effectiveness of the Smoking Cessation Unit at a primary care level in the city of Buenos Aires, 2008-2013: observational prospective cohort study

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Background: Although there is a lot of evidence about the effectiveness of smoking cessation treatments, there are few reports on this topic from Argentina. This study evaluated the interventions applied in the Smoking Cessation Unit of the General Internal Medicine Programme (SCU-PMIG, "Hospital de Clínicas", University of Buenos Aires) following the "Russell Standard (Clinical)". They were established in the UK to assess the performance of the Stop Smoking Services. A recent evaluation of their performance in the first ten years found four weeks abstinence rates ranging from 35% to 34%.

Design/Methods: To assess the effectiveness at four weeks of the intensive and individual multicomponent interventions in the SCU-PMIG during 2008-2013 and to identify predictive factors associated with the treatment's outcome. From 2008 to 2013, 820 patients were assisted at the SCU-PMIG, an ambulatory clinic for adult patients from the "Hospital de Clínicas". Only those who at least completed one treatment session (n=454) were included in the analysis. We collected data on demographics, related with addictive behaviour and the prevalence of non-psychotic mental disorders by the implementation of the "Self Reporting Questionnaire" Test (SRQ-20, developed by the WHO) which has been locally validated. Cessation rates at 4 weeks were obtained by self-reporting and measurement of CO in expired air. Categorical variables were compared with Chi square, continuous variables using a t-test and a logistic regression model was developed.

Results: The sample included 55.4% (n= 454) who started treatment. The mean age was 52 years (DS±13), 63% were women and 49% had university level of education. The mean number of cigarette/day was 25 and the mean for the Fagertröm score was 5.14. There were no significant differences between abstinent or non-abstinent in demographic characteristics (except gender) but the abstinent group smoked fewer cigarettes per day and had more previous quit attempts than non-abstinent. The abstinence rate at 4 weeks was 44.49% (n=202), 42.95% validated by CO and 1.54% by self-report. Predictors of abstinence at 4 weeks were to be referral by the PMIG's staff (OR = 2.31; 95% CI

1.32-4.07) and SRQ-20 test less than 7 (OR = 0.54; 95% CI 0.35-0.84). The relapse rate at 52 weeks was of 14% (n=27).

Conclusion: We observed a satisfactory abstinence rate at short-term. However, these results should be validated with a larger sample and with a longer follow-up.

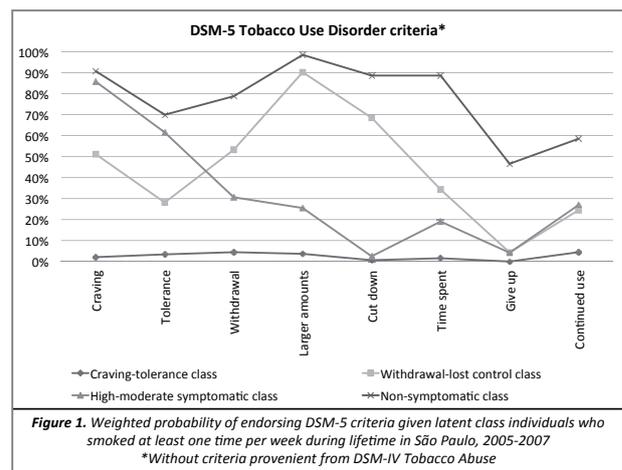
PD-673-19 DSM-5 Tobacco use disorder phenotypes in a representative sample of the largest metropolitan area in South America

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Background: Given the recent launch of a new diagnostic classification (DSM-5) for tobacco use disorders (TUD), we aimed to identify continuous and categorical phenotypes among individuals who had at least 1 cigarette per week during lifetime. Most of the conceptual framework for TUD comes only from alcohol use disorder (AUD) studies. Data came from São Paulo Megacity Mental Health Survey (SPMHS) collected from 2005-2007, which is part of World Mental Health Survey.

Design/Methods: Exploratory factor analysis (EFA) and latent class analysis (LCA) of the DSM-5 TUD symptoms - SPMHS did not include the 3 DSM-IV tobacco abuse questions - were performed using Mplus software taking into account complex survey design features. Socio-demographic correlates were examined via weighted logistic regression models.



Results: As in DSM-5 AUD studies, an one-factor model reached the best fit in EFA, including very high loadings (>60%) of all eight symptoms tested. The best LCA model was a four-class model: a "non-symptomatic class" (31.1%), a "lost-control class" (27.3%) - defined by high probabilities of "use in larger amounts" and "unable to cut down" criteria, a "craving-tolerance class" (7.9%) and a "high-symptomatic class" (33.6%). Those in the "lost-

control class" and "craving-tolerance class" were more than 2 times more likely to be young adults than those in the non-symptomatic class. Being in the three symptomatic classes was associated with unemployment/informal employment as compared being in the non-symptomatic class.

Conclusion: This study reinforces a DSM-5 TUD continuum. However, there are two different intermediate phenotypes within it. These are useful information for professionals working with treatment and prevention of tobacco disorders.

PD-674-19 Impact of passive smoking on hypertension in rural Chinese non-smoking women

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Background: Growing evidence suggested that active smoking is a risk factor for hypertension, but little is known about the effect of passive smoking on hypertension. In China, women's passive smoking is widespread and severe because of the high proportion of male smokers (about 70%), low percentage of female smokers (<5%) and poor awareness of smoking damage, especially in rural areas. The present study aims to examine whether passive smoking is associated increased risk of hypertension among non-smoking women in rural China.

Design/Methods: We conducted a cross sectional study in Pingding County of Shanxi province in northern China. 392 non-smoking rural women aged 33-82 years were recruited when they come to the County hospital to look after or visit their pregnant relatives between Aug 2012 and May 2013. Demographics, passive smoking, and other health-related variables were collected by questionnaire. A physical examination including measurement of height, weight, blood pressure and heart rate was performed by county physicians according to standard protocols. Hypertension was defined as systolic blood pressure at least 140mmHg and/or diastolic blood pressure at least 90mmHg, or as self-reported diagnosed hypertension requiring antihypertensive drugs. Passive smoking was defined as exposure to smoking at least once per week on average and at least half-hour each time from other people at home or public places. Logistic regression was used to evaluate the association between passive smoking and the risk of hypertension, adjusting for potential confounders.

Results: 30.1% (118/392) participants reported having been exposed to passive smoking. Of the women with passive smoking, 88.3% reported being exposed at home. The prevalence of hypertension was significantly higher for women with passive smoking (49.2%) than those without passive smoking (38.0%, $p < 0.05$), with crude odd ratio (OR) of 1.58 (95% confidence interval [CI]:1.02-2.44). After adjustment for women's age, body mass index, education, occupation, drinking status, physical activity, menopause status, passive smoking showed about 2-fold risk

increase for hypertension (adjusted OR: 1.99; 95% CI: 1.16-3.39). The adjusted ORs for exposure levels of 1-3 times, 4-6 times and more than 6 times per week were 1.01 (0.39-2.62), 2.57 (1.05-6.30) and 2.59 (1.18-5.69), respectively.

Conclusion: In rural areas of northern China, women's passive smoking at home is prevalent. Frequent exposure to passive smoke is a risk factor of hypertension among non-smoking women. The findings strongly advocate measures against smoking at home for this population.

PD-675-19 Alternative tobacco product experimentation among adolescents: a multiple indicators and multiple causes model

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Background: There is a growing popularity of alternative tobacco product (ATP) experimentation and use among adolescents in western countries, however little is known about factors that influence ATP experimentation. The aim of this study was to model adolescents' ATP experimentation and explore the relationship between adolescents' cigarette smoking experience, socio-demographic patterns and their ever use of ATPs.

Method: A multiple indicators and multiple causes (MIM-IC) model estimated simultaneously the relationship between cigarette smoking experiences, socio-demographic covariates and ATP experimentation among cross-sectional samples of grade 8th and 11th students (n=1987, 54% girls) from Budapest and five metropolitan cities of Hungary. ATP experimentation as a latent variable was defined by the ever trial of roll-your-own cigarette, cigar and cigarillo, waterpipe, pipe and flavoured cigarette.

Results: Fifty-five percent of respondents have ever tried cigarettes and 30% of adolescents were current smokers (smoked at least 1 cigarette in the past 30 days). Among those who ever smoked cigarettes, the prevalence of lifetime use of waterpipe, flavoured cigarettes, cigars, roll-your-own cigarettes and pipe were 82%, 64%, 50%, 49%, 19%, respectively. Older adolescents and boys were more likely to report ATP experimentation compared to younger participants and girls. Respondents who tried cigarette smoking before 12 years of age, reported higher frequency of past-month cigarette smoking and had a history of ever daily smoking for 30 days predicted positively ATP experimentation. Students with one or more smoking friends and those who had non-smoking parents were vulnerable to experiment with ATPs. Weekly allowance showed no effect on the latent variable.

Conclusions: ATP experimentation is common among adolescents who have ever tried cigarette smoking. Attractiveness and misperception of ATP as a less hazardous product can easily lead adolescents to poly-tobacco use,

therefore national youth tobacco prevention programmes and legislative actions should address ATPs.

PD-676-19 Fully integrated tobacco curriculum and tobacco cessation skills in medical colleges in India

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Background and challenges to implementation: Doctors need to play an active role in tobacco cessation as little attention is paid in medical education to the effect of tobacco on organ systems, disease processes or medicine effectiveness. Baseline surveys in five Indian medical schools found that faculty and students were interested in receiving education on tobacco related illness and cessation counselling. A tobacco curriculum developed by Project QTI has been introduced in five Medical schools in Kerala and Karnataka which is flexible and across the nine semesters providing hands-on training on tobacco cessation to faculty and students. The main objectives are to educate medical students on the impact of tobacco on all organ system and disease processes, and to provide skills on brief tobacco cessation interventions

Intervention or response: Curriculum mapping identified where in the nine semesters of medical education the fifteen tobacco modules could be introduced providing information on tobacco epidemiology, its effect on specific diseases and brief cessation skills. Each module has power point presentations with speaker notes, fact sheets for bedside teaching, sample examination questions and case scenarios and clinical videos to model cessation skills as teaching aids. Modules were piloted tested and revised. Faculty from all schools received training on module implementation and cessation skills and took a basic cessation skills competency exam. Medical students underwent training in brief intervention skills for tobacco cessation; practice these skills on 3-5 smokers during the final year training and after completing 5 BI logs were evaluated through an OSCE examination.

Results and lessons learnt: Faculty and students found the mini lectures to be very relevant. Speaker notes and references allow the faculty to lecture with confidence. Students found the videos informative and practical in giving guidance in how to help patients quit. This curriculum and tobacco cessation training is accepted by Kerala University of health Sciences for integration into the undergraduate medical education in Kerala.

Conclusions and key recommendations: Inclusion of tobacco topics in the medical curriculum is necessary as is training in brief interventions for tobacco cessation. The curriculum and tobacco cessation training can be implemented in other medical schools. Doctors need intensive training so they can begin to see cessation as a normative part of their practice

Sl No:	Module	PPT- Mini lectures
1	Tobacco issues in basic medical practice and professionalism.	1. Burden of Tobacco 2. Tobacco as a risky behavior for patients and the family. 3. Role of doctors in tobacco control, including 5As
2	Tobacco and Community Medicine and Public Health	1. Burden of tobacco and global tobacco control. 2. Tobacco and occupational health. 3. Hazard of passive smoking and smoke free environment. 4. Cessation strategies and social support 5. Tobacco impact on the family and economy
3	Tobacco and the musculoskeletal system	1. Nicotine effects on pain. 2. Tobacco and back pain and osteoporosis.
4	Tobacco and the endocrine System	1. Tobacco and diabetes. 2. Tobacco and other metabolic disorders (hyperlipidemia, obesity)
5	Tobacco effects on the cardiovascular system	1. Epidemiology of CVD and tobacco. 2. Tobacco as CVD risk factors and the mechanism. 3. Important of cessation in patients with CVD
6	Tobacco and the gastrointestinal system	1. Tobacco and oral diseases. 2. Tobacco and common abdominal disorders
7	Tobacco and the reproductive system	1. Tobacco effects on pregnancy. 2. Tobacco effects on fertility. 3. Passive smoking and pregnancy
8	Tobacco effects and neoplasia	1. Tobacco and carcinogenesis. 2. Tobacco and respiratory tract cancer. 3. Tobacco and digestive cancer. 4. Tobacco and urogenital cancer. 5. Tobacco cessation as an important part of cancer management
9	Tobacco and the nervous system	1. Tobacco and stroke. 2. Tobacco and pain. 3. Nicotine effects on neurodegenerative diseases
10	Tobacco effects on the respiratory system	1. Tobacco and TB. 2. Tobacco and COPD. 3. Tobacco and asthma
11	Tobacco and mental health	1. Nicotine addiction. 2. Tobacco and depression and anxiety. 3. Tobacco and schizophrenia
12	Tobacco and the special senses	1. Tobacco and the aging eye (cataract and age related macular degeneration). 2. Tobacco and skin (aging and wound healing)
13	Tobacco and children's health	1. Tobacco effects on respiratory health in children 2. Other tobacco effects on children's health
14	Tobacco and theuopoetic system	1. Tobacco effect and erectile dysfunction
15	Tobacco and adolescents	1. Tobacco use among adolescents. 2. Effect of tobacco use on adolescent growth and development 3. Risk factors for tobacco initiation 4. Tobacco advertising and marketing to youth 5. Tobacco prevention and cessation for adolescents

PD-678-19 Cross-cultural adaptation of a smoking cessation intervention using short text messages in Argentina

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Background: In Argentina, tobacco use produces about 40,000 deaths every year; however, tobacco cessation interventions are sparsely available. We adapted STOMP (HAS Global, Auckland), a mobile phone-based short messages tobacco cessation programme, to be used in Argentina.

Design/Methods: We conducted a cross-cultural adaptation of STOMP following a flexible, dynamic and circular approach. The process included English-Spanish translation and back-translation, face validity by 2 local tobacco cessation experts followed by a complete review (using a structured questionnaire) and 2 discussion groups with potential users (self-defined current smokers who are in preparation or action stages -Prochaska's change model- or self-defined former smokers who quitted in the past 6 months). During the process, an advisory board was responsible for reviewing new information collected and proposing modifications to messages. Legibility of messages was assessed using Inflex v1.0.

Results: Local tobacco cessation experts found most of translated messages applicable to the local setting, although mention of local triggers (e.g., 'mate') was recommended. A total of 19 potential users (11 females, age range: 30-73) participated of the complete review of messages or discussion groups. Messages were in general well received by participants who emphasised the importance of using local expressions and informal language. A final set of 601 short messages (≤ 130 characters) in Spanish was prepared. Legibility of final messages was characterised as very easy (Flesch-Szigriszt Index: 75.53, Fernández Huerta Index: 79.93).

Conclusion: We have conducted a cross-cultural adaptation of STOMP in order to be implemented in Argentina. A pilot trial is currently in preparation.

PD-679-19 Improvement in provider adherence to tobacco use treatment guidelines following a system-level intervention

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Background: Given the oral health consequences of tobacco use and that most smokers see a dentist annually; dentists have a credible role in treating tobacco use. Unfortunately, adoption of tobacco use treatment (TUT) guidelines remains suboptimal in dental care settings.

Methods: As part of a larger cluster randomised clinical trial evaluating system-level strategies for implementing TUT guidelines in dental clinics, we conducted baseline (BL) and follow-up (FU) surveys of dental care providers in New York City to assess TUT guideline adherence prior to and five months post intervention. Providers were asked what percentage of their patients (<20%, 21-40%, 41-60%, 61-80%, and >80%) they delivered each of the recommended 5As of brief TUT (asking about tobacco use, advising smokers to quit, assessing readiness to quit, offering quitting assistance and arranging follow up). Practice behaviours (5As) that were delivered to most (>80%) patients were considered to be indicative of routine high quality TUT care. A generalised estimating equation was used to test for statistical significance.

Results: Provider adherence improved for all TUT guideline practice behaviours. At BL, 29% of providers reported asking most of their patients about tobacco use, compared with 55% of providers at FU ($p < .01$). Similarly, at BL, 45% of providers reported advising most current smokers to quit and 22% offered brief smoking cessation counselling to their patients who were ready to quit using tobacco whereas at FU, the percentage of providers advising most smokers to quit and offering brief counselling increased to 61% ($p = .03$) and 36% ($p = .07$) respectively. At BL, very few providers reported routinely discussing or prescribing cessation medications (5% and 0%, respectively) while at FU these assisting behaviours increased to 22% ($p = .06$) and 3% of providers, respectively. Finally, a larger percentage of providers referred patients for tobacco cessation services after participating in the study intervention. At BL, only 4% of providers referred most of their patients who smoke to the New York State Smokers' Telephone Quit line, compared to 41% at FU ($p < .01$).

Conclusion: These promising findings suggest that system changes including implementation of a clinical reminder system and facilitating referrals to a state-wide telephone quit line may increase dental care provider adherence to TUT guidelines. Additional data on factors influencing provider behaviour change will be presented.

PD-680-19 Betel quid and oral diseases in Taiwan: an opportunity for betel quid cessation in the dental office

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Background: Betel Quid (BQ) use in South and South-east Asian nations is widely prevalent and responsible for the increasing incidence and mortality from oral cancer in the region. In Taiwan, the BQ parcel contains areca nut, coated with white or red lime, wrapped in a piece of betel palm leaf. This practice differs from most Asian countries

as the pouch does not contain tobacco. However, concurrent consumption of BQ, cigarette smoking, and alcohol drinking has been reported. This qualitative study discusses findings concerning BQ use and oral/dental diseases that can be considered in developing health promotion initiatives and cessation efforts in Taiwan, where the dental workforce could have a pivotal role.

Design/Methods: Fifteen in-depth interviews and 4 focus groups discussions were conducted. Men and women over 18 years of age and who self-identified as current and former BQ users were included in the study. IRB approval was obtained from China Medical University.

Discussion was tape-recorded and transcribed. Interpretative analysis was undertaken manually and themes and emerging key points were developed into a thematic framework table for identifying oral/dental health risk perception, withdrawal symptoms associated with the oral cavity, and opportunities for obtaining assistance from dental health care providers in cessation efforts.

Results: The sample was 66% male and 34% female, 41.02±9.23 years old on average, and members of a community organisation located in Jhushan Township, Taiwan. Participants agreed that most of the health consequences of BQ chewing occur in the oral cavity (e.g., flat teeth, bad breath, oral ulcers, and gum disease, among others). The most frequently mentioned withdrawal symptoms related to dental/oral conditions were: damage to the enamel surface (coloration and/or erosion), tooth ache, tooth loss, bitter taste, and increased salivation.

Conclusion: Due to the increased risk of oral cancer and other BQ-related conditions, BQ chewers must receive routine oral screenings and extensive documentation of oral soft tissue lesions. In addition, dental and other health care professionals in Taiwan should be aware of the negative oral/dental effects caused by BQ chewing and be prepared to advise patients on cessation strategies. Dental professionals and oral health stakeholders must have an active involvement in shaping future public health policies on BQ prevention and control in Taiwan.

08. CESSATION INTERVENTIONS AND EFFECTIVENESS

PD-681-19 Efficacy of long-term maintenance in the treatment of smoking cessation

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Background and challenges to implementation: Smoking is an addictive disease and therefore, chronic and recurrent, sustained by a triple dependency: chemical, psychological and social. Our goal is to show that the treatment sustained over time, whether individual or groupal, is what results in the permanent cessation of the patient. For this, accompanying the person with frequent monitoring throughout a year, benefits the patient process leading towards a new identity and a successful recovery from the addiction.

Intervention or response: A random sample of patients seeking treatment for tobacco cessation was studied. Personal and familial clinical history was recorded, as well as smoking history. The level of dependence (Fagerström test) and motivation to quit smoking was analysed. Patients only initiated individual or groupal treatment if they had groupal characteristics. The work done with all of them during the first weeks consisted of habit changes and projections towards the cigarette. Specific records of behaviour and feelings when smoking were performed. Subsequently the "D Day" was set and the patient was treated with medication or nicotine replacement therapy. When quitting smoking, the patient was led to a maintenance group or individual interviews through the year. After the cessation, the work done was related to the characteristics of the addictive personality. The follow-up at 3, 6 and 12 months was meant for measuring the withdrawal

of the patients, both in group and individual therapy, who had not kept up with the pre-set interviews.

Results and lessons learnt: A total of 320 patients who attended the treatment were evaluated. When comparing patients with and without long-term monitoring, statistically significant differences were observed showing that only patients with maintenance up to one year had no relapse or occasional consumption, thus achieving to double cessation rates published to date.

Conclusions and key recommendations: Monitoring throughout the first year of the patients who achieved smoking cessation, regardless of drug treatment used, proved to be efficient to prevent relapse and sustain motivation. This same motivation caused attitudinal changes related to their quality of life.

PD-682-19 Cost-effectiveness of varenicline for smoking cessation: using electronic medical records in a cardiovascular hospital

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Background: Cost-effectiveness analyses have been marginally conducted to guide widespread use of different smoking cessation treatments in developing countries. Objective- To describe a cost-effectiveness of varenicline against bupropion and nicotine replacement therapy in a smoking cessation programme of a Cardiovascular Hospital in Brazil.

Methods: This is a retrospective study of 940 patients admitted to a smoking cessation programme. We relied on an electronic Programme of Assistance to Smokers (PAF) designed to monitor cessation treatment and outcomes. Smokers had access to medical consultations and prescription of nicotine replacement therapies (NRT — patch and gum), bupropion, and varenicline. Use of cessation medication was determined based on nicotine dependence (Score Fagerstrom and ISSA); previous use cessation medication; availability of medication and contra-indication. Cessation outcomes were evaluated at 12 months and confirmed through exhaled carbon monoxide. Incremental cost-effectiveness ratios (ICERs) were estimated in the perspective of the Brazilian Public Health System (SUS).

Results: Cessation in the varenicline monotherapy group was 39.4%; varenicline plus bupropion was 47.2%, bupropion plus gum was 31.7%, bupropion plus gum and patches was 39.6% and NRT gum plus patches was 33.1%. The best cost-effectiveness for one participant to quit smoking with varenicline plus bupropion was BRL R\$ 1.546.40; varenicline alone was BRL R\$ 1.650,00; bupropion plus gum was BRL R\$ 1.971,32; bupropion plus NRT was BRL R\$ 2.413,81; and BRL R\$ 2.414,26 for NRT alone. The ICERs for one subject to quit smoking was BRL R\$ 1.528,85 compared to treatment with bupropion associated with NRT, respectively.

Conclusion: In this study, treatment with varenicline showed to be cost-effective compared to NRT and/or bupropion in the context of Brazilian universal health care system.

PD-683-19 Assessment of tobacco cessation counselling in primary care: prospects for efficiency and effectiveness

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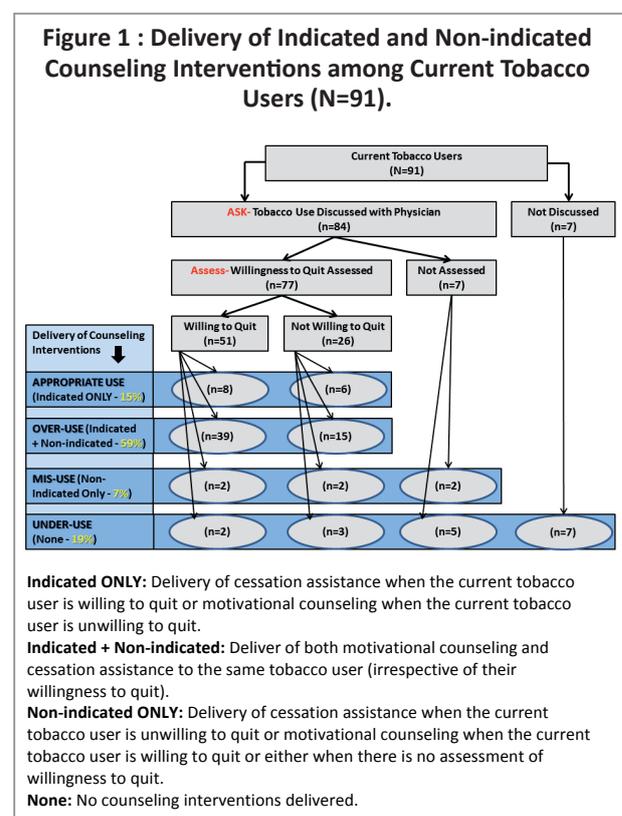
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Background: Clinical practice guidelines for treating tobacco use and dependence advocate for counselling tobacco users during each office visit. No prior study has evaluated the delivery of guideline-recommended cessation assistance or motivational counselling approaches in routine clinical practice considering both effectiveness and efficiency. Our objective is to evaluate use of clinical practice guideline-recommended tobacco use screening and counselling interventions in primary care.

Design/Methods: An observational cross-sectional study of routine periodic health examination in 2007 – 2009. Eligible clinician and patient participants were those enrolled in an observational study of primary care patients due for colorectal cancer screening at the time of a routine periodic health examination. For that study, 484 of-

fice visits were audio-recorded and transcribed. Current tobacco users (N=91) were identified via a combination of a pre-visit survey and audio-recordings. Transcripts were coded for the delivery of all tobacco-related counselling interventions. The extent to which identified counselling interventions were used and/or targeted appropriately to the patients' readiness to quit was the main measure.

Results: The majority of tobacco users (N=77) had their tobacco use status assessed, and most received some sort of tobacco-related counselling (N=74). However, 15% received only the recommended counselling targeted to their readiness to quit (appropriate use). While some patients received less counselling than recommended (underuse, 19%) or inappropriate counselling (misuse, 7%), the majority of patients who did not receive the recommended counselling received non-indicated counselling in addition to that which was indicated (overuse, 59%) (Figure 1).



Conclusion: Results indicate physicians' commitment to cessation counselling but also identify gaps and opportunities to improve both the effectiveness and efficiency of tobacco-related counselling in primary care practice. This suggests that many primary care physicians might benefit from training or other awareness activities to help them implement the recommended guidelines. Such training should focus not only on reminders not to miss an opportunity to counsel a tobacco user by asking all patients about their tobacco use, but also on the importance of assessing each patient's readiness to quit to avoid use of non-indicated counselling techniques which may result in wasted time or effort.

PD-684-19 Does receipt of '5As' services in tobacco cessation have implication for patients' satisfaction in India?

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Background: The '5As' model for behaviour change counselling is an evidence-based counselling approach. This study aims to explore the relationship between patient satisfaction with counselling services and '5As' interventions in tobacco cessation. We also investigated the impact of satisfaction with counselling services on patients' intention to quit and recommendation of those services to other tobacco users.

Methods: Two cross-sectional surveys were administered among patients and physicians working in primary health care facilities in 12 districts of two states in India. Health facilities and patients were recruited by systematic random and simple random sampling respectively. We limited our analyses to only those patients who were asked about their tobacco consumption. We used multivariable logistic regression to investigate associations between individual components of 5A's interventions and patients' satisfaction with the counselling services.

Results: Patients who reported that they were 'advised' to quit (OR: 9.56; 95% CI: 1.89-48.28), 'assessed' for readiness to quit (OR 2.1, 95% CI: 1.07-4.15) and offered cessation 'assistance' (OR 2.2, 95% CI: 1.17-4.29) were more satisfied with the counselling services. Patients who were satisfied with the counselling services were five times more likely to have an intention to quit tobacco (OR: 5.45, 95%CI: 3.59 to 8.27) and four times as likely to recommend counselling to other tobacco users (OR 3.83; 95% CI:2.46 -5.96).

Conclusions: Incorporating 5As interventions in the delivery of primary care would likely increase patients' satisfaction with physicians' delivered counselling services. Patients' recommendation of counselling services will aid in demand generation for cessation services in primary care.

PD-685-19 Effect of tobacco dependence treatment training on competence and confidence: experience of King Hussein Cancer Center and Global Bridges

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Background: FCTC Article 14 calls for including tobacco dependence treatment training (TDTT) in professional development programmes. TDTT enhances confidence and readiness to advise, counsel, and offer tobacco dependence treatment (TDT) services. A Cochrane review of randomised trials –where TDTT to healthcare providers (HCPs) was the intervention- concluded that trained

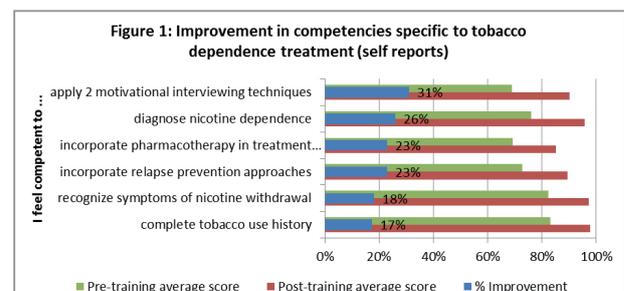
HCPs were more likely to ask patients to set a quit date, make follow-up appointments, and counsel smokers; and that TDTT has a measurable effect on continuous abstinence and point prevalence of smoking. The expanded outcomes framework for planning and assessing CME (Moore et al.) recommends measuring satisfaction, learning, and competence as precursors to assessment of outcomes (performance, patient health, and community health). In the Eastern Mediterranean Region (EMR), there is a lack of structured and tested TDTT programmes.

Intervention: KHCC (regional host for Global Bridges) introduced and assessed a novel 3-day TDTT programme in EMR building on global standards. The programme utilises lectures, interactive exercises, and case studies. The programme administers a pre- and post-workshop assessment system: knowledge and competence are compared pre- and post-training; and satisfaction, confidence, and intention to change are assessed at closing.

Results and lessons learnt: Average results for 4 workshops in 4 countries conducted over a 12-month period (total of 174 HCPs) indicate that:

- Post-workshop knowledge significantly improved compared to pre-workshop levels (scores: 74% compared to 56%, p-value<0.05).
- Competence significantly improved (p-value<0.05) along various dimensions (Figure 1).
- Confidence to counsel and prescribe medications was at 92% and 81% respectively.
- Participants reported intentions to offer the brief intervention, incorporate TDT in daily practice, and emphasise motivational interviewing.
- Participants rated workshops (on a scale of 0-4) as valuable (3.5) and content as practical (3.3) and relevant (3.3).
- Participants demanded refresher workshops and practice in established clinics.

Conclusions: The training model offered by KHCC is satisfactory and enhances competence and knowledge. However, there are demands for refresher workshops and clinical practice, suggesting the need for in-country training programmes. Assessing long-term competence retention and performance (i.e. incorporation of TDT in clinical practice) is worthwhile for this programme.



PD-686-19 Analysing the relationship of factors in the process of behaviour change in a smoking cessation programme

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Background: This study explores possible factors that affect smoker's behavioural change who signed up for smoking cessation clinic service provided by nation-wide community health centres. To clarify the process of behavioural change, it proposes structural hypothesis predicated on trans-theoretical model, and looks into diverse relationships not only between quitting smoking and decisive variables, but among those variables.

Design/Methods: This study takes the way of cross-sectional and its subject covers 272,384 smokers who are registered in nation-wide smoking cessation clinics from January to August in 2012. Analysis is conducted with database collected by questionnaire and counsel document used in the clinics. Descriptive statistics, variance analysis, exploratory factor analysis, multinomial logistic-regression analysis, confirmatory factor analysis and structural equation are used in this study.

Results: The result indicates that the higher level of trans-theoretical model factors such as self-efficacy, decisional balance and processes of change, the more meaningful impact on stage of change they brings out. However, in a process of change, self-efficacy shows partially increased impact on stage of change, while decisional balance shows decrease of that. Furthermore, there are significant relationships between stage of change and each characteristics of subjects including sex, age, medical insurance type, blood pressure, BMI, carbon monoxide level and nicotine dependence. These characteristics also show increased or decreased impact after they go through structural relationship with trans-theoretical model factors. Therefore, the study figures out that the level of impact on stage of change depends on the subjects' characteristics, and thereafter it varies by going through smoking cessation consultation in accordance with self-willingness, decision and consultation programme's properties.

Conclusion: It is expected that the study result would be applicable to smoking cessation programme development and its strategic practice, because the result explains and predicts the possibility of success of quitting smoking predicated on the characteristics of subject, self-willingness, decision and consultation programme's properties.

PD-687-19 Comparison of the effectiveness of smoking cessation methods

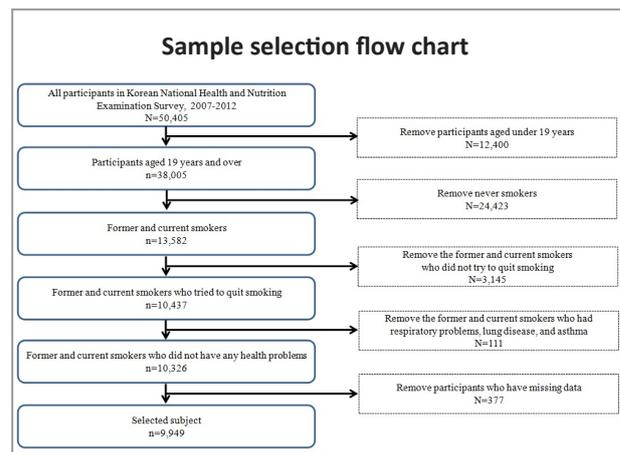
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Background: The Korean government provides free nicotine replacement therapy (NRT) and counselling to smok-

ers who wish to quit. In addition, smokers who wish to quit are able to buy smoking cessation medication and Korean herbal cessation cigarettes. The purpose of the present study was to compare the effectiveness of available smoking cessation methods in Korea.

Design/Methods: A nationally representative cross-sectional survey, Korean National Health and Nutrition Examination Survey (2007-2012), was analysed.



Results: Among 50,405 participants, we selected 9,949 who met the predefined research criteria (Figure 1). The majority of participants tried to stop smoking with their willpower (91.0%). Those who used NRT was 5.2%, Korean herbal cigarettes was 2.0%, counselling was 1.5%, and smoking cessation medication was 0.4%. Age was positively associated with being a former smoker who successfully quit smoking ($p<.0001$). The successful quitters were heavier smokers compared to current smokers. They smoked 16.6 cigarettes per day on average, while current smokers smoked 15.2 cigarettes. The difference was statistically significant ($p<.0001$). Participants who experienced to be hospitalised were more likely to be former smokers ($p=.002$). Smoking cessation medication was the most effective method for smokers to quit smoking with 41.1% success rate, followed by willpower (27.8%), counselling (24.5%), Korean herbal cigarettes (13.4%) and NRT (9.6%). After adjusting for confounders, smoking cessation medication was 1.23 times more effective to quit smoking than willpower, however, it was not statistically significant [95% Confidential Interval (CI) .65-2.36]. Otherwise, counselling [Odd Ratio (OR) .87; 95% CI .54-1.40], Korean herbal cigarettes [OR .41; 95% CI .23-.73] and NRT [OR .28; 95% CI .19-2.36] were less effective than willpower.

Conclusion: Although various smoking cessation methods were available in Korea, most smokers did not use the methods which have been recognised as effective interventions to quit smoking. There is a need to promote smokers to use these methods. More importantly, given that willpower to quit is essential for successful quitting, all the smoking cessation methods should be provided with interventions to increase smokers' willpower to quit smoking.

PD-688-19 Building capacity of health care providers in Nigeria on tobacco dependence treatment: a feasibility project**A Adebiji,¹ S Ilesanmi,¹ O Dania¹**¹Community Medicine, University College Hospital, Ibadan, Nigeria. e-mail: adebiyi20012002@yahoo.com

Background and challenges to implementation: The shifting of focus of tobacco industry to LMIC portends a serious challenge to poor health systems bugged down already by lack of capacity to respond adequately to the emerging Non-Communicable Disease burden. However, one of the best strategies for an effective comprehensive tobacco control is to offer help to quit tobacco. It is doubtful if health care providers are sufficiently empowered to offer this assistance. Our project is one of the very first in Nigeria to provide training for a broad category of health workers in this respect.

Intervention or response: We provided training on tobacco dependence treatment to a broad based category of health care providers from the 16th -18th August, 2012. This consisted of interactive presentations, role play and video session. We present herein an evaluation of the effect of the training and participant's challenges with implementation of the brief intervention at 6months and 18months after the training. All participants were contacted and evaluation done via phone calls, e-mails, and text messaging.

Results and lessons learnt: In all, 25 participated out of which 5(20%) were public health physicians, 10(40%) were resident doctors and 10(60%) were medical officers and nurse tutors. At 6 months and 18months, 87.5% and 95.5% respectively had carried out at least one knowledge transfer activity. At 6 months and 18months, 47.8% and 95% were involved in tobacco cessation activities. The common challenge reported was the unavailability of a formal structure for cessation assistance in their centres. Other challenges include lack of funding opportunities for cessation work. Areas of further training identified by participants included partnership and networking, motivational interviewing and nicotine replacement therapy. Many of the participants emphasised the need for refresher trainings, collaborative research and regular linkages with trainers. Suggested ways of overcoming barriers were: advocacy to hospital management, and informal sharing.

Conclusions and key recommendations: The training of health care providers can assist them in getting involved in tobacco cessation activities as one of the endgame strategies for tobacco. However, there is a need to include topics on innovative strategies for incorporating cessation practice in routine clinic activities for trainees to become successful at offering the brief intervention package

PD-689-19 Brief smoking cessation advice for smoke-free environment policy violators: does it work?**M L Alzona,¹ L Wood²**¹Health and Public Safety, Metropolitan Manila Development Authority, Makati City, Metro Manila, Philippines, ²Tobacco Control, The International Union Against Tuberculosis and Lung Disease, Paris, France. Fax: (+632)8820870. e-mail: drlalzona@yahoo.com.ph

Background and challenges to implementation: Effectiveness of smoke-free policies in public places is enhanced by awareness and enforcement. Metropolitan Manila Development Authority launched a programme to enforce SF policy in public transport terminals July, 2011. This programme is supported by grant funding from Bloomberg Philanthropies through The Union. From inception until June 30, 2014, 155,478 violators have been apprehended for smoking. As most violators belong to the poor socio-economic group, they do not have money to pay PHP500 (USD 12) fine. To help settle penalty, MMDA initiated alternative option for violators, enabling them to undergo brief smoking cessation advice instead. This service was launched on June, 2012. Since then until June, 2014, 49,443 violators have availed of the service. Of 64,636 apprehensions January to June this year, 29,297 (45%) elected to undergo the service. Nurses provide brief advice. Clients are given reading materials on harms of tobacco and tips on quitting smoking.

Intervention or response: To determine effectiveness of brief smoking cessation advice, survey was undertaken. Random sample of 300 violators who availed of the service from January to May, 2014 were selected. Respondents were asked whether they stopped smoking or not after attending the service. Subsequent questions explored details of attempt to quit and reasons for relapse.

Results and lessons learnt: 97% attempted to quit smoking after brief advice. Only 38% remained smoke-free and 59% relapsed. Quitting abruptly, immediately after brief advice worked well for 17%. Those who remained smoke-free gave health as main reason for quitting. Of the 59% who relapsed into smoking, many waited for more than a week before trying to quit and/or started by reducing cigarette consumption. Eventually all 59% were back smoking after a month. Usual reason for relapse was seeing other people smoking. Only 3% admitted not trying to quit at all. A firm decision to quit smoking emerged as an important factor in successful cessation, with the first week following advice a particularly critical window.

Conclusions and key recommendations: Brief smoking cessation advice as penalty for SF policy violations can effectively prompt cessation attempts, and result in successful cessation. Relapse rates are problematic. Strategies to improve cessation efficacy in first week after advice may be needed. Further study over time needs to be done to evaluate longer term effectiveness.

PD-691-19 Developing an integrated tobacco curriculum in medical colleges and a community-based smoke-free homes initiative: lessons from India and Indonesia

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Background: This paper presents the experience of a decade-long project in India and Indonesia (Quit Tobacco International) which focused on introducing smoking cessation into the medical college curriculum and developing a community-based smoke-free homes initiative. Making smoking cessation a normative part of clinical practice is the only way to substantially reduce tobacco-related morbidity and mortality in the short term. At the community level, providing education about the harm of second-hand smoke to women and children is a first step in protecting their health.

Intervention: Following a curriculum review, a 15 module tobacco harm and cessation curriculum was developed, pretested, piloted, and evaluated by faculty and students at medical colleges in each country. The fully integrated curriculum was developed to promote an illness-specific approach to cessation training modelled in training videos. Qualitative research was conducted to identify challenges to future curriculum implementation. To develop the community-based smoke-free homes initiative, surveys were conducted to establish the need for such a programme, and educational videos and a step wide consensus building approach was developed to gain support for a smoke-free homes declaration.

Lessons Learnt: Asia's first fully integrated modular tobacco curriculum for medical colleges was developed and positively evaluated by both students and faculty. Culturally sensitive illness-specific cessation training videos were found to instil students with the confidence to carry out cessation counselling with patients. In the community, the smoke-free homes movement was successfully launched based on the principle of collective efficacy as a means to promote community-wide changes in smoking norms. Smoke-free household communities were established in both countries and are now being taken up on a larger scale.

Conclusions: A fully integrated tobacco curriculum for medical colleges was piloted in five medical colleges in India and three in Indonesia and is now freely available online. The curriculum has been adopted by the state of Kerala, India as a first step to gaining Medical Council of India review and possible recognition. The smoke-free homes initiative has shown success ranging from 30-60% of households reporting a smoke-free status following the intervention. The programme has already gone to scale in Kerala and in Java.

PD-1367-19 Successful quit-smoking and health-related quality of life in Korean general adult population

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¹ National Evidence-based Healthcare Collaborating Agency, Department of Department of Planning, Seoul, Korea, Republic of

Background: Approximately 44 percent adult men in South Korea are current smokers. Most Korean still recognise that cigarettes are a kind of food rather than a harmful product to their health. Although the importance of research to motivate current smokers to quit smoking has increased, there are limited domestic studies about the effect of quitting smoking on health-related quality of life (HRQoL). The purpose of the present study was to identify the effect of smoking status on HRQoL in Korean adult smokers.

Design/Methods: A nationally representative cross-sectional data from Korean National Health and Nutrition Examination Survey (KNHANES) pooled 2010-2012 was used to evaluate the association between smoking status and HRQoL based on EQ5D. The EQ-5D describes health in five dimensions, namely mobility, self-care, usual activity, pain/discomfort, anxiety/depression and a single value (tariff) for each health state can be obtained using a standardised formula. Smoking status was defined as never smokers, current smokers, and former smokers who successfully stopped smoking for more than 12 months. Regression analyses were conducted to measure the influence of smoking cessation on HRQoL.

Results: A total of 17,519 Korean adults aged 19 years and over, which represented weighted population counts of 36,456,898 Korean residents, was included in the analyses. The weighted proportion of never smokers, former smokers, and current smokers were 55.0%, 17.8%, and 27.2%, respectively. The current smokers tended to be younger (mean age 41.6; standard error 0.31) than the other two groups. The mean EQ-5D tariffs were 0.941, 0.951, and 0.959 in never, former, and current smokers, respectively. However, after adjusting for sex, age, education, occupation, marital status, income, stress level, and chronic diseases status, the EQ-5D of former smokers was 0.009 higher [95% Confidential Interval (CI) 0.004-0.014] and that of never smokers was also 0.009 higher [95% CI 0.004-0.013], compared to current smokers.

Conclusion: The results of this study identified that smoking cessation was, in practice, positively associated with HRQoL among Korean adults. The EQ5D tariff of smoking cessation that this study found can be applicable to future economic evaluations regarding tobacco control policies.

PD-1368-19 The dissemination strategy and cessation effect of Taiwan's Quit & Win Campaign for Correctional Facility Inmates

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¹ Taiwan John Tung Foundation, Department of Tobacco Control, Taipei, Taiwan

Background: Starting from 2002, Taiwan has held the Quit & Win Campaign biennially, which has already been held successfully seven times and attracted almost 170,000 addicts to sign up and quit smoking. Since the launching of the Inmate Quit & Win Campaign in 2010, in collaboration of the Ministry of Justice, inmates have not only been helped successfully to quit smoking but, even more so, have been enabled by their successful kicking of the habit to obtain a revitalizing belief in themselves, thus conferring an additional social value on the Quit & Win Campaign.

Methods:

1. Monetary award incentive: Additional awards to attract the participation of inmates
2. Appeals by celebrities acting as volunteers, who give inmates encouragement to try to quit smoking
3. Full support of the Ministry of Justice: Grouping of the smoke-quitting inmates; implementing measures such as smoke-free workplaces; making an exception to allow the Quit and Win Campaign sign-up and smoking cessation leaflets to enter the closed-off correctional facility; and providing every registered team of inmates to receive a participation certificate and a souvenir.
4. Special rewards:
 - 1) Inmates who win awards can travel under supervision to designated prisons to attend the awarding ceremony
 - 2) Increase in-person or telephonic prison visits
 - 3) Arrange gatherings with family members
 - 4) Raise inmates' performance scores.
 - 5) Confer an award certificate upon inmates who abstain from smoking for a full year

Results: According to Ministry of Justice surveys, 91% of inmates were smokers in February 2010, and as of February 2014 this figure had dropped to 82% in four years resulting from the holding of three Quit & Win Campaigns in 2010, 2012, and 2014 and from the Correctional Facility Tobacco Control Implementation Plan promulgated by the Ministry of Justice. In addition, according to follow-up surveys carried out a year after the completion of the most recent two Campaigns, 70% of inmates who had signed up to quit smoking continued to abstain from smoking.

Conclusion: With the reward measures promoted and the smoking cessation services provided by successive Ministers of Justice, many inmates have been enabled by their participation in the nation-wide smoking cessation campaign to regain better health and are no longer controlled by tobacco products. They have also won the praise of family and friends, and at the same time further expanding the smoke-free indoor environments into the correctional facilities.

09. TRADE, CSR AND LITIGATION AS A TOOL

PD-692-19 Indirect advertising and tobacco industry: a study on the ambiguous advertising strategy of tobacco companies in the name of CSR

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Background: Tobacco companies make financial or in-kind contributions to organisations, such as community, health, welfare or environmental organisations, either directly or through other entities. The aim of this study is to explore the ongoing CSR activities to promote tobacco product indirectly.

Method: A cross sectional survey was conducted in selected urban and rural areas of the nine districts Bangladesh during the months of January to March 2013. Both quantitative and qualitative methods were applied to identify and collect information on the ongoing CSR activities from the selected urban, semi urban and rural areas of the districts.

Provide stipend for students	Chittagong	Sylhet	Kushtia	Rangpur	Dhaka	Barisal	Total
Yes	0(0.0)	1(0.4)	72(32.0)	50(22.7)	0(0.0)	2(0.6)	125(7.4)
No	214(83.9)	216(89.3)	75(33.3)	70(31.8)	68(15.9)	116(36.6)	759(45.0)
Do not know	41(16.1)	25(10.3)	78(34.7)	100(45.5)	359(84.1)	199(62.8)	802(47.6)
Total	255(100.0)	242(100.0)	225(100.0)	220(100.0)	427(100.0)	317(100.0)	1686(100.0)

Results: The study revealed that different type of CSR activities are done in the locality by tobacco industries. These are mainly done in the tobacco producing areas. Through this philanthropy activities tobacco companies are able to gain media coverage at local levels. CSR activities also help tobacco companies to draw a large number of supporters and allies. It strongly felt at Barisal for Karikor bidi and Kushtia for Nasir Tobacco. Some years ago Tobacco Companies especially BATB promoted STAR Search, Band music competition as well as different type of cultural activity. Although this type of activities presently are not being prompted by Tobacco Company but there are many other activities has been accomplished as CSR. 7.4% reported that tobacco companies had provided scholarship to the poor students, mostly in Kushtia (32%) and Rangpur (22.7%). About 3.1% respondents have said they know about tournaments organized by tobacco companies in the locality. 'Dipto' and 'Banayan', Krishok School is running as CSR in Bandarban, Lama and Alikadam upzilla of Bangladesh. BATB's CSR project "Banayan" project can be seen on both sides of Bandarban Road. Signboard of this project is visible on both sides of the road containing BATB logo in it. Tobacco Companies especially Akij Biri provides trainings and they also provide funding for schools, colleges, orphanage, madrasa, hospi-

tal etc. Sponsoring study tour, scholarship programme and funding for hajj are also done by tobacco companies in the name of CSR activities.

Conclusion: Strict rules need to be formulated following the passage of current law to stop all forms of indirect advertisement.

PD-693-19 Tips from a successful campaign to ban tobacco industry CSR campaigns

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Background and challenges to implementation: The tobacco industry uses corporate social responsibility (CSR) programmes to promote their image and the idea that tobacco is an ordinary consumer product manufactured and sold by caring companies. Public health advocates will never have the funding to outspend industry CSR programmes; our only hope of preventing their effect on the public is by working towards a ban.

Intervention or response: In Bangladesh, Work for a Better Bangladesh (WBB) Trust began resisting industry CSR campaigns in 2001, when British American Tobacco (BAT) launched its youth smoking prevention campaign. WBB responded with a quick research study and report, which gained significant media attention and led to the government and other organisations refusing to take part in the campaign. Years later, WBB led successful movements to oppose a tree plantation programme by BAT in front of the Parliament. As a result of WBB advocacy, Parliament did not take allow the campaign. In order to gain broader public support, WBB also created various materials about industry CSR activities and conducted advocacy work to educate policy-makers about the real intentions behind CSR.

Results and lessons learnt: As a result of the smaller campaigns, tobacco control advocates in Bangladesh were able to incorporate a ban on CSR into the amended national tobacco control law. The tobacco industry can no longer affix their name or logo onto any work they do. An important lesson learnt was that big achievements in tobacco control usually require years of sustained effort and a gradual series of steps towards the bigger result. It is unlikely that we would have succeeded in gaining a CSR ban in the original tobacco control law; our success built on our earlier campaigns. A second important lesson learnt is that it is indeed possible to convince a government to ban tobacco industry CSR campaigns.

Conclusions and key recommendations: Tobacco control advocates often suffer under the belief that the tobacco industry, due to its wealth, is more powerful than we are. While we will never have the material resources that they command, we can prevent them from using that money in the ways they wish. By learning from our struggles and sharing lessons across organisations and countries, we can build up the expertise needed to enact successful advocacy campaigns that limit the power of the tobacco industry so that public health can prevail.

PD-694-19 Tobacco habits, oral mucosal conditions and periodontal status among women beedi rollers of Mangalore City, India

P Shetty¹

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Background: India is the third largest tobacco producing country. The beedi market in India is large and highly competitive. The steps of beedi manufacturing include procurement of raw material, beedi rolling, sorting and roasting, and finally labelling and packing. A large part of this industry is unregulated; home based and is a major occupation for a lot of women in Mangalore, India. Since women beedi rollers have easier access to tobacco they may be more predisposed to tobacco habits. Due to exposure to raw tobacco, smokeless tobacco habits and neglect of oral health due to their poor standard of living, lack of time, financial instability, and lack of access to health care facilities, they are predisposed to oral diseases. Though studies have found that beedi rollers suffered from health problems, information about their oral health status is lacking. Hence this study was conducted to assess the tobacco habits, oral mucosal conditions and periodontal status among 35-44 year old women beedi rollers.

Design/Methods: The study subjects comprised of 550 women beedi rollers. After obtaining informed consent, their tobacco habits were recorded and oral mucosal conditions and periodontal status was recorded using WHO oral health assessment proforma. Statistical analysis was done by using SPSS (Statistical Package for Social Sciences) version 17. Pearson's correlation and Chi-square tests were used to analyze the data. The level of significance was set at 0.05.

Results: The prevalence of oral mucosal conditions among study subjects was 4.4%. Calculus was present in 85.3% of the study subjects and 7.1% had loss of attachment of 4-5mm. The duration of beedi rolling in years was found to have a weak correlation on the oral mucosal conditions and periodontal status ($p < 0.05$). The prevalence of smokeless tobacco users was 21.5%. The prevalence of oral mucosal conditions and periodontal diseases among smokeless tobacco users were significantly ($p < 0.05$).

Conclusion: Tobacco use, Oral mucosal conditions and periodontal diseases were found to be high among beedi rollers. Tobacco cessation and oral health programmes must be organized to aid them in improving their oral and general health.

PD-695-19 A critical analysis of state and national level implications of public interest litigation on tobacco control filed by Kerala Voluntary Health Service

S V Itty¹

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Background and challenges to implementation: The use of tobacco is one of the major risk factor of fatal dis-

ease in the state. As per the Global Adult Tobacco Survey Kerala has the 10th rank in terms of smoking prevalence. The second-hand smoke exposure rate is 18.7%. GATS says 48, 34,648 people annually exposed to second-hand smoke. Article 19.1 of FCTC provides that "For the purpose of tobacco control, the Parties shall consider taking legislative action or promoting their existing laws, where necessary, to deal with criminal and civil liability, including compensation where appropriate." Based on the above context Kerala Voluntary Health Services(KVHS) started state level initiatives to control the use of tobacco in the state by using "MPOWER" package of WHO as a tool and Legal advocacy as a means to advance the mission.

Intervention or response: KVHS Filed a Public Interest Litigation in Hon. High Court alleges that the negligence and callous attitude of the law enforcing agencies have in effect flouted the provisions of Tobacco Control legislations and its allied rules. The petition was filed in 2010 with documentary evidence, scientific study reports and grass root level facts. After series of sitting the Hon Court finally delivered the judgment on 26th March 2012.

Results and lessons learnt: The Hon. Kerala High Court judgment (WP(C) No.38513/2010) directed central and state governments to enforce ban on TAPs in Cinema and Television programmes. It also strengthens the enforcement of section 6 (b) in the state. As per the direction the state government introduced a three tire systems for implementation and monitoring of section 6 of COTPA in Kerala by (GO (RT).No 1479/12/Home dated 17th May 2012. Therefore the strong monitoring mechanism is now institutionalized. It support ministry of health and family welfare to issued revised notification regarding TAPs in cinema and television programmes by (G.S.R.708 (E), Dated 21st September 2012.

Conclusions and key recommendations: The civil society has a role to protect the government's positive response and good will towards the judgment. The day itself tobacco companies started interference to diluting the spirit of the judgment. Therefore effective monitoring from the civil society is the key success of the legal advocacy.

PD-696-19 Litigation as a tool for enforcing tobacco control legal provisions

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Background and challenges to implementation: Advertisements of tobacco products have been banned in India under Section 5, of the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA). Accordingly 'No person, for any direct or indirect pecuniary benefit, shall— (a) display, cause to display, or permit or authorise to display any advertisement of cigarettes or any other tobacco prod-

uct; and No person, shall, under a contract or otherwise promote or agree to promote the use or consumption of—cigarettes or any other tobacco product; or any trade mark or brand name of cigarettes. In violation of the legal provisions, two helmet companies sold helmets marked with the Marlboro logo of a red and white chevron. The displayed logos in these helmets directly reminded the popularly known Marlboro cigarette logo in colour and in design, clear advertisements for the Marlboro brand of cigarettes. The brand name of Marlboro was very visible when the motorcyclists rode.

Intervention or response: Pasumai Thaayagam Foundation documented the violation with evidences. Complaints were filed but there was no response. Hence a Writ was filed seeking direction to ban the sale of helmets with Marlboro logo and to ensure that no other products are sold under the disguise of tobacco brand name in any form in Chennai as well in the state of Tamil Nadu and thus render justice. Media release on filing of the litigation was made.

Results and lessons learnt: The media highlighted the information of the litigation that was filed before the High Court Chennai. On behalf of the government pleaded that actions were being taken and already notices were given to the perpetrator companies. The Honourable court upheld the prayer and disposed the Writ directing the State Nodal Officer of the State Tobacco Control Cell, to follow up and see that it is carried out. Now there is ban of sale of helmets under disguise of tobacco brand name in any form in the state of Tamil Nadu.

Conclusions and key recommendations: This is a great success and has opened the way for challenging other disguised forms of promotions of tobacco products.

PD-697-19 Challenging inclusion of tobacco industries in CSR (New Companies Act, 2013) through Ministry of Health and Family Welfare

S C Alexander¹

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Background and challenges to implementation: Section 135 of New Companies Act, 2013 mandates Corporates to set budgetary allocation for CSR invariably including Tobacco Industries. The Act contradicts section 5(3b) of COTPA 2003 and section 5.3 of WHO FCTC. Tamilnadu

Peoples Forum for Tobacco Control (TNPFTC) took the initiative at the National Level to challenge participation of Tobacco Industries in CSR. The intervention activities resulted in Secretary, Department of Health & Family Welfare, GOI writing to Secretary, Ministry of Corporate Affairs GOI to re-examine section 135 of the Act. This step has its impact at the National Level in protecting the health of Indians.

Intervention or response: Lobbying with the Government and creating a mass movement were the methods used.

- Online Signature Campaign initiated and spread at the national level
- Regular Representations along with the consolidated report of Online Signature Campaign was sent to Minister of Corporate Affairs and Minister of Health requesting them to address the issue
- Demonstration was staged at Chennai for the issue which resulted in huge media coverage.
- Regular follow-up with both the Ministries was done through RTI

Results: On 10 Jan, 2014 Kesav Desiraju, Secretary, Department of Health & Family Welfare, GoI sent a letter to Naved Masood, Secretary, Ministry of Corporate Affairs GoI. In the letter, Kesav had asked Naved to re-examine section 135 of New Companies Act, 2013. He suggested that the Tobacco Industries pay their 2% into a Fund operated by the Ministry of Corporate Affairs and identify appropriate recipients through a Committee which includes representatives from Ministry of Health & Family Welfare.

Lessons learnt: The learning got was on how to make the Government function through the use of RTI. In all the activities, the public support was crucial and if they are sensitised properly are very supportive. The movement for tobacco control must be strengthened and the civil society members must be vigilant for any strategy of tobacco industries.

Conclusion: The Ministry of Health & Family Welfare has taken a stand to protect the health of the nation, COTPA, FCTC and taken action against the issue. The civil society must be watchful of Tobacco Industries and stop their influence. Also they must play a proactive role in sensitising Health Department about the strategies that the tobacco industries carry out.

F.No. P-16018/35/2014-PH-I [FIS- 89494/2014]
Ministry of Health & Family Welfare
Government of India

Nirman Bhawan, New Delhi - 110 108
Dated, 9th May, 2014

To,
Shri S. Cyril Alexander,
C/O/ Tamil Nadu Peoples Forum For Tobacco Control,
39/8, Starling Apartments, Akbarabad 2nd Street, Kodambakkam,
Chennai - 600 024

Subject : Information sought under RTI, 2005 - regarding

Sir,

Kindly refer to your RTI application dated 05.05.2014 received in this Division on 15.04.2014. The matter pertaining to Tobacco Control Programme is as under-

Information sought	Reply
1. Please provide the current status of the CSR status in Rules of Companies Act, 2013.	1. RTI Application transferred to Ministry of Corporate Affairs.
2. Please provide the action taken regarding our complaint dated 05.11.2013 for the new companies Act. Please give us the current status regarding our complaint to protect Health Policy through excluding the Tobacco Industries from CSR activities.	2. Based on the number of representations received in the Ministry, Secretary (H & FW) vide letter dated 10 th January, 2014 requested Ministry of Corporate Affairs to have the matter re-examined in view of Public Health impact. A copy of the letter is Annexed.

The appellate Authority in this matter is Shri Amal Pusp, Director, Ministry of Health and Family Welfare, Nirman Bhawan, New Delhi.

Yours faithfully
(R.S. Negi)
Under Secretary to Govt. of India
Tel: 2301 2735

1. Copy to RTI Cell - RTI Section MOHFW - File No. A.60011/FIS 91770/2014-RTI Cell

5. In view of the above apprehension and in order to assist this Department in reducing tobacco consumption with the objective of protecting present and future generation from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke, I would request you to urgently have the matter re-examined.

6. One suggestion made is that the proposed Corporate Social Responsibility (CSR) Rules 2013 incorporate a provision to the effect that companies engaged in the production, manufacture, sale, distribution and supply of cigarettes or any other tobacco products or alcohol shall not undertake any CSR activities as specified in Section 135 of the Companies Act, 2013. However, such a provision would have adverse effect of exempting the tobacco and alcohol industry, already identified as demerit goods industry, from exercising any social responsibility whatsoever. The solution seems to be not that such industries are exempted from Section 135 but that they are prevented from giving any sort of publicity to such efforts.

7. Another possibility is that all such industries pay their 2% into a Fund operated by your Ministry. A Committee which includes representative from this Ministry could then identify appropriate recipients. This would have the advantage of breaking the link between donor industry and recipient.

8. We are examining the matter further; however, I would be grateful for any suggestions you may wish to make.

Keshav Desiraju
Yours sincerely
(Keshav Desiraju)
10 Jan

Shri Naved Masood
Secretary
Ministry of Corporate Affairs
Government of India
Shastri Bhawan
New Delhi.

केशव देसिराजु
सचिव
KESHAV DESIRAJU
Secretary
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E-mail: secyhfwm@nic.in
k.desiraju@nic.in


सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110011
Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare
Nirman Bhawan, New Delhi- 110011

D.O.No.P-16011/05/2013 10th January 2014

Dear Naved,

I take this opportunity to congratulate you on the successful introduction of the new Companies Act, 2013 which has sought to introduce harmony with international norms, fraud reduction measures, new government powers, and accountability provisions, particularly Section 135 of the said Act mandating, inter-alia, targeted companies to spend a prescribed formula-based amount on Corporate Social Responsibility activities for applicable fiscal year and a report on these activities in the Annual Board Report.

2. I have also gone through the draft Corporate Social Responsibility Rules being framed under Section 135 of the Companies Act, 2013 and observe that as tobacco is a demerit goods industry that risks public health, the probability of these industries taking advantage of the said rules for directly or indirectly promoting their trade/brand name and the product they manufacture will remain high. This, then, would be in direct conflict with Section 5 of the Cigarettes and other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA 2003) (copy enclosed) which inter-alia prohibits tobacco companies from direct/indirect and even surrogate advertisements, promotion and sponsorship. Such activities would also contravene the guidelines framed under Article 13 of WHO Framework Convention on Tobacco Control (FCTC) (copy enclosed) which has been ratified by India along with 177 countries thereby committing themselves to reduction of tobacco use globally.

3. Tobacco companies are prohibited from sponsoring any public event viz. gifts, bravery award, games/sports etc. In this regard the government should not unwittingly or otherwise be seen to encourage any project of public importance or participate in any activity such as to render nugatory the provisions of WHO FCTC and COTPA.

4. Further, one of the recommendations of the 210th Report of the Rajya Sabha Committee on Sub-ordinate Legislation enjoins on this Department to ensure that rules for direct/indirect advertisements are clear, comprehensive and unambiguous so that the tobacco industry cannot circumvent them, and thus, minimize the scope for veiled/surrogate advertisements. Knowing the tobacco industry well, there is every likelihood of them exploiting the proposed provisions of the draft CSR Rules in their favour and subvert this Department's efforts.

PD-698-19 Why medical doctors and dentists in Makassar-Indonesia smoke: a determinant analysis

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Background: Doctors and dentists are good models in application of healthy lifestyle which play a key role in controlling tobacco-use in their community. They are at forefront of primary health care and give medical intervention which is effective in helping patients to quit tobacco, but ironically they smoke themselves. Objective of this study is to find out determinant of the risk of smoking sustained habit by medical doctors and dentists in Makassar City, and how much probability of them appear still being smoker if had multiple risk factors.

Design/Methods: The type observational study is case control design. Samples were taken with purposive method in eight hospitals, 25 community health centres (Puskesmas and Balai Kesehatan) in the city of Makassar. The cases are medical doctors and dentists who smoked at least one cigarette per day. The controls are medical doctors and dentists who have quit smoking at least one month or had ever smoked. Amount of 204 respondents with 1:2 ratio of case-control. This research uses self-administered questionnaire modified from Global Health Professional Survey (GHPS) by WHO. Analysis of test data used was the odds ratio, logistic regression, and confounding analysis.

Results: The results indicated that personality factors ($p=0.000$; OR 10.983; 95% CI 5.144 to 23.449); attitude towards patients ($p=0.000$; OR 4.108; 95% CI 2.057 to 8.204); work environment ($p=0.001$; OR 2.735; 95% CI 1.461 to 5.123), and readiness help others to stop smoking ($p=0.000$; OR 3.153; 95% CI 1.718 to 3.246) were significantly at risks while knowledge factor ($p=0.471$; OR 1.247; 95% CI 0.684 to 2.274) are not meaningful. Respondents have probability 73,6% appear still being a smoker if have negative personality, negative attitude toward the patient, and not ready help others to stop smoking. Even if no risk factors were present in respondent there is probability 3,5% appear still being smoker. There is no effect-modifier occur in interaction of significant variables.

Conclusion: Personality is the most powerful determinant of smoking habit sustainability of medical-doctors and dentists (OR 9.477). This study suggests for increase effectiveness of smoke-free area regulation in health services therefore should be made the rule by profession association (e.g IDI and PDGI) themselves about smoking habit among doctors and dentists because smoking by doctors and dentists could influence smoking behaviour of patients and communities.

Figure 1. Smoking Habit Distribution of Respondents by Age Group and Level of Education

Characteristics	Case		Control		Total	%
	n	%	n	%		
Age Group						
< 31 years old	15	22,1	12	8,8	27	13,2
31-40 years old	15	22,1	29	21,3	44	21,6
41-50 years old	25	36,8	68	50,0	93	45,6
> 50 years old	13	19,1	27	19,9	40	19,6
Level of Education						
General Practitioner	36	52,9	53	39,0	89	43,6
Specialist	27	39,7	67	49,3	94	46,1
Sub-Specialist	1	1,5	1	0,7	2	1,0
Master Degree	4	5,9	14	10,3	18	8,8
Doctoral Degree	0	0,0	1	0,7	1	0,5
Total	68	100,0	136	100,0	204	100,0

Source: Primary Data, 2012

Figure 2. Distribution of Respondents Who Ever Smoking According to Special Characteristics

Special Characteristics of Respondents Who Ever Smoking	n=106	%
Type of Smoker		
Light Smoker (<10 cigarettes/per day)	57	53,8
Middle Smoker (10-20 cigarettes/per day)	44	41,5
Heavy Smoker (>20 cigarettes/per day)	5	4,7
Age First Time Smoking		
< 10 years old	6	5,7
10-15 years old	25	23,6
>15 years old	75	70,8
Smoking Period		
Before Being a Medical Doctor or Dentist	92	86,8
After Being a Medical Doctor or Dentist	14	13,2
Reason Start Smoking		
Just Try/Follow Friends	74	69,8
Following Mode	9	8,5
Pride Emblem/Maturity	4	3,8
Reduce Stress and Anxiety	19	17,9

Source: Primary Data, 2012

Figure 3. Distribution of Respondents According to Personality, Attitudes Toward Patient, Work Environment, Knowledge, and Readiness to Stop Smoking

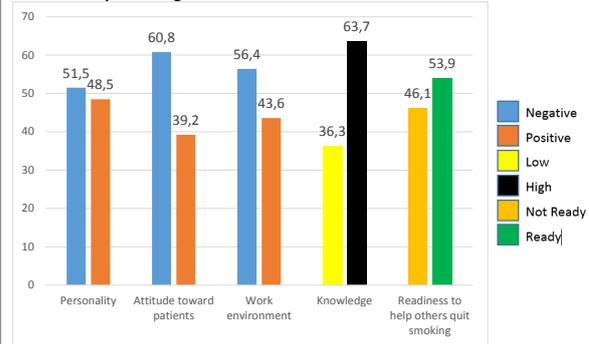


Figure 4. Risk of Personality, Attitude Toward Patient, Work Environment, and Readiness Help Others to Stop Smoking Toward Smoking Habit Sustainability Among Medical Doctors and Dentists in Makassar

Variables	Case		Control		Total		OR 95% CI
	n	%	n	%	n	%	
Personality							
Negative	58	85,3	47	34,6	105	51,5	10,983 (5,144-23,449)
Positive	10	14,7	89	65,4	99	48,5	
Attitude Toward Patients							
Negative	55	80,9	69	50,7	124	60,8	4,108 (2,057-8,204)
Positive	13	19,1	67	49,3	80	39,2	
Work Environment							
Negative	49	71,1	66	48,5	115	56,4	2,735 (1,461-5,123)
Positive	19	27,9	70	51,5	89	43,6	
Knowledge							
Low	27	39,7	47	34,6	74	36,3	1,247 (0,684-2,274)
High	41	60,3	89	65,4	130	63,7	
Readiness help Others to Stop Smoking							
Not Ready	44	64,7	50	36,8	94	46,1	3,153 (1,718-3,246)
Ready	24	35,3	86	63,2	110	53,9	
Total	68	100,0	136	100,0	204	100,0	

Source: Primary Data, 2012

Figure 5. Multiple logistic regression analysis With Backward Stepwise (Conditional) Method Determinants of Smoking Habit Sustainability Among Medical Doctors and Dentists in Makassar

Variables	Coef	Wald	OR	95% CI	
				LL	UL
Personality	2,249	30,600	9,476	4,272	21,026
Attitude Toward Patients	0,954	5,695	2,596	1,186	5,688
Readiness Help Others to Stop Smoking	1,143	10,053	3,136	1,547	6,357
Constant	-3,316	46,657	0,036		

PD-699-19 Litigation against the tobacco industry in Lebanon: a first case in the Middle East

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Background and challenges to implementation: The measures included in national law 174 included a ban on all tobacco advertising, promotion and sponsorship (TAPS) (March 2012) and increased warning labels to 40% (October 2013). The tobacco industry has been actively interfering in implementation, primarily through the state-run monopoly. This has included requesting legal counter-opinions on the interpretation of law provisions, applicability of warning label size, indirect advertising and infringement of the law by promotion in the hospitality sector.

Intervention or response: The Lebanese Union on Consumer Protection (LUCP) is an NGO that legally represents consumer rights in Lebanon, and a recipient of a TFK grant for tobacco control. In October 2013 LUCP raised a case to the State Consultation Council against the Minister of Finance for refusing to implement the warning decree measures and issuing illegal instructions (delaying 40% warning label by 1 year and for only one side of pack rather than both sides). In November 2013 LUCP raised a second case to the Lebanese Judiciary against Philip Morris for advertising and promoting to customers in restaurants and cafés. LUCP collected written, photographic and video evidence to support both cases raised, and met with other tobacco control activists and legal experts to discuss approaches. Journalists were also notified of these actions.

Results and lessons learnt: The tobacco industry began implementing the 40% warning label on both pack sides in December 2013 and within two months all packs had the correct label, without waiting for the outcome of the State Consultation Council's verdict. Response of the new Minister of Finance in April was that the correct measure was implemented and the continuation of the court case not necessary. In the second case Philip Morris took the maximum time allowed (3 months) to receive the legal notification, and used delaying tactics at the first hearing in July 2014 claiming consumers are not adequately represented; hearings are still under way in Lebanese courts. Several articles in the media covered the court cases and infringements.

Conclusions and key recommendations: Litigation and advocacy by civic groups against tobacco industry interference is an important measure for tobacco control, to ensure effective implementation of national law and highlight tobacco industry practices. Such litigation can be successful in developing countries, including in the Middle East region.

PD-700-19 The growing tobacco market in Saudi Arabia

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Background: According to Euro monitor international, all tobacco categories continued to show impressive growth despite the public smoking ban among other legislative obstacles in Saudi Arabia. The aim of this study was to evaluate growth of tobacco consumption and to calculate the proportion of added economic burden.

Design/methods: Data regarding the Compound Annual Growth Rate (CAGR) of the tobacco market were retrieved from Euro monitor international. Data on imported tobacco in the period 2007-2012, were obtained from the Saudi Customs Authority. To evaluate the economic burden, mortality was calculated using the following parameters: 1 ton of tobacco consumed causes an average of 0.65 premature deaths, and the net loss was calculated as US\$50.3 million (2014 US\$ prices) for every 1000 tons of tobacco consumed. This represented the net cost of premature deaths and the direct and indirect costs of morbidity.

Results: Tobacco products market recorded a CAGR of 11%. Imported tobacco increased from 40 in 2007 to 57 (thousands tons) in 2012. Annual Premature deaths increased from 26000 (2007) to 37000 (2012) and the annual economic burden increased from 2 billion to 2.5 Billion US\$ in the same period. The total economic burden in the period (2007-2012) was 14.5 billion US\$ and 188500 premature deaths with an increase of >20% over the forecasted burden if the level of imported tobacco on 2007 was maintained.

Conclusion: Both data sources confirm the growth of Tobacco market in Saudi Arabia despite modest increase in the Smoking prevalence. This is may be explained by the influence of tobacco industry and increase in the absolute number of smokers.

PD-702-19 The position of Turkey in WTO trade disputes conflicting with the Framework Convention on Tobacco Control

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Background: World Health Organization (WHO) and other major health organisations emphasise that addiction to nicotine and smoking cause primarily lung diseases and other related diseases. Thus, health institutions and authorities underline that tobacco control policies must restrict and discourage tobacco consumption and take necessary precautions to stop the harms of tobacco. The countries that agreed with those institutions signed the Framework Convention on Tobacco Control (FCTC) to protect their citizens. However, while on the one hand those countries implement tobacco control policies, on the other hand international trade disputes arise between them, conflicting with the goals of the FCTC.

Design/Methods: Tobacco industry targets free global trade and compels World Trade Organization (WTO) to eliminate trade barriers. As a result, the FCTC and national health policies are generally treated as trade obstacles at Technical Barriers to Trade (TBT) committee meetings of WTO. If the FCTC-implementing countries are the third parties in those trade disputes, their attitudes and posi-

tions in TBT committees can shed light on the content and effectiveness of their national tobacco control policies. On this ground, the contents of WHO resources as well as TBT committee meeting texts are analysed in order to explore the positions of Turkey vis-à-vis international tobacco trade disputes between other third party countries.

Results: Tobacco industry-related disputes at the WTO are generally evaluated on the basis of whether or not there is a violation of free trade rules. Sometimes countries intervene as if they are the representatives of tobacco industry. As a member of the TBT committee, Turkey also intervenes in tobacco industry disputes between country parties. TBT committee disputes show that international trade rules affect FCTC policies negatively. Recognized as a best country practice by WHO, Turkey's interventions in TBT become especially meaningful and also give signal for the future of tobacco control in the country.

Conclusion: In this study, TBT committee disputes are explored in light of the liberalization of international trade rules in contrast to FCTC policies. The analysis covers party countries' FCTC implementation performances as well as intervention topics on disputes through the lens of Turkey's position at TBT committee meetings. The analysis indicates that FCTC policies must be prioritized against free trade rules in TBT disputes.

10. SMOKELESS TOBACCO - BURDEN, TRENDS AND CHALLENGES

PD-703-19 Determinants of low tax coverage of smokeless tobacco in Bangladesh: a qualitative study

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Background: Despite its proven efficacy as a tool to reduce demand of tobacco products, taxation on smokeless tobacco (ST) remains generally low as compared to cigarette in Bangladesh. Our aim was to identify the underlying factors for low tax coverage for ST in Bangladesh.

Design/Methods: Policy-makers, manufacturers and retailers at central and regional levels were interviewed using semi-structured questionnaires, asking questions about the products, and adherence to legislation and tax payment.

Results: In Bangladesh, ST is taxed at a much lower rate based on "ex-factory price". There is an absence of annual systematic inflation-adjusted increase in tobacco taxation, in general. Though sale of packed smokeless tobacco product in Bangladesh requires a license from Ministry of Industry, large numbers of manufacturers are producing packed ST products without license and remains out of

paying taxes and VAT to the government. Some manufacturers do not use any brand name while some keep on changing brand names making it difficult to bring them under tax coverage. Another reason of low tax coverage remains the varying types of smokeless tobacco products including packed and unpacked items produced by large number of manufacturers. No mapping of ST manufacturers had been done in Bangladesh and their actual number is unknown. Moreover, there is no legislation to restrict production and sale of unpacked smokeless tobacco leading to tax evasion. The supply chain for smokeless tobacco products is not straight forward as many of the actors are interlinked in Bangladesh, which makes it complicated to impose tax on unpacked smokeless tobacco. Inadequate training of law enforcers, unclear roles and responsibilities of different government departments, and inadequate resources for enforcement are some of the barriers in increasing tax coverage for ST products.

Conclusion: Specific excise tax needs to be imposed on ST with annual systematic inflation adjusted increase in tax. A mapping of ST manufacturers by administrative area and by type and volume of ST production is required to understand the market share of ST and the coverage for tax. Appropriate training of law enforcers is also required.

PD-704-19 Association between tobacco use and body mass index among Indian males: a preliminary report

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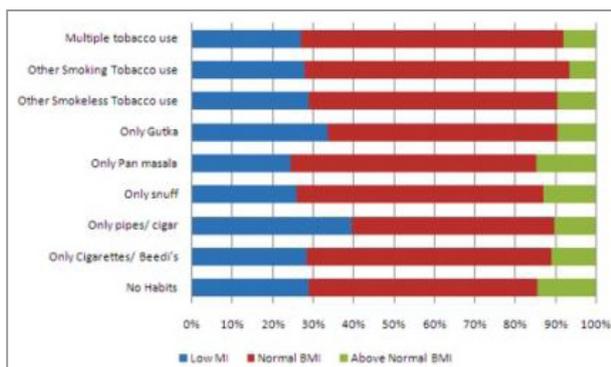
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Background: Body mass index [BMI, weight (kg)/height (m²)], a measure of weight adjusted for height, is a simple and inexpensive index that is often used as a proxy for overall health of populations. As such, it is influenced by diet, other aspects of lifestyle, and other environmental factors. In India, the association between low BMI and tobacco use is well documented. However such studies were limited to restricted geographical location in this vast country. India as a country with huge diversity in cultural, geographical, food habits, socio-regional and religious practices, the BMI for India has not been studied with regards to tobacco. Thus the focus of this preliminary report is to provide an insight descriptive study of the relation between different forms of tobacco use among Indian males and BMI. Materials and

Methods: A secondary data analysis of the questionnaire fielded under National Family Health Survey-3 (NFHS-3), which collected information from a nationally representative sample of 74,369 men aged 15-54 years was used for the analysis. The data of use of tobacco in any form was collected from the participants. Similarly, food habits (qualitative measurements – never, occasional, weekly and daily) and BMI measurements were done as per standard procedure with informed consent.



Results: Of all the male participants for whom data were available 57.6% used tobacco in some form. Of them 33.4% smoked cigarettes or bidis, 0.7% smoked cigar/pipes, 25,587(34.42%) used one or another chewing products; 8.1% used Pan masala, 11.8%used gutka and 12.13% used other chewable tobacco products. BMI data were available for 93.1% of all males. Of them 19802(26.6%) were having low BMI (<18.5), 41238 (55.5%) had normal BMI (18.5–25) and the rest 8161(11.0%) had above normal BMI (>25). Graph 1 shows the percent prevalence of high, normal and low BMI amongst tobacco users. When compared to other tobacco product uses, Pan masala only

users had a significantly higher BMI values when compared to the non-users.

Conclusions: It was found in the present study that all forms of tobacco use were associated with low BMI amongst male tobacco users in Indian population. However use of certain smokeless tobacco products like pan masala had been associated with high BMI values among this population. This finding raises important questions about the magnitude of the adverse impact of Pan Masala use on the health status of the population.

PD-705-19 Do warning messages on products motivate women's intention to quit using smokeless tobacco?

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Background: All packaged tobacco in India contains health warnings as per norms prescribed by the Government of India. However, women use both packaged and unpackaged smokeless tobacco products (SLT) thus restricting their exposure to these warning messages. Few studies have explored the understanding of these health warnings among women using SLT, however, its relation to their intention to quit these products is not explored. This study explores: (i) women's understanding of warning message (scorpion picture) on SLT products; and (ii) to assess its relations to women's intentions to quit the use of currently using smokeless tobacco products.

Design/Methods: A cross-sectional community survey was conducted among a sample of 409 married women aged 18- 40 years consuming at least one form of SLT for the past 7 days during 2011-12 in a slum area, Mumbai. The respondents were interviewed using structured questionnaire designed to collect information on socio-demographics characteristics, patterns of tobacco use, significance of scorpion on SLT products and intention to quit. Univariate and bivariate analysis was carried out.

Results: It was found that 52% women linked scorpion sign to causing cancer and it was positively related with the level of education of women. Overall, 68% women had intended to quit the SLT use but there was no significant association between the awareness of significance of scorpion picture and intention to quit SLT products.

Conclusion: Warning labels might not be effective among SLT users as there are both packaged and non-packaged products that are readily available and accessible in the market. Instead there needs to be rigorous community level educational programmes through mass media or big hoardings that can be more influential in creating awareness on the harmful effects of smokeless tobacco products.

PD-706-19 Assessment of pH and pathogens in smokeless tobacco products available in Mangalore City, Karnataka, India.**B Sadhu¹**¹Department of Public Health Dentistry, A.J Institute of Dental Sciences, Mangalore, India.

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Background: The vast majority of people use tobacco products well before the age of 18 years. An estimated one million Indians die annually from tobacco related diseases in spite of Tobacco use is the single most preventable cause of disease and death. Increased alkalinity promotes the absorption of Nicotine and facilitates dependence. Pathogenic microorganisms may be associated with smokeless tobacco products during the process of handling, processing, manufacturing, storing or packaging, which may pose serious health consequences to consumers and may be synergistic to the harm caused due with the presence of toxic chemicals. The objective of the present study was to assess the pH levels and the presence of various pathogenic microorganisms among different Smokeless Tobacco Products commercially available in Mangalore, Karnataka, India.

Design/Methods: Smokeless tobacco products commercially available in the local market of Mangalore, India were examined. Two popular brands each of unprocessed tobacco, Zarda, Khaini, Ghutka were used for the study. An extract of each of the smokeless tobacco products was prepared and the pH was determined in triplicates for each extract using a pH meter. For microbial analysis the samples of smokeless tobacco products were transferred into Brain Heart Infusion broth and were inoculated into culture plates and incubated for the growth of microorganisms.

Results: The pH of smokeless tobacco extracts ranged from 5.16 to 8.89. Genus Bacillus was isolated from Khaini, Zarda and Unprocessed Tobacco. Klebsiella was isolated from Ghutka. The fungus Aspergillus fumigatus was isolated from Ghutka.

Conclusion: The alkaline pH of smokeless tobacco products leads to increased nicotine absorption and facilitate increased addiction. The Pathogenic organisms isolated add to the detrimental effects of tobacco on health. These findings are in support of these public health issues and it should be brought to the attention of policy makers as well as manufacturers for development of suitable regulations. Consumers, particularly the youth must be made aware of the additional health hazards from consuming tobacco.

PD-707-19 Smokeless tobacco use in Myanmar: a challenge for regional tobacco control**N N Kyaing,¹ T Sein,² K K Zaw³**¹Sustainable Development and Healthy Environments, WHO Regional Office for South-East Asia, New Delhi, India,²President, People's Health Foundation, Yangon, ³Lower Myanmar, Department of Medical Research, Yangon, Myanmar. Fax: (+91)1123370197. e-mail: kyaingn@who.int

Background: The use of smokeless tobacco (SLT) in Myanmar is highest among ASEAN countries and is the highest among adult males globally (51%). The Ministry of Health in Myanmar is working towards strengthening its national tobacco control legislation adopted since 2006[i], and thus, it is imperative that the national policies and programmes are tailored to address the unique characteristics of SLT use. The study aims to review the prevalence, details of the products, trade, marketing, advertising, legislation and taxation, and evidence on morbidity and mortality and to make recommendations for policy options.

Design/Methods: The data sources for this review were obtained from published reports and documents, research findings and personal communications.

Results: A variety of SLT products used together with betel quid poses a challenge since betel quid chewing habit has been accepted as a cultural norm in both rural and urban areas. Betel quid chewing is found to be initiating at younger ages. Sale, marketing and advertising of SLT are not under control and thus, road-side kiosks selling betel quid with SLT are mushrooming. Considerable trade of SLT products by illegal and legal means created an increase in access and availability. Low cost of SLT product enables high volume of use, even for the poor families. Taxation for raw tobacco and tobacco products is half the rate of tax on cigarettes.

Conclusion: The high use of SLT in Myanmar and the lack of awareness on its dangers, weak enforcement, low tax rates and illicit trade across neighbouring countries pose a challenge on tobacco control in Myanmar and in the WHO South-East Asia Region. It is urgently required to advocate policy makers on the magnitude of the problem and make amendments on the tobacco control legislation and tax structure. Effective enforcement and action for social change are urgently needed.

PD-708-19 Prevalence and trend of smokeless tobacco [SLT] among youth in South-East Asian countries**D Sinha,¹ K Palipudi,² T Gyeltshen,³ S Asma²**¹Sustainable Development and Healthy Environment, World Health Organization, New Delhi, India, ²Office on Smoking and Health/Global Tobacco Control, Centre for Disease Control and Prevention, Atlanta, Georgia, United States of America, ³Ministry of Health, Royal Government of Bhutan, Thimphu, Bhutan. e-mail: sinhad@who.int

Background: Global Youth Tobacco Survey has been completed in at least two rounds for most of the countries in South-East Asia Region. Comparing findings from these

two rounds provides trend data for most of the countries in the Region. Since smokeless tobacco use prevalence among adults is high in countries of the Region, this paper examines the prevalence and trends of smokeless tobacco use among youth.

Design/Methods: Global Youth Tobacco Survey is a survey of 13-15 year students using standard protocol. GYTS uses two stage cluster sample design. At the first stage schools were selected based on probability proportional to the enrolment size of the schools. At the second stage classes are selected randomly. Students anonymously recorded their responses on machine readable answer sheets. All students in selected classes were eligible to participate in survey.

Results: Prevalence of current use of smokeless tobacco among youth varied from 5.0 % in Thailand to 23.2% in Bhutan; among boys from 7.1% in Bangladesh to 27.2 % in Bhutan and among girls from 3.7% in Bangladesh to 19.8% in Bhutan. Prevalence of smokeless tobacco was reported significantly higher among boys as compared to girls in Bhutan [Boys 27.2%; Girls 19.8%], India [Boys 11.1% vs. 6.0%], Maldives [Boys 9.2%; Girls 2.9%], Myanmar [Boys 15.2%; Girls 4.0%], and Sri Lanka [Boys 13.0%, Girls 4.1%], however, there was no difference in prevalence of SLT use among boys and girls in Bangladesh, Nepal, Thailand and Timor-Leste. Prevalence of current tobacco use did not change in Bangladesh [between 2007-4.9% [2.9, 8.0] and 2013- 5.9% [4.2, 8.2]], India [between 2006 -9.4% [7.5, 11.6] and 2009- 9.0% [7.7, 10.4], Myanmar [between 2007-6.5% [5.1, 8.3] and 2011-9.8% [7.5, 12.6]], and Sri Lanka [between 2007- 6.8% [4.9, 9.4] and 2011- 8.5% [7.1, 10.1]], however, a significant increase was noted in Bhutan from 9.4%[7.3, 12.1] in 2009 to 23.2%[19.9, 26.8] in 2013 and in Nepal from 6.1%[4.5, 8.2] in 2007 to 16.2%[13.2, 19.6] in 2011.

Conclusion: Smokeless tobacco use prevalence among youth in Member countries of WHO South-East Asia is high and not reducing over years in many countries and is on rise in some countries. Suitable corrective measures need to be implemented.

PD-709-19 Consumption of smokeless tobacco among females in India

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Background: A report published in The Lancet says that having nearly 275 million tobacco users, India ranks second globally and very close to China (approximately 301 million users). But unlike China, where nearly all are smokers and nearly 95 per cent smoke manufactured cigarettes, India accounts for more of smokeless tobacco users which is about 206 million.

Design/Methods: The main aim of the study is to examine the prevalence of smokeless tobacco among women in India by using data from the Global Adult Tobacco Survey (GATS) in India conducted during 2009-2010. It is a household survey of persons age 15 and above done on a

nationally representative probability sample was used to provide national and regional estimates by residence and gender and state estimates by gender. Bi-variate and multivariate analysis has done to see the prevalence of tobacco user and Chi-square tests can be used to test the association between two classifications (classifier variables) of a set of counts or frequencies and compares the observed and expected frequencies in each category.

Results: Study shows that smokeless tobacco use among women is 18.4 per cent and 15 percent were daily user. The prevalence is found high among rural women and aged more than 64 years and prevails in the north-eastern part of the country. Regression analysis has also shown a statistically significant correlation between residence and use of smokeless tobacco that rural women were more likely to be vulnerable to smokeless tobacco user as compared to urban counterpart ($p < 0.05$). Among women consumption of oral tobacco (as snuff, mishri, gul, gudakhu) is found high followed by paan masala, betel quid without tobacco and nasal use of snuff etc.

Conclusion: Smokeless Tobacco consumption is associated with various chronic diseases among man and women which may causes severe illness and mortality. So, there need to be prevention of Smokeless Tobacco consumption could be an important intervention in preventing the ongoing increasing in prevalence of various chronic diseases in the country.

PD-710-19 Smokeless tobacco use among Indian youth

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Background: The prevalence of current smokeless tobacco (SLT) use among youth is an important predictor of the future burden of tobacco related diseases. This paper presents that evidence on prevalence, trends and factors associated with SLT use among youth in India.

Design/Methods: A systematic review of the literature was carried out to summarise the published evidences on SLT use among youth in India. A number of electronic databases such as PUBMED, and COCHRANE databases were searched, supplemented by screening reference lists, SLT related websites, and contacting experts. A second search was carried out combining the search terms 'smokeless tobacco' and 'youth in India' as follows: 'smokeless tobacco and youth in India'. The literature search included papers published till December, 2013. Only English language papers only retrieved. Selection, extraction and quality

assessments were carried out by a group of independent reviewers. The focus was on studies conducted on SLT use of the school-and non-school going youth in India and discussed in a global perspective.

Results: About one in ten students aged 13-15 years use some form of SLT product. The Global Youth Tobacco Survey (GYTS) data shows no change in prevalence of SLT use among students aged 13-15 years between 2006(9.4%) and 2009 (9%). The prevalence of SLT use in girls is higher as compared to smoking. The SLT use varies widely among student youth in states of India with prevalence ranging from 1% in Himachal Pradesh to 56% in Bihar. SLT use among youth in India is influenced by a number of environmental and individual level factors, including price, availability, social norms, advertisements and promotions influence SLT use among youth in India. Multi-component school based interventions are effective in preventing adolescents from starting tobacco use in school settings and in changing community norms.

Conclusion: The research evidence suggests preventing the onset of SLT use by intervening at early adolescence, prior to the time when they have experimented with it. School based tobacco control interventions need to be scaled up for preventing initiation of tobacco use among youth.

PD-711-19 Developed for addiction: use of gudakhu as dentifrice among young people in rural Chhattisgarh, India

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Background: Indian legislation prohibits use of tobacco as an ingredient in dental care products. gudakhu is a paste of tobacco and sugar molasses which is commonly used by young people and involve direct application of tobacco to the gums, thus increasing risk of cancer of gums. The present study was aimed to identify factors leading to initiation of gudakhu use, find out prevalence and preventive strategies, which could be used to deal with this menace.

Design/Methods: A community-based survey using pre-tested semi-structured questionnaire was developed with questions about initiation, reason for indulging, related misconception, knowledge about ingredients and benefits and harmful health effects of gudakhu use. The survey was conducted in 9 villages of Achanakmar wildlife sanctuary which were randomly selected out of 42 villages. Data was collected from 385 young residents of 15 to 30 years during April to May 2011.

Results: Gudakhu use initiated by 12 years of age. 69.8% of study participants used tobacco related products, out of which 41.2% indulged in applying gudakhu habit alone. This habit was slightly higher among males compared to females. Male participants than females were more likely to perceive gudakhu use as harmful habit draining community health and wealth. Availability, cost, family and

peer influence plays a central role in gudakhu initiation. The primary reasons for gudakhu initiation and maintenance were identified as social influence, stress, boredom and misconception that tobacco is good for teeth. Jaggery as ingredient was known to study subjects except a very few who could also report tobacco as main ingredient. The barriers to quitting were identified as social sanction, enjoyment of applying and anticipated loss of means of handling stress or bad moods.

Conclusion: Gudakhu, which are promoted as antibacterial and infallible protection against teeth and gum diseases, are popular among rural residents. This habit often becomes an addiction, and young people graduate to other forms of tobacco, thus increasing their chance for cancers. Comprehensive prevention strategies with focus on personal and socio-environmental factors that influence initiation and maintenance of gudakhu use; aims to build knowledge and skills to break misconception; bring motivation to quit tobacco use related behaviour among parents, teachers, health providers should be adopted and strong punitive measures by law enforcing agencies should be taken to curb this problem.

PD-712-19 A study on smokeless tobacco use among 8th, 9th and 10th grade students in Myanmar

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Background: The recent Myanmar Global Youth Tobacco Survey results (2011) showed that Smokeless Tobacco (SLT) use among students of aged 13-15 years has increased in both sexes. The purpose of the study is to provide accurate updated data on the prevalence of major Smokeless Tobacco use among student youths in Myanmar to help National Tobacco Control Programme develop priorities, establish programmes, and advocate for resources for school health and youth health programmes and policies relating Prevention and control of Tobacco and smokeless tobacco.

Design/Methods: A multi-stage, school-based, two-cluster survey (n=1058, 8th, 9th and 10th Grade) was conducted in 18 basic education high schools of Myanmar in 2012, using a pre-tested modified questionnaire based on the Global Youth Tobacco Survey questionnaire developed by CDC, USA. A total of 1,058 students ages 13-15 participated in the study.

Results: According to the survey, 24% of students reported ever use of betel quid where 7.6% were current cigarettes smoker, 7.3% were current cheroot smokers, 6.9% were current user of other Smokeless Tobacco products (9.9%

among boys and 3.7% among girls) and 15.6% were current user of betel quid. 44.2% of current users of betel quid used tobacco in the betel preparation (39.1% among boys and 70.4% among girls). 22.4% of current users of betel quid used tobacco preparation (betel quid with various forms of modified tobacco and raw tobacco) in it. Current use of betel quid with tobacco among girls was about 2 times higher than the boys. Usually students start chewing betel preparation without tobacco but the majority adds tobacco into the preparation in later stages and become addicted to tobacco.

Conclusion: The current prevalence of Smokeless Tobacco use revealed the urgent need to focus on the smokeless tobacco problem in Myanmar. As there was a wide spread myth that smokeless tobacco is not as harmful as cigarettes, parents and teachers tend to show less concern on their children's chewing betel with tobacco. The cultural and social acceptance and the myths were compounded by lack of specific smokeless tobacco control component in the existing tobacco control law adopted in 2006. Enforcement of the national legislation on tobacco control needs to be strengthened, and the National Tobacco Control Programme needs to be more comprehensive incorporating measures to reduce smokeless tobacco use and other non-cigarette tobacco products.

PD-713-19 Evaluation of cardiovascular risk parameters in smokeless tobacco users

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Background: Despite considerable decrease in smoking, ST use prevalence in the United States has not significantly changed in the past several years. Currently, 9 million U.S. adults use ST products. Due to aggressive marketing and promotion of ST products and higher use of ST by current smokers, it is important to evaluate ill health effects of ST use. Cigarette smoking is a well-documented major risk factor for cardiovascular disease (CVD), however, there is inadequate evidence of such association for ST use. The aim of this study was to evaluate cardiovascular risk parameters in ST users. ST users were compared to cigarette smokers and non-tobacco users.

Methods: Data from 18,197 adults who participated in National Health and Nutrition Examination Survey (NHANES) 2003 – 2010 were used. Tobacco use was defined on the basis of smoking status and recent tobacco use. The associations were examined using univariate and multiple logistic regression with odds ratios (OR) and 95% confidence intervals (CI) reported. Taylor Series linearization approach was used to account for the complex sample design and perform weighted analysis of the aggregate data.

Results: Prevalence of exclusive ST use in the study sample was 2.2% whereas, 22.4% were exclusive smokers. Major-

ity of the ST users were male (96%) and Non-Hispanic White (90%). 39.4% of the ST users were hypertensive and 26.5% had high cholesterol levels. Most (82%) of them were overweight (33%) or obese (49%). Multiple logistic regression analysis indicated that ST users were 1.76 (95%CI: 1.24, 2.49) times more likely to have hypertension compared to smokers when adjusted for other covariates. Similarly, these odds were significantly higher when ST users were compared to nontobacco users (aOR=1.66, 95%CI: 1.22, 2.26). ST users were almost twice more likely to be obese compared to nontobacco users (aOR=1.9, 95%CI: 1.23, 2.95) and their adjusted odds of being obese were increase more than four-fold compared to smokers (aOR=4.06, 95%CI: 2.60, 6.35). ST users had significantly higher uptake of nicotine and NNK compared to smokers.

Conclusion: It is believed that health risks associated with ST use are lower than those with cigarette smoking. However, the study findings indicate substantial association of ST use with hypertension and obesity which are independent risk factors of CVD. More focused research is warranted to carefully examine the effects of ST on cardiovascular and other body systems.

PD-714-19 Preventing harms associated with SLT use among women of reproductive age in India through tailored campaign messages about infant health backgrounds

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Background: Among Indian women smokeless tobacco (SLT) has significant oral and reproductive health consequences and use of SLT among lower income women is increasing and worrisome. Women see many benefits of use but believe that tobacco use causes harm to their babies. More than 50% of SLT using women initiate after marriage. Addressing married women's concerns about infant development and health may prevent initiation or reduce use especially during pregnancy. This paper is first to report on women's concerns about the effects of tobacco use on perinatal health. **Methods:** In a mixed methods study in a slum area of Mumbai, 43 in-depth interviews with daily SLT-using married women between 18 and 40 years of age were conducted in Hindi and Marathi. They formed the basis of a survey conducted with 409 daily SLT users. Qualitative themes associated with risk to babies were examined in survey data that included demographics, respondent and spousal SLT use, pregnancy status, use patterns and perceived risks to infants, using univariate and bivariate statistics.

Results: Between 40-60% of women agreed to seven statements that SLT use during pregnancy causes 1) baby's skin to peel; 2) tobacco collection in child's chest; 3) child born with gutkha layers on his body; 4) weakness at birth; 5) skin allergies, 6) low birth weight, and 7) baby's

tobacco addiction. High concern for risk was associated with husband's polytobacco use ($p=0.008$); born in Maharashtra ($p=0.002$); women's poly SLT use ($p=0.001$) and longer residence in Mumbai ($p=0.03$). Age, education, income, amount of use in grams, and pregnancy status did not make a difference.

Conclusion: In a gender inequitable environment, Indian women often rank family health over their own. We show SLT using women are more concerned about the effects of tobacco on the health of their babies than on themselves. Culturally specific harm reduction campaign messages addressing the baby's health should be developed and delivered to all SLT using women especially those immediately post marriage, tailored to more and to less concerned SLT users based on consumption patterns and social context, and the effects evaluated. This approach has implications for needed tobacco control efforts focused on women.

PD-715-19 Global burden of disease due to smokeless tobacco consumption: analysis of surveys from 101 countries

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Background: Smokeless tobacco is consumed in most countries in the world. Its common use and the associated risks warrant an adequate description of its global impact on health. However, differences in risks associated with use of different smokeless tobacco products make it difficult to estimate such risk or setting policies. We present the first ever global estimates of the burden of disease due to smokeless tobacco consumption among adults (≥ 15 years) in 2010.

Design/Methods: The burden attributable to smoke-

less tobacco use was estimated as a proportion of the disability-adjusted life-years (DALYs) lost and deaths reported in 2010 Global Burden of Disease study. We used the comparative risk assessment, which evaluates changes in population health (burden of disease) that result from modifying population's exposure to a risk factor (smokeless tobacco). Distribution of population exposure was extrapolated from country-specific prevalence of smokeless tobacco consumption and changes in population health were estimated using disease-specific relative risks associated with its use. Using a conservative approach, we only allocated risk estimates to selected countries including Sudan and those in South and Southeast Asian, Nordic, and North American region.

Results: Our literature search found adult prevalence figures for smokeless tobacco consumption in 64 countries. Furthermore, we extrapolated adult figures for another 38 countries, based on youth surveys. Bangladesh (32.6%) and Myanmar (51.4%) has the highest prevalence of smokeless tobacco use among females and males, respectively, while India has the highest number of smokeless tobacco users in the world. Depending on the product (and region), we found a varying risk of oral, pharyngeal, oesophageal, pancreatic cancers as well as fatal myocardial infarction and stroke, associated with smokeless tobacco use. Our estimates indicate that smokeless tobacco use led to 428,736 deaths and a loss of 10,048,453 DALYs in 2010. This accounts for 1% of all global deaths and 0.5% of all DALYs lost in that year. Out of this, almost a quarter of disease burden is due to cancers and rest is due to cardiovascular diseases.

Conclusion: This is a conservative estimate as the risks associated with SLT use in most countries in Africa and Central Asia are largely unknown. Nevertheless, our estimates suggest that efforts successful in reducing SLT consumption are also likely to result in substantial health gains.

11. ADDICTION - DETERMINANTS AND MOTIVATORS TO QUIT

PD-717-19 Comparison of tobacco dependence evaluated by self-assessment and ICD-10 among 582 current smokers from Miyun and Yanqing County in Beijing, China

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Background: China is the largest tobacco producer and consumer. There are at least 300 million smokers in China, about 1 million people die from smoking related diseases every year. WHO has classified tobacco dependence as a disease in the list of International Classification of Disease (ICD-10, F17.20), confirming that tobacco is the top threat to human's health at present, and the main substance causing tobacco dependence is nicotine. The most widely used standards to diagnose tobacco dependence are ICD-10 and DSM-V. In United States, prevalence of tobacco dependence among current daily smokers measured by DSM-V is approximately 50%, prevalence measured by ICD-10 is 70%. There are many studies to explore the tobacco dependence prevalence in Europe, America and other countries in Asia, while that is little known in China.

Design/Methods: In this study, 727 smokers from Yanqing and Miyun County in Beijing, China were recruited for a telephone survey. They were invited to answer a questionnaire about smoking characters designed according to standard of drug dependence in ICD-10. Chi-square Test was used to compare the dependence on tobacco evaluated by self-assessment and ICD-10 standard.

Results: Totally 582 current smokers complete the survey including 551 daily smokers and 31 occasionally smokers. Among 582 current smokers, 70.1% are addicted to tobacco, 29.0% are not addicted, 0.9% are not sure whether they are addicted, and 73.7% daily smokers are addicted to tobacco by self-assessment. In contrast, 55.8% current smokers are dependent on tobacco, 44.2% are not, and 59.0% daily smokers are diagnosed as tobacco dependence by ICD-10 standard. Among 169 smokers thinking they are not addicted to tobacco, 4.4% of them are diagnosed as tobacco dependence by ICD-10. Among 408 smokers thinking they are addicted to tobacco, 22.5% are not diagnosed as tobacco dependence by ICD-10. There is significant difference between ICD-10 standard and self-assessment on diagnosing nicotine dependence ($P < 0.05$).

Conclusion: Gap exists between self-assessment and ICD-10 standard on evaluating tobacco dependence, which is helpful for formulating smoking cessation intervention strategies in China.

PD-718-19 Effect of ban on chewing tobacco on consumers in Chennai, India

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Background: Chewing tobacco was banned under the food safety act in Tamil Nadu in May, 2013. The current study is to find out the effect of the ban on consumers in Chennai. The study was conducted 9 months from the ban.

Design/Methods: One main road and one busy street (branching from the main road) were identified using stratified simple random sampling from each of the 15 administrative zones in Chennai city. An investigator observed 6 randomly chosen shops from each zone (2 of each type; permanent, platform and bunk) for 30 minutes during peak hours. When purchase of a banned product was noticed, the consumer was approached by the investigator and interviewed after receiving oral consent. A total of 90 consumers who purchased from 3 different types of shops were interviewed. The questions included awareness about the ban, impact of the ban on their motivation to quit, availability of products and price increase.

Results: All the consumers interviewed were aware of the ban and 90% reported availability in their regularly frequented shops; 63.3% reported availability everywhere and 60% had no difficulty in procuring banned products. Price increase was reported by 85.6% of the consumers. Consumers report feeling guilt (18.9%), fear (23.3%) when purchasing a banned product. Consumers also reported that the ban has motivated them to quit (22.4%), make multiple quit attempts (58.9%) and felt the need to seek help to quit tobacco (28.9%). About 1 in 3 consumers have reduced their consumption (35.6%) and price, availability and health reasons were the top 3 reasons reported for reduction. There was a significant reduction in the number of sachets used per day (before ban (5.64 ± 3.41) , after ban (4.42 ± 2.91) , $t(89) = 5.55$, $p = 0.005$). MDM (40%), Hans (26.7%), unpackaged tobacco (Mava, 20%), were the highly used products. Consumers reported increase in price of products (MDM (50% to 300%), Hans (20% to 233%), Manickand (up to 150%) and unpackaged tobacco (up to 100%)) after the ban. .

Conclusion: Ban has had an impact on the consumers in terms of motivating them to quit and reducing use. However, availability and accessibility is a major deterrent in quitting tobacco. Demand and awareness about tobacco cessation has to be intensified.

PD-719-19 Prevalence and socio-demographic determinants of tobacco use in countries of the WHO SEA region: findings from the Global Adult Tobacco Survey

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Background: Tobacco use is a leading cause of deaths and Disability Adjusted Life Years [DALY] lost worldwide, particularly in South-East Asia. Health risks associated with exclusive use of one form of tobacco alone has a different health risk profile as compared to dual use. In order to tease out specific profiles of mutually exclusive categories of tobacco use, we carried out this analysis.

Design/Methods: We used the Global Adult Tobacco Survey [GATS] data to describe the profile of three mutually exclusive tobacco use categories ['Current smoking only', 'Current smokeless tobacco [SLT] use only', and 'Dual use'] in four WHO SEAR countries, namely Bangladesh, India, Indonesia and Thailand. GATS was a nationally representative household-based survey that used a stratified multistage cluster sampling design proportional to population size. Prevalence of different forms of usage were described as proportions. A logistics regression analysis was performed to calculate Odds Ratios with 95% CI. All analyses were weighted to account for the complex sampling design and conducted using SPSS version 18.

Results: There was significant cross-country variation in the prevalence of different forms of tobacco use. The overall prevalence of current tobacco use was highest in Bangladesh [43.3%], followed by, Indonesia [35.7%], India [34.6%] and lowest in Thailand [27.2%]. Prevalence of current smoking only was highest in Indonesia [34%] followed by Thailand [23.4%], Bangladesh [16.1%] and India [8.7%]. Prevalence of current SLT use was similar in India [20.6%] and Bangladesh [20.3%] followed by Thailand [3.5%] and Indonesia [0.9%]. Prevalence of dual use was highest in Bangladesh [6.8%], followed by India [5.3%], Indonesia [0.8%] and Thailand [0.4%]. Each country had a specific set of socio-demographic determinants. There was a perceptible social hierarchy in the distribution of exclusive categories of tobacco use patterns. Current tobacco use was compared with never tobacco use. Current tobacco use was significantly associated with male, gender, with increasing age, education, and wealth quintile.

Conclusion: This study addressed the socio-economic disparities, which underlie health inequities due to tobacco use. Tobacco control activities in these countries should take in account local cultural, social and demographic factors for successful implementation.

PD-720-19 Assessment of bidi dependence in multiple tobacco use settings: evidence and implication in Indian Context

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Background: Each tobacco product serves as a source of nicotine. Evidence has suggested smokers consume fewer cigarettes when other tobacco products are in use simultaneously. This affects commonly used nicotine dependence indicators like cigarette smoker per day (CPD) and time to first smoke (TTFS). This study further examines performance of nicotine dependence and its outcome indicators among bidi smokers in Indian context.

Design/Methods: Global Adult Tobacco Survey (India) data used for analysis. The current daily smokers who smoked (N=2797) only bidi (nil simultaneous use of other tobacco products) were termed as exclusive users and rest (N=2724) daily bidi smokers using any other tobacco products (smoking/smokeless) simultaneously was defined as multiple users. These groups were compared across dependence and its outcome indicators like quit intention and quit attempt etc. Sample weight was not used for this non-random sub-sample analysis.

Results: Average number of bidi smoked per day (BPD) among exclusive users (12.28, CI:11.94-12.63) was significantly ($p<0.001$) higher than multiple users (10.76, CI:10.38-11.13). Higher proportion (73.4%) of multiple users reported smoking within 30 minutes of waking up than their exclusive user (71.7%) counterparts but not significant. Mean heaviness of smoking index (HSI) score among exclusive users (2.52, CI: 2.47-2.57) was significantly ($p<.005$) higher than their multiple user (2.41, CI:2.47-2.57) counterparts. Multiple users had shown significantly ($p=0.036$) lower quit intention (22.6%) than their exclusive user (26%) counterparts. Similarly multiple users had shown lower ($p=0.003$) past quit attempt 28.3% than their exclusive user (33%) counterparts.

Conclusion: Indicators like consumption intensity (BPD), need for restoring nicotine level in the morning after night sleep (TTFS) and HSI remains less reliable in multiple tobacco use settings. However dependence outcome indicators like poor quit intention and lower quit attempt was significantly and consistently associated with multiple use of tobacco products. Therefore multiple use itself may be considered as an important indicator of nicotine dependence itself that represents craving for nicotine containing products from whatever source. Further validation studies with factor analysis and correlation with biological markers should be given research priorities to confirm the same.

PD-721-19 Estimating the consumption of tobacco products in India using GATS 2009-10

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Background: India has more than 275 million tobacco users and more than one-quarter of India's youth begin tobacco use before they are 16 years old. A diversity of tobacco products spurs India's hidden epidemic. The widespread use of tobacco is largely because of easy accessibility and availability.

Design/Methods: Using SPSS 19 (V 3) we estimate tobacco products consumed by users in India annually using disaggregated data that is publically accessible Global Adult Tobacco Survey (2009-10) from the US CDC open access data.

Results: Using this method we estimate the consumption of all tobacco products (smoked and chewed) consumed in India annually using prevalence data. In India nearly 0.5 trillion bidis, 110 billion cigarettes and around 570 million tonne of chewing tobacco was consumed in 2009-2010.

Conclusion: Prevalence data and per capita consumption can be used to quantify total consumption of tobacco products and serves as an effective proxy of the total tobacco products manufactured in India. Such information can inform policy-makers on a diverse set of issues ranging from taxation, cessation and regulation and provide a long-term perspective on tobacco control strategies.

PD-722-19 Overlapping reasons for starting smoking and substance abuse

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Background: Smoking was significantly associated with substance abuse. Youths who smoke are more likely to experience dangerous jobs, so smoker are more likely to have substance abuse. Because in both cases, the same reasons such reducing stress or opposition to adult authority, may be proposed, aim of this study was evaluating reasons for starting smoking and substance abuse and its correlation.

Method: In a cross-sectional study 481 cases referred to methadone substance use disorder clinics and drop in centres were studied. Through standard questionnaire, smoking history, nicotine dependency and reasons for starting smoking and substance abuse and its correlation was evaluated.

Result: Comparison reason of smoking initiation and substance abuse in the cases showed, that the first three reasons in both of cases was similar, as smoking initiation causes was peer's consumption (36.1%), reducing depression and anxiety (17.5%) and relieving pain (16.4%) re-

spectively. Also the first three reasons of starting substance abuse were peer's substance abuse (42.5%), relieving pain (16.6%) and reduction of depression and anxiety. There was a significant correlation between smoking and substance abuse initiation reasons ($p < 0.001$).

Conclusion: Overlapping the most common initiation reasons of smoking and substance abuse, increase probability of this theory that smokers and substance abusers have of psycho somatic problems that leads to starting such matters or people who start smoking with such reasons are most susceptible to start drug abuse, too. Therefore in such a situation, preventive programmes are necessary.

PD-723-19 Prevalence and social determinants of smoking in 15 countries from Central and Western Asia, Latin America and Caribbean: a secondary data analysis

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Background: Article 20 of Framework Convention on Tobacco Control calls for cross-country surveillance of tobacco use through population-based surveys. We aimed to provide country-level prevalence estimates for current smoking and smokeless tobacco use and assess social determinants of smoking.

Design/Methods: Data from Demographic and Health Surveys done between 2005 and 2012 in 9 Central and West Asian countries and 6 Latin American and Caribbean countries among men and women aged 15-59 years were analysed. Weighted country-level prevalence rates were estimated for 'current smoking' and 'current use of smokeless tobacco (SLT) products' among men and women. In each country, social determinants of smoking and among men and women were assessed by binary logistic regression analyses using 'svy' command on STATA to account for complex survey design.

Results: Prevalence of smoking among men was high in Armenia (63.06%), Moldova (51.06%), Ukraine (52%), Azerbaijan (49.80%), Kyrgyz Republic (44.33%) and Albania (42.52%) but prevalence smoking among women was low (<9%) in most countries except Ukraine (14.81%) and Jordan (17.96%). Prevalence of smokeless tobacco use among men and women was very low in all countries (<4%) except men in Kyrgyz Republic (10.60%). Smoking was associated with older age, lower education and poverty among men and higher education and higher wealth among women. Smoking among both men and women was associated unskilled work, living in urban areas and being single.

Conclusion: Smoking among men was very high in Central and West Asian countries. Our analysis shows that Demographic and Health surveys may provide reasonably reliable estimates of current smoking. Social pattern of smoking among women that was different from men for

education and wealth should be considered while formulating tobacco control policies in some Central and West Asian countries.

Weighted prevalence estimates (95% confidence intervals) of smoking (cigarettes, pipe and others) and smokeless tobacco use (chewing, snuff) among men and women				
Country (survey year)	MEN		WOMEN	
	Smoking	SLT use	Smoking	SLT use
Central and West Asia				
1. Albania (2008-2009)#	42.52 (40.39, 44.65)	1.64 (0.98, 2.30)	4.18 (3.02, 5.33)	
2. Armenia (2010)#	63.06 (60.08, 66.04)	0.09 (0.09, 0.27)	1.78 (1.14, 2.41)	
3. Azerbaijan (2006)#	49.80 (47.38, 52.21)	0.24 (0.10, 0.38)		
4. Kyrgyz Republic (2012)	44.33 (41.86, 46.79)	10.60 (8.98, 12.23)	2.76 (2.14, 3.38)	0.04 (-0.01, 0.09)
5. Tajikistan (2012)*			0.19 (0.07, 0.31)	0.03 (0.00, 0.07)
6. Moldova (2005)	51.06 (48.54, 53.57)	0.11 (0.02, 0.24)	7.12 (6.41, 7.83)	0.02 (-0.01, 0.05)
7. Ukraine (2007)#	52.00 (48.97, 55.02)	0.25 (0.07, 0.43)	14.81 (13.26, 16.35)	
8. Jordan (2012)*#			17.96 (16.37, 19.55)	
9. Egypt (2005)*			0.60 (0.46, 0.74)	0.03 (0.00, 0.07)
Latin America and Caribbean				
10. Bolivia (2008)*#			8.66 (7.99, 9.32)	
12. Dominican Republic (2007)	11.50 (10.85, 12.14)	2.22 (1.93, 2.52)	6.39 (5.94, 6.85)	0.33 (0.24, 0.42)
13. Honduras (2011-2012)	24.28 (22.83, 25.73)	0.67 (0.43, 0.90)	1.74 (1.49, 1.99)	0.03 (0.01, 0.06)
14. Peru (2012)*#			4.92 (4.34, 5.49)	
15. Guyana (2009)#	30.46 (28.11, 32.82)	0.54 (0.17, 0.91)	3.30 (2.60, 4.00)	
16. Haiti (2012)	11.48 (10.49, 12.47)	3.13 (2.45, 3.82)	2.17 (1.83, 2.50)	3.15 (2.59, 3.71)

* Men were not interviewed or tobacco questions were not asked to men
Data was not collected or smokeless tobacco use was not reported

PD-724-19 Motivation and quitting success among adult smokers in the United States

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Background: The purpose of this study was to examine trends in smokers' motivation to quit, quitting efforts, and smoking behaviour over the past decade in the United States using data from the International Tobacco Control (ITC) US adult smoker cohort survey.

Methods: Data for this analysis are from the first eight waves of the ITC survey conducted annually from 2002 to 2011 and include a total of 6,669 adult smokers. Participants were asked a series of questions on their tobacco use beliefs and behaviours, including amount and type of products consumed, motivation and efforts to stop smoking, purchasing habits, and beliefs about the health risks of smoking. Generalized estimating equations were used to test for trends, estimate adjusted wave specific prevalence rates, and model characteristics associated with outcomes of interest.

Results: Over 90 percent of smokers in our surveys reported wanting to stop smoking, planning to quit, and making a quit attempt over the past decade. Success in staying off cigarettes following a quit attempt was low, with average annual quit rate of about five percent measured as not smoking continuously for 6-months or longer. Most smokers expressed worry about their smoking

causing damage to their health and an increasing percentage of smokers reported having health problems due to smoking. The use of medications to help smokers quit increased over time, although the majority of smokers who reported making a quit attempt did so without any form of assistance. The average number of cigarettes consumed daily by smokers did go down overtime as did the percentage reporting daily smoking.

Conclusions: The findings from this study suggest that most smokers would stop smoking if they could do so easily. However, despite high motivation to quit, overall quitting success is low, and has not changed dramatically over the past decade despite higher cigarette prices, clean indoor air laws, and an increasing barrage of anti-smoking messages. Smokers continue to smoke despite acknowledging concerns about the damaging effects of smoking on their health and in some cases even admitting that smoking has harmed their health. These findings underscore the conclusion that motivation to stop smoking is not deficient; rather addiction to cigarettes is what keeps most smokers puffing away.

PD-725-19 Do former smokers still find cigarette-related stimuli to be motivationally salient?

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Background: Repeated smoking has been theorised to increase the salience of stimuli conditioned during drug use to the point that they influence attention, motivation, and ultimately behaviour, thus helping to maintain nicotine dependence. However, the extent to which former smokers find smoking-related stimuli to be motivationally salient is largely unknown.

Design/Methods: We collected event-related potential (ERP) data from former (n=60) and never (n=60) smokers and compared them to a sample of current smokers (n=60) who completed the same ERP paradigm prior to smoking cessation treatment. All participants attended one laboratory session where we recorded dense-array ERPs in response to cigarette-related, pleasant, unpleasant, and neutral pictures, and where we collected valence and arousal ratings of the pictures. Using permutation analysis, we identified three spatial and temporal regions of interest, corresponding to the P1 (120-132 ms), early posterior negativity (EPN; 244-316 ms), and late positive potential (LPP; 384-800 ms) ERP components. The P1, EPN, and LPP components are well established in the visual processing literature and have been found to be sensitive to the motivational relevance of visual stimuli

Results: We found that all participants produced larger P1 responses to cigarette-related pictures compared to the other picture categories. Cigarette-related pictures evoked larger EPN among current smokers than among former and never smokers. With the LPP, all participants

produced smaller responses to cigarette-related pictures compared to pleasant and unpleasant pictures, and current smokers produced larger responses to all pictures than former and never smokers. Current smokers rated the cigarette-related pictures as being more pleasant and arousing than the former and never smokers.

Conclusions: The P1 findings suggest that depictions of cigarettes attract attention early for all people, probably because of their perceptual characteristics. The EPN and picture rating results suggest that former smokers, like never smokers, do not find cigarette-related stimuli to be as motivationally salient as current smokers. Future research should attempt to identify the time course by which cigarette-related stimuli lose their motivational salience among former smokers.

PD-726-19 Racial differences in daily smoking compared to other health-risk behaviours among adolescents in the United States

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Background: There are significant racial differences in adult smoking prevalence in the United States. The aim of this study was to assess racial differences in the prevalence of tobacco use as well as other health-risk behaviours among adolescents in the United States.

Design/Methods: We analysed data from the latest national Youth Risk Behaviour Survey, which was conducted in the United States during spring 2013. A nationally representative sample of 13,583 students from public and

private schools in grades 9-12 were selected using a three-stage cluster sample design. The categories of race/ethnicity assessed were non-Hispanic white; non-Hispanic black; Hispanic; and non-Hispanic "Other" (American Indian/Alaska Native, Asian, Native Hawaiian/other PI and Multiple - Non-Hispanic). Daily cigarette smoking was defined as having smoked at least one cigarette every day for the past 30 days. High alcohol consumption was defined as having had at least one drink of alcohol for 6 days or more or having had 5 or more drinks of alcohol in a row on one or more days, both during the past 30 days. Data on having ever used any drug and risky sexual behaviours were also collected through a self-completed questionnaire. Multivariate logistic regression models were fitted to assess the association of race with each of these behaviours, adjusting for age and sex.

Results: African American (OR=0.35, 95% CI: 0.24-0.50), Hispanic (OR=0.53, 95% CI: 0.39-0.73), and "Other" race/ethnicity students (OR=0.68, 95% CI: 0.48-0.97) had lower odds of daily smoking than non-Hispanic Whites. In contrast, Black (OR=1.62, 95% CI: 1.25-2.11) and Hispanic (OR=1.72, 95% CI: 1.37-2.16) students had higher odds of engaging in substance use than Whites. Similarly, Black (OR=0.53, 95% CI: 0.41-0.67) and "Other" race/ethnicity students (OR=0.70, 95% CI: 0.53-0.93) were less likely than Whites to report high alcohol consumption, but equally likely with Whites to engage in risky sexual behaviours, whereas Hispanic youth did not differ from White students in high alcohol consumption, but were less likely to be involved in risky sexual behaviours (OR=0.51, 95% CI: 0.31-0.72).

Conclusion: Findings may indicate that smoking might not be perceived as risky a behaviour as drug or alcohol use among American adolescents, therefore more targeted efforts to denormalise smoking are required.

12. TOBACCO - A VIOLATION OF HUMAN AND SOCIAL RIGHTS

PD-727-19 Argentina global adult tobacco survey: exposure to media messages

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Background: The primary vector for the spread of the tobacco epidemic is the advertisement and promotion of products by tobacco companies. In Argentina, the National Tobacco Control Law prohibits advertising, promotion,

and sponsorship of cigarettes or tobacco products through any media or communications outlet, with the exception of points of sale, among other measures. This study aims to describe the impact of anti-tobacco advertising and messages and enforcement of the law in Argentina, as well as alternative methods to which tobacco companies might resort to market their products.

Design/Methods: The Global Adult Tobacco Survey included questions about the population's exposure to anti-tobacco information and cigarette advertisements in various types of media (newspapers, magazines, television, radio, billboards on public thoroughfares, Internet, and cigarette packs in the past 30 days and the effect of health warning labels on cigarette packs. There were also questions about sports, music, fashion and art events associated with particular brands of cigarettes or tobacco companies, and on different strategies for promoting cigarettes.

Results: A total of 75.8% of those surveyed had noticed information about the dangers of smoking or urging smoking cessation in some media outlet during the previous 30 days. Television was the most common outlet (58.3%), followed by newspapers and magazines (42.9%). The Internet was the most popular place for noticing anti-smoking information among the youngest age groups (33.2%), higher income groups (26.9%), and among those with higher educational levels. More than half of the population (53.2%) reported seeing warnings on the risk of smoking on a cigarette pack in the past 30 days. The youngest age groups were more likely to report having seen a warning label and the percentage of current smokers that saw warning labels was as high as 83.4%. A total of 32.9% of smokers reported that the messages on cigarette packs made them think about quitting smoking. Advertisements were seen mostly at locations where cigarettes are sold (41.9%).

Conclusion: The GATS showed that cigarette advertising and promotion reaches strongly the population, especially at points of sale. There is a high awareness of information on the dangers of smoking or encouraging smoking cessation. The internet appears to be a powerful reference point for anti-smoking information among youth, those in higher income brackets, and the more highly educated.

PD-728-19 Knowledge, attitudes and beliefs about smoking among Aboriginal and Torres Strait Islander Australians

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Background: Aboriginal and Torres Strait Islander peoples were 2.6 times more likely to smoke than non-Indigenous Australians in 2012-2013. All Australian governments have committed to understanding and addressing the causes of this disparity. This is the first national study that describes knowledge, attitudes and beliefs about smoking among Aboriginal and Torres Strait Islander peoples, how each relates to quitting, and how this compares to the Australian population.

Design/Methods: A national stratified cluster sample of 2522 Aboriginal and Torres Strait Islander people were surveyed in 2012/13, and were compared to the broader population using data from the Australian International Tobacco Control (ITC) Project.

Results: Knowledge and attitudes about smoking were generally less positive among daily compared with non-

daily smokers. Knowledge about direct effects of smoking and second-hand smoke (SHS) was high, yet only SHS knowledge was significantly associated with health worry (OR 4.29, 95% CI: 2.78-6.61) and attempts to quit in the past year (OR 1.82, 95% CI: 1.32-2.52). Contrary to our expectations, risk minimising beliefs were not associated with quitting. Compared to the Australian population, Aboriginal and Torres Strait Islander daily smokers were less likely to say they enjoy smoking (65.1% cf. 80.6%) and that society disapproves of smoking (60.8% cf. 78.5%), and were more likely to support government action (80.4% cf. 47.2%); other attitudes were similar. Further, perceived disapproval of smoking was lower for Aboriginal and Torres Strait Islander community leaders than for mainstream Australian society. Smokers who believed society disapproves of smoking (OR 1.50, 95% CI 1.12-2.01) and community leaders disapprove of smoking (OR 1.83, 95% CI 1.42-2.35) were more likely to want to quit, compared to those who did not hold these beliefs. Smokers who perceived disapproval of smoking by community leaders were also more likely to have tried to quit in the last year (OR 1.40, 95% CI 1.14-1.71). We found no evidence of social norms that indicate smoking is desirable socially.

Conclusion: Differences in the perceived acceptability of smoking, but not health concerns, risk beliefs or personal attitudes, are likely to contribute to the high smoking prevalence among Aboriginal and Torres Strait Islander people. Community-led tobacco control strategies that emphasise the protection of others may address this and boost motivation to quit.

PD-729-19 Homeless clients benefit from smoking cessation treatment delivered by a programme for homeless persons

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Background: Few homeless programmes offer smoking cessation treatment. This study examined the feasibility, acceptability and effectiveness of a financially-sustainable smoking cessation treatment model that was delivered by staff of a homeless persons' programme.

Design/Methods: Fourteen nurses from Melbourne's Royal District Nursing Service Homeless Persons' Programme recruited 49 clients into a 12-week programme offering weekly nurse-delivered smoking cessation appointments with intermittent carbon monoxide (CO) measurements, GP-prescribed free nicotine patch, bupropion or varenicline, and Quitline phone support. Surveys were completed at programme enrolment, end of programme (EoP, 3 months) and six months post-enrolment.

Results: Clients attended on average 6.7 nurse-delivered appointments. Most used pharmacotherapy (69%, n=34) and Quitline (61%, n=30, average 8.4 calls among users).

Using all-cases analyses 29% had made a quit attempt by EoP; 24-hour point prevalence abstinence rates were 6% at EoP and 4% at 6 months (no participants achieved sustained cessation), and 29% reported 50% consumption reduction at 6 months, the latter positively associated with increased Quitline use. Tobacco consumption and money spent on tobacco halved by EoP with similar levels maintained at 6 months. Butt smoking reduced. Using within-subjects analyses, all participants reported either the same or fewer symptoms of anxiety at EoP compared to baseline and 92% reported the same or less depressive symptoms.

Conclusion: Integrating nurse support with low-cost cessation interventions (government subsidised pharmacotherapy plus Quitline) was feasible and acceptable. While quit rates were low, treatment benefits included harm-reduction (reduced consumption and butt smoking), significant financial savings, and psychological benefits (improved or stable mood).

PD-730-19 Integrated production system in tobacco cultivation: human rights abuses in Brazil

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Background: Agricultural household model is the basis of Brazilian tobacco farming. Since 1918, the Integrated Production System has been adopted in tobacco cultivation in Brazil, which consists of a system of contract between the tobacco industry and growers. This study aimed to understand how Integrated Production System affects tobacco growers' human rights.

Design/Methods: Focus groups were conducted with female tobacco growers, concerning on the impacts of tobacco growing to their health, environment and social lives. Model of contract signed between tobacco growers and industries was analysed. Categories describing issues related to human rights were used in analysis process.

Results: This study was carried out at the municipality of Palmeira, in southern of Brazil, which is the most important region of tobacco farming in the country, in the first half of 2013. Focus groups were conducted with 71 participants. Outcome of group discussions highlighted the social and complex context in which tobacco cultivation is developed, expressed by exposure to health risks of tobacco farming, engagement of all family members (including children), indebtedness of growers, economic dependence and subordination to industries, and other situations. The analysis of the purchase and sale agreement showed that tobacco growers must comply with all rules imposed by industry for planting, cultivation and commercialization of tobacco leaves. Furthermore, the contract also covers issues regarding worker safety, environmental protection and children's rights, with all applicable legal responsibilities

placed on growers. Thus, considering the comparison between outcomes of analysis that showed the complexity involved in tobacco farming and rights stated in Universal Declaration of Human Rights and International Covenant on Economic, Social and Cultural Rights, it is easy to observe some human rights abuses. These are mainly related to the right to health, right to education, right to information, right to healthy environment, right to just and favourable conditions of work, right to equal pay for equal work.

Conclusion: Integrated Production System, linked to social context, raises human rights violations in tobacco growing areas. Government, workers unions and civil society should strengthen articles 17 and 18 of WHO Framework-Convention to Tobacco Control to protect the rights of tobacco growers and promote economically viable alternatives for local sustainable development.

PD-731-19 Smoking and chronic kidney disease: identifying associations between users with multiple chronic conditions

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Introduction: Chronic kidney disease (CKD) is a component of multiple chronic conditions (MCC). Cigarette smoking is an independent cardiovascular risk, and patients with CKD is a desfavorable factor. Little is known among CKD, tobacco status and the frequency of other MCC. Objective: To describe the status of tobacco and frequency of other MCC among patients with CKD.

Methods: A longitudinal study conducted in outpatient care for hypertensive, diabetic and CKD patients, at high cardiovascular risk (Juiz de Fora, Brazil, 2012). For 3 consecutive months, users ≥ 18 years were interviewed about sociodemographic data, screening for alcohol, depression and smoking status (current smokers, former smokers and non-smokers). Also, data regarding the clinical aspects (computerized medical records) for the period of the survey were collected. CKD was defined as the glomerular filtration rate <60 ml / min; declared atherosclerotic disease as those with acute myocardial infarction or coronary revascularization, stroke, peripheral vascular disease prior. Obesity, body mass index > 30 Kg/m². The project was approved by the local Ethics Committee and all participants signed a consent form.

Results: The sample comprised 1558 users, 58% female, mean age $60,5 \pm 13,5$ years. CKD identified by self-report (questionnaire) was 19,2%, while those identified by the proposed definition was 63%. Described himself, then data of current smoking (10,6%), former smokers (44,4%)

non-smokers (45%) and p value ($<0,05$), respectively, among these users. Obese: 36,4%/ 39%/ 48,5%/ 0,001. Sedentary: 81,8%/ 74,9%/ 71,3%/ 0,08. Chronic obstructive pulmonary disease (COPD): 3%/ 2,2%/ 0,24%/ 0,02. Bronchial Asthma: 2%/ 2,4%/ 1,2%/ 0,415. Declared atherosclerotic disease: 34,3%/ 32,4%/ 22,9%/ 0,004. Fasting glucose > 100 mg/dL: 53,1%/ 61,7% / 64,2% / 0,06. Systolic blood pressure >130 mmHg: 62,6%/ 69,6%/ 65,4%/ 0,2.

Conclusion: We identified a high prevalence of CKD, despite the low knowledge of their existence by their patients. Was also elevated the status of former smokers compared to current smokers. We also observed that those who have had or have contact with tobacco (smokers or former smokers) had significantly higher prevalence of overt atherosclerotic disease, COPD, were more sedentary. Ally, these users still had a tendency to greater glycaemic uncontrolled. Thus, the current or previous tobacco use gave the CKD a worse clinical profile. Among CKD patients, tobacco cessation should be a priority target.

PD-732-19 Awareness of tobacco-related harms among vulnerable populations in Bangladesh: findings from the International Tobacco Control (ITC) Bangladesh Survey

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Background: Tobacco use is more prevalent among vulnerable groups who tend to be less knowledgeable of its dangers. Decreased awareness of its harms may inhibit users' motivation to quit. Living conditions, gender and low education are factors that increase vulnerability to poor health. This study assessed awareness of tobacco harms among vulnerable Bangladeshis using nationally representative survey data.

Methods: In 2011-2012, 5288 tobacco users and non-users aged 15+ participated in the ITC Bangladesh Wave 3 Survey. A multi-stage design sampled 4223 respondents from the six districts of Bangladesh; another 1055 respondents were sampled from Dhaka's urban slums. Vulnerability was assessed using residence, gender and education. Outcomes included knowing that cigarette smoking causes stroke, impotence, chronic obstructive pulmonary disease (COPD) and heart disease and that smokeless tobacco causes gum disease and heart disease. Respondents were also asked whether tobacco packaging should contain more health information. The percentage of knowl-

edgeable respondents was estimated for each vulnerability indicator; differences between groups were tested using logistic regression. Results were weighted to represent the Bangladeshi population.

Results: Knowledge of tobacco harms was significantly lower in vulnerable groups: fewer slum vs urban non-slum residents knew that cigarette smoking causes stroke (70% vs 85%), impotence (56% vs 77%), heart disease (50% vs 86%) and COPD (45% vs 74%) and that smokeless tobacco causes heart disease (48% vs 81%) and gum disease (74% vs 86%). Similar trends were observed for women (vs men) and education, where awareness was lowest among the illiterate. Fewer illiterate Bangladeshis thought tobacco packaging should contain more health information compared to the most educated (57% vs 80%) while a greater percentage of slum residents thought this (82% vs 66% of urban non-slum residents).

Conclusion: Results indicate significant deficits in awareness of tobacco harms among vulnerable Bangladeshis signalling a need for increased education about such harms. Tobacco warning labels provide an immediate avenue to educate vulnerable groups of the harms and slum residents seem to want that information. Empowering women and providing equitable education opportunities, aims consistent with the UN Sustainable Development Goals, might increase awareness of tobacco harms. Development goals can augment the goals of the WHO FCTC.

PD-733-19 Second-hand smoke exposure among working women in a developing country: the Jordanian case

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Background: Knowledge, attitudes and avoidance practices among Jordanian women have not been previously studied regarding second-hand smoke (SHS) exposure. This study assessed the knowledge, attitudes, and avoidance behaviour towards SHS exposure among non-smoking Jordanian women currently employed at two public universities.

Design/Methods: A convenience sample of 220 women participated in the study. They completed (1) socio-demographic questionnaire, (2) household SHS exposure questionnaire, (3) knowledge and attitudes toward SHS exposure questionnaire, and (4) SHS exposure avoidance scale.

Results: The participants age range was 28 - 58 years old, mean of 34.6 years (SD 7.2). Two thirds (59.6%) of participants reported that their husband or other family member smoked inside their house. Nearly all participants (97.6%) perceived SHS exposure to be extremely dangerous. overall mean hours of exposure per day was 5.5 hours (SD 5.5), and mean days of exposure per week was

6 days (SD 6.2). SHS exposure was mainly in participant's houses or houses of friends, having a smoking husband was the most significant indicator of higher SHS exposure. The majority of women (74.1%) will try to distance themselves from smokers, but they would (75.1%) allow "visitors" to smoke in their homes and will not leave (79.9%) a group if someone starts smoking.

Conclusion: Participants avoidance behaviour did not reflect their level of knowledge and attitudes about SHS risks. Middle-eastern culture and traditional gender roles could be playing a role in their lack of assertive avoidance behaviour causing alarming SHS exposure levels.

PD-734-19 Air quality assessment in public places in Bali

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Background: The fact that smoking not only affects the smoker but also to those who breathe the air of the same room where smoking activity occurs is uncontested. Many regulations have been implemented to protect those passive smokers especially when they are in public places. In order to protect public from second-hand smoke exposure, Bali has issued regulation to set the smoke-free area. After 2 years implementation of smoke-free regulation we try to assess indoor air quality in public area ruled by the regulation.

Design/Methods: The study is a cross-sectional descriptive study using area monitoring and observation. Samples were calculated using a multistage random sampling and the results of 250 samples over 3 counties with 7 types of public places ruled by the smoke-free regulation. Air quality assessed using dylos air quality monitoring device to measure fine particulate matter (PM 2.5) pollution inside building. We use WHO standard for PM2.5 = 25 µg/m³ to determine which areas were above the standard and which were below.

Results: Of all 250 samples, 56.4% of the area has air quality above the WHO standard for PM2.5. Among all 7 area ruled by the regulation bar/karaoke is the area with the worst air quality, in average PM2.5 for bar is 213.4 µg/m³ and almost all (92%) bar/karaoke has an air quality above WHO standard. Indoor smoking activity is major factor in polluting the air, with or without AC/Mechanical ventilation present inside the room. Average PM2.5 level for a room with smoking activity is 174.3 µg/m³, while room without smoking activity barely below standard 24.98 µg/m³ We found that separation between smoking and non-smoking area within a single room did not protect people from second-hand smoke exposure. Average PM2.5 level in this kind of area is 29 µg/m³ even most of those area (10 out of 13) has no smoking activity during survey. In this survey we made a criterion to differentiate between

areas which comply with smoke-free regulation and areas which do not and try to find out the air quality between those two type areas. Average air quality in comply area (54 area) is 25.45 µg/m³ and areas which do not comply (196) is 95 µg/m³.

Conclusion: Indoor smoking activity is the main contributor in polluting air and mechanical ventilation is unable to reduce the second-hand smoke. Separation between smoking and non-smoking area within a room is unable to protect public from cigarette exposure.

PD-735-19 Cotinine level is associated with asthma severity in children

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Background: Asthma environmental triggers play important roles in severity of disease. Passive smoking could exacerbate asthma symptoms and enhance decrease in lung function. Cotinine levels could be a reflection of passive exposure to the cigarette both in adults and paediatrics.

Aim: To determine degree of association of asthma severity and cotinine level as a marker of passive smoker.

Design/Methods: : In a cross-sectional study 100 pediatric patients (under 10 years old) with asthma were enrolled in this study that 50 patients have been exposed to passive smoking and 50 patients have not. A complete clinical history, lab exams, and spirometry were determined. A sample of urine, serum and saliva is collected from all attendant patients in the study after confirmation of diagnosis and determination of severity of asthma.

Results: Age, sex, age of onset of asthma, family history and allergic history were not significantly different between two groups of patients. According to GINA classification, percentage of patients with severe asthma was significantly higher in passive smoker group (p=0.001). Cotinine was significantly higher in passive smoker group compare to control group in serum (p=0.001), saliva (p=0.001), and urine (p=0.0014). In passive smoker group, cotinine levels were significantly higher in serum (p=0.001), urine (p=0.007), and saliva (p=0.01) of patients with severe asthma than moderate and mild asthma. Serum cotinine (OR: 1.81, 95% CI: 1.35-2.32, P=0.024), urine cotinine (OR: 3.56, 95% CI = 1.29-5.53, p=0.01) and saliva cotinine (OR: 1.66, 95% CI: 1.23-1.98, P=0.031) were also significantly associated with higher risk of severe asthma.

Conclusion: Cotinine levels are higher in passive smokers compare to non-passive smokers. Besides, cotinine is predictive risk factor for severe asthma.

PD-736-19 Breast milk substitute manufacturers and the tobacco industry: is there an interference risk?

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Background: Exclusive breastfeeding is WHO recommended up to 6 months age. In Moldova there is a high rate of initiation at birth (>85%), it drops to 3-4 months. There is a tendency among smoking nursing mothers to stop breastfeeding or even not initiate at all. The failure to make work 3 documents can be involved - International Code of Marketing of Breast-milk Substitutes, FCTC and Baby Friendly Hospital Initiative (BFHI).

Intervention: Through 32 cases of smoking nursing mothers determined at birth, we tried to find if there is a link between 2 industries (tobacco & milk formula manufacturers) that can influence mothers. What are the premises? An informed choice or no access to smoking cessation programmes? Questionnaires with mothers and obstetricians were performed, also observing visits to places where pregnant women go usually for follow-up.

Results: In 52% pregnant women came to give birth having bought already the box of milk formula for the future baby; even if 85% of these women had postpartum milk. Only in 62% they were told by obstetrician "better to not stop smoking and breastfeed, than to not breastfeed at all". But no any smoking cessation aide was offered to pregnant or nursing mothers. 87% received information about formula milk during pregnancy (from TV, during consultation at obstetrician), but no support to quit (just general recommendation). Thus can lead to use of milk formula, as "easier just to read the instruction on the box how to prepare the formula for the baby, than to try to quit if no support (behavioural, medication) is given". The link between to smoke & not breastfeed is made more by women herself (at least no direct advertising was seen in media or written leaflets). In the maternity, general physician & obstetrician offices - widespread written information on BFHI, including breastfeeding, but no on smoking during pregnancy and breastfeeding. Early weaning (67% at 3 months) & reduced milk supply (85%) following maternal smoking.

Conclusions: A vicious behaviour (smoking) can lead to another (decision) to not breastfeed the baby, even in the presence of breast milk. Thus a baby is subjected to double health risk - to be fed with formula (even the mother milk is available) and exposed to SHS from the mother. Opportunities for future implication - include smoking cessation information in BFHI, as an entire package by WHO; to propose to breast milk substitute industry to link their presentations with smoking cessation advices.

PD-737-19 Effective pathways to policy change among marginalised and disadvantaged communities

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Background: Tobacco is responsible for more than 400,000 deaths in the U.S. each year. Many of those deaths are individuals from communities disproportionately impacted by tobacco. In addition, the role of the tobacco industry has greatly impacted the increase of tobacco use within communities of colour. Tobacco control policy change has been seen as one of the greatest public health accomplishments of the 20th century. However, tobacco disparities remain among marginalized groups and the pathways and process for increasing inclusion of disproportionately impacted communities in tobacco control policy change is being closely examined.

Design/Methods: Secondary data analysis and key informant interviews with community members and tobacco control leaders were done in 2014.

Results: Community leadership and advocacy programmes, such as the Leadership and Advocacy Institute to Advance Minnesota's Parity for Priority Populations (LAAMP) based on the APPEAL 4-Prong Policy Change Model, have been demonstrated to be effective in building community capacity on tobacco control policy change and community empowerment. This session highlights the unique APPEAL 4-Prong Policy Change Model and its impact on building capacity, mobilizing communities, and advancing tobacco control particularly in communities of colour and other priority populations. Examples from APPEAL Leadership Programme fellows will highlight how communities were mobilized around tobacco and other social justice issues and how successful tobacco control activities and policy actions were implemented. This session will explore effective pathways to policy change on tobacco use that involve diverse communities such as AA and NHPI communities and study the key community readiness and capacity building steps to successful policy change based upon results from key informant interviews, community readiness assessments and evaluations of APPEAL leadership trainings.

Conclusion: Despite some initial successes in tobacco control policy change, the field of tobacco control will need to examine more creative methods and diverse pathways for continuing this success. The APPEAL 4-Prong Policy Change Model addresses the elimination of tobacco and other health disparities by building leadership and advocacy efforts on many levels of community and public health.

PD-738-19 Cardiovascular risk of air pollution and smoking**G Thurston,^{1,2} R Hayes,^{1,2} R Shanley,² J Ahn^{1,2}**

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Background: Smoking and fine particulate matter air pollution (PM_{2.5}) have each been independently associated with increased risk of cardiovascular disease (CVD) mortality. However, studies of air pollution have found varying risks of air pollution for smokers vs. non-smokers. We review the evidence for the risks of CVD mortality due to PM_{2.5} exposure as a function of smoking status.

Design/Methods: A review and summary was conducted of the available information on the variation of CVD mortality risk of PM_{2.5} air pollution as a function of smoking status. This included a synopsis of available published results, as well as consideration of recent results from the authors' past and ongoing investigations in the American Cancer Society Cancer Prevention Study II (ACS CPS-II) and the NIH-AARP Diet and Health cohorts in the US.

Results: Published studies generally suggest a higher cardiovascular and cardiopulmonary relative risk (RR) of death associated with air pollution for non-smokers than for smokers. In the ACS cohort, the PM_{2.5} RR cardiopulmonary mortality estimate for never-smokers is RR=1.08 (CI=1.03-1.11) per 10 µg/m³ exposure, while that for current smokers is RR=1.04 (CI=0.98-1.1), though the effect is only statistically significant for non-smokers (Pope et al., 2002). For ischemic heart disease mortality, the ACS study gave RR = 1.22 (CI = 1.14-1.29) for never-smokers, vs. RR = 1.16 (CI = 1.07-1.27) for smokers (Pope et al, 2004). Our recent analyses of the NIH-AARP cohort also shows similar trends, with the central estimate of CVD mortality risk for never-smokers being RR=1.11 (CI = 1.04-1.18) vs. (RR=1.07 (0.99-1.16) for current smokers, and RR=1.05 (CI=1.01, 1.10) for former smokers. While no one study was able to determine a statistically significant difference between smokers and non-smoker PM_{2.5} mortality RR's, a general pattern of a larger RR central estimate for non-smokers vs. smokers is shared across studies.

Conclusion: Trends of higher air pollution-associated RR's for CVD mortality are found for non-smokers than for smokers across studies. The reasons for this are uncertain, but might be contributed by the lower baseline risk of CVD mortality in non-smokers, or possibly to greater susceptibility by non-smokers. These results support the need for combined multi-cohort assessments of this and other PM_{2.5} effect modification parameters to more definitively assess their influence on the PM_{2.5} - CVD mortality relationship.

PD-739-19 Perspectives on tobacco dependence and its treatment within child and adolescent mental health services**L Huddleston,¹ M Kulkarni,² A Taylor,² K Sayal,³ E Ratschen¹**

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Background: Adolescents with mental disorders have a high prevalence of tobacco use, yet very few receive cessation support despite recommendations for a co-ordinated approach to treatment for tobacco dependence in the context of treatment for mental disorder. This study obtained preliminary data to guide development of a tailored cessation programme to address tobacco dependence among young people with mental disorders. The challenges to conducting research within this hard to engage group are also discussed.

Design/Methods: A mixed methods study set within a large National Health Service (NHS) specialist and highly child and adolescent mental health service (CAMHS) in England, comprising an audit, a cross-sectional survey of mental health clinicians, semi-structured interviews with young smokers accessing CAMHS, and a brief survey of parents and carers of young people with mental disorder. **Results:** The identification of young smokers was found to be quite comprehensive (52.6%), however offers of support or referral to treatment were extremely rare, and no referral pathways exist. Misconceptions relating to smoking were present across all staff groups, for example just 40% were aware of the interactions between tobacco smoke and certain antipsychotic medication, although psychiatrists were significantly more knowledgeable than non-medical clinicians (91.6% vs 27.1%; OR 3.4; p=<.001). Reported smoking related training attendance was low (41.7%). Young people accessing CAMHS appear to be motivated to quit smoking, but lack confidence in cessation methods. Integrating smoking cessation support into existing care for mental disorders was found to be acceptable to young people and their carers' and positive attitudes towards web-based support were expressed.

Conclusion: Clinicians require comprehensive development to improve tobacco related attitudes and knowledge, especially in relation to the links between smoking and mental disorder. An integration of a smoking cessation programme in to existing CAMHS treatment provides a platform of trust and familiarity from which young smokers can address their tobacco dependence. Further research is required to assess the feasibility and effectiveness of interventions.

13. COMPLIANCE AND ENFORCEMENT AT POINT-OF-SALE AND IN MEDIA

PD-741-19 Youth actions against tobacco advertisement in Georgia

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Background and challenges to implementation: Georgia ratified FCTC long ago (Dec 2005) but still many provisions of the Convention are not implemented. Tobacco industry still uses unlawful advertisement campaigns, which are addressed to youth. "Be Marlboro" campaign is one of them, which took place from 2013 in Georgia. The youth involvement was very essential against such actions from tobacco industry side. Youth section of the Tobacco Control Alliance organized appropriate activities the aim of which was to promote total ban of tobacco ads in Georgia. NATT and TFK supported us in organizing of appropriate advocacy work.

Intervention or response: The main your actions were the following: On 24 April, 2014 we have organised the action in front of Parliament of Georgia in Kutaisi. In the action there participated 25 pupils and students. They have been wearing special campaign T-shirts and performing different sport activities. Also they have distributed special leaflet with the demands for improving tobacco control mechanisms in Georgia and implement complete ban on tobacco advertisements in the country. On 30 May, 2014 we have organized action in Tbilisi. It was organized together with the movement "Critical Mass" and company "Velo+". There was organised bike tour from Vake Park till Freedom Square in Tbilisi. Bikers have passed main streets of Tbilisi and therefore attracted big attention. There were more than 50 bikers participating, at the meeting point, at Vake Park they have also organized some attractive exercises and lot of public was attracted. We have issued appropriate T-shirts and certificates. You can find the photos from the action at: <https://www.dropbox.com/sh/ngwxsdo1b083/AABcGois36UVgL6GO-jZWSx7a> https://www.dropbox.com/s/v7w0s0cpgsy4b91/VTS_03_1.VOB <https://www.dropbox.com/s/ny2htvouspsf9xe/tambaco%20live.mpg>
Results and lessons learnt: After our actions, members of Parliament of Georgia promised to consider total ban of tobacco ads and promotion during fall sessions of 2014. The draft is already prepared by MoH and will be adopted by Government soon.

Conclusions and key recommendations: Youth voice and activism is crucial to defence our rights. Georgian youth needs more contacts and collaborations with appropriate movements in other countries.

PD-742-19 Widespread violations of point of sale advertising in Mumbai, India

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Background: A point-of-sale (POS) advertising promotes tobacco sales at where they are sold. POS advertisements stimulate trial use and promote brand awareness. It can also serve as a motivating factor for youth to try tobacco products. The WHO Framework Convention on Tobacco Control stipulates a comprehensive ban on tobacco industry advertising, promotion and sponsorship. In India, The Cigarettes and Other Tobacco Products Act (COTPA) 2003 limits tobacco advertising at points of purchase to listing of the tobacco products on sale by their generic names on two prescribed boards carrying health warnings at each retail location.

Methods: In 2013, a survey was conducted across 1,100 tobacco vendors in Mumbai, India to assess compliance with Section 5 and 6 of the Cigarettes and Other Tobacco Products Act (2003). Shops that displayed point of sales advertisements or failed to comply with COTPA received a follow up interview.

Results: Most tobacco vendors surveyed failed to comply with COTPA Sections 5 and 6 (71%, n=786). In majority of the shops, boards promoting cigarette brands were displayed outside the shop and prominently within the shop. Only 2% of shops displayed mandated tobacco warning signs. Most POS advertisements were created by tobacco companies (94%, n=743).

Conclusions: The survey found widespread violations of COTPA Section 5 and 6. The large number of violations suggests that the development of tobacco control laws is not enough to change commercial behaviour. In order to prevent tobacco use among users and youth, enforcement of COTPA laws is necessary.

PD-743-19 Using community festivals to strengthen implementation of the ban on tobacco surrogate advertising

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Background: The Indian Tobacco Control Law (COTPA, 2003) bans direct and indirect tobacco advertising. However, implementation of the ban has not been effective in curbing surrogate tobacco advertisements. Ganpati, a popular ten-day festival in Mumbai, sees citizens visit pandals (temporary structures) holding large idols of Ganesh. Due to their popularity, pandals attract significant advertisements. In 2010, Salaam Bombay Foundation began tobacco control activities during the Ganpati festival with the goal to ban surrogate advertisements of tobacco at pandal sites.

Methods: Ganpati advocacy took four forms. Members of Salaam Bombay Foundation conducted outreach with pandal members and municipal authorities prior to the

festival outlining the harms of tobacco and the use of surrogate advertisements. Student participants in Salaam Bombay Foundation programmes visited pandal sites to provide information about tobacco's harms and COTPA. Anti-tobacco banners and a devotional song were also provided to pandals. Finally, visitors were encouraged to promote tobacco-free pandals by leaving tobacco products in specially-designed boxes before seeking the blessing of Ganesha.

Results: Coverage of Ganpati pandals has been extensive - the advocacy programme has covered more than 200 pandals in Mumbai. Nearly 1,000 young advocates have participated in advocacy activities at pandal sites. Following outreach by Salaam Bombay Foundation, the Municipal Corporation of Mumbai implemented a ban on tobacco surrogate advertising in all the Ganpati pandals in 2011. Prior to the municipal ban, pandals across the city reported refusing surrogate advertisements deals worth over Rs 33 lakhs (USD 74,000) to date.

Conclusions: Using festivals as platforms for multi-pronged tobacco control advocacy was an effective method for building knowledge, consensus and action in Mumbai and resulted in a ban on surrogate advertisements of tobacco across the city.

PD-744-19 Tobacco industry interference in India: games the industry plays

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Background and challenges to implementation: Tobacco industry one of the most profitable industries in the world. Tobacco companies use their enormous wealth and influence both locally and globally to market their deadly products. Even as advocacy groups and policy-makers work to combat the tobacco industry's influence, new and manipulative tactics are used by tobacco companies and their allies to circumvent tobacco control efforts.

Intervention or response: We keep a close track and monitor tobacco industry tactics and also overview the Tobacco Advertising Promotion Sponsorship.

Results and lessons learnt: Monitored Different Types of Tobacco Industry Tactics in India: Package Advertising: During festival seasons, colourful packagings of tobacco products with special designs have become a common sight. Product Placement in Movies: Industry has been successful in product placement in movies and promoting tobacco through film stars. Corporate Social Responsibility Activities (CSR): As part of the image building exercise, most of the tobacco companies engage in social, culture activities and promote their corporate logo, company and brand names under the guise of philanthropic activities. Trademark Diversification: Tobacco industry directly promotes their company trademarks by using the same to sponsor other activities and events. Internet Promotions: The industry effectively and discreetly uses social networking sites like "Facebook" to promote its products. One can find many groups in the name of

cigarette brands on social networking sites. The products are aggressively promoted on these sites through & among the youth. Free Sampling: Promotion of their new tobacco products & distribution of free samples among the youth.

Conclusions and key recommendations: Even as advocacy groups and policy makers work to combat the tobacco industry's influence, new and manipulative tactics are used by tobacco companies and their allies to circumvent tobacco control efforts. It is important for tobacco control advocates to know which companies are present in their country, how and where they operate, the types and quantity of products sold, and marketing tactics used to sell tobacco products. By being informed about all aspects of the tobacco industry within a country, advocates are better equipped to fight for effective tobacco control policies.

PD-745-19 Tobacco advertisements, promotion and sponsorships in India: tobacco industry continues to play deceitful games in India

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Background: Tobacco industry has been using all possible tools to market their deadly products globally and earn profits at the expense of public health, lost lives, and untold sorrow. In India, newer and manipulative tactics are being used by tobacco industry, circumventing the Indian tobacco control law (COTPA) and carrying the business of lies and deception. It is important for tobacco control advocates and law implementers to have an understanding how tobacco companies market their deadly products. This information is important in designing tobacco control efforts and get better prepared to counter the industries tactics. The researchers did the present study with the objectives to keep a track and monitor tobacco industry tactics and overview range of the ongoing tobacco advertising promotion and sponsorship (TAPS) violations in India.

Design/Methods: Researchers did the newspaper scans, market survey and company's website search in May-April, 2013 and 2014. The marketing materials at point of sale (PoS) were also analysed.

Results: Tobacco industry is utilising PoS as a strategic location for carrying out TAPS in India. Companies are paying retailers to display the advertisement billboards and tobacco products are placed strategically to give an ambience of power walls. Near all cigarette brands are offering price discounts and encouraging single cigarette sales. Contests, giveaways and coupons for gift catalogues are other gimmicks in practice. Special editions and packages of cigarette brands are common in India. Though direct advertisements are banned in India but industry is carrying out surrogate advertisements as trademark diversification and brand-stretching especially in print and

outdoor media. Industry has been successful in product placement in movies and promoting tobacco through film stars. Tobacco use in Bollywood movies and on television is portrayed as fun, exciting, rebellious and symbol of success. As part of the image building exercise, most of the tobacco companies are doing CSR activities. The industry effectively and discreetly is using social networking sites like “Facebook” to promote its products.

Conclusion: Tobacco industry in India is carrying out aggressive advertising and promotion and sponsorship campaigns to glamorize its deadly product through indirect advertising and deceitful tactics. There is an urgent need to enforce legislation (COTPA) to contain all common types of TAPS violations in India

PD-746-19 Young adults in situ exposition to tobacco advertising and promotion in Switzerland: a proxy observational study

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Background: The WHO Framework Convention on Tobacco Control emphasises the importance of tobacco control strategies and roots for a comprehensive ban on tobacco advertising. Among signing parties, Switzerland is one of the few that have not ratified the convention (i.e. after ten years). Further, national tobacco advertising regulations are flawed and partial, allowing the industry to develop and test creative marketing strategies. While studies have documented associations between exposure to tobacco advertising/promotion and e.g. youth smoking, the level of exposition of young adults to tobacco products, advertising and other marketing stimuli has never been assessed in Switzerland.

Design/Methods: Identification, classification and quantification of tobacco related stimuli were aimed by monitoring exposition over typical day itineraries in six cities of the French speaking area of the country. Itineraries were derived based on typical day’s/outgoing activities of youth aged 18 to 24. In total 20 itineraries were recorded; 6 related to “students’ profile”, 6 to “workers’ profile” and 6 to “weekend activities”. In addition, two “nightlife” itineraries were documented. Observations were conducted between November 2013 and January 2014.

Results: Without taking into account point-of-sales’ products display, an average of about 23 pro-tobacco stimuli were recorded per itinerary, among which about three quarters were explicitly associated with tobacco advertising/marketing campaigns or brand stretching. Especially high numbers of stimuli were recorded within “weekend” and “nightlife” oriented itineraries. The four most frequently documented types of stimuli were advertising posters of various sizes, branded table ashtrays, packet of cigarettes packaged coupons for online lottery/raffle, and advertisement on cigarettes vending machines. Packaged coupons – representing roughly three stimuli per itiner-

ary in average – were in most records coded additionally as littering items.

Conclusions: Findings highlight the substantial in situ tobacco marketing exposition of young adults in Switzerland and enhance the need for stronger regulation on tobacco advertising at national level. The relatively large exposition to littering items such as flyers and coupons suggests that, in this context, these might be a significant communication tool used by the tobacco industry to overflow youth environment with pro-tobacco stimuli.

PD-747-19 Training teams to conduct a TAPS compliance assessment: lessons from Brazil and China

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Background: Despite comprehensive bans on tobacco advertising, promotion and sponsorship (TAPS), people encounter provocative and enticing pro-smoking messages in their daily lives. Compliance assessments provide data on whether messages are in line with existing regulations.

Intervention: In March 2014, the TAPS Guide “Assessing Compliance with Tobacco Advertising, Promotion, and Sponsorship (TAPS) Bans” was distributed (in native languages) and a two-day training course occurred in Rio de Janeiro, Brazil and Shanghai, China (28 and 30 college students, respectively). Expert speakers offered information on regulations, including national and local bans on tobacco advertisement and loopholes. Participants reviewed the TAPS Guide and learned data collection logistics (e.g., routes and sites for neighbourhood observations of TAPS compliance). Sufficient time was allotted for questions and answers. Participants completed surveys before, immediately after, and four weeks following the training (during the interim weeks, all participants successfully collected compliance data from their communities).

Results: Participants provided perceptions on the TAPS Guide and training. On a scale from 1 (not useful at all) to 4 (very useful), participants rated the TAPS Guide a 3.09, right after the training and 2.74, subsequently. Likewise, participants found the training sessions useful, with an overall rating of 3.25 immediately following and 2.97 four weeks later. Participants reported if they previously knew the presented content; over half (57.3%) said they learnt new material. Overall, 81% said they would use the information and techniques. While most felt “quite” or “very confident” with the TAPS project tasks, there was a difference by country ($\chi^2 = 3.9$, $p < 0.001$). Brazilians felt less confident than the Chinese (74.1% vs 100% were quite or very confident).

Conclusions: Participants, who completed compliance data collection in Brazil and China, perceived the TAPS

Guide and training to be valuable. Although based on self-report, participants felt they acquired useful content and gained skills to go out into their communities and confidently conduct a compliance assessment. This experience suggests that similar distribution of the TAPS Guide and training can occur effectively in different countries and communities. Working with educated, involved individuals, data on compliance can be successfully collected.

PD-748-19 Utilising mobile data collection technology to evaluate tobacco control policy compliance and support effective implementation and enforcement

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Background and challenges to implementation: As FCTC member countries adopt new tobacco control laws throughout their jurisdictions, it is important to monitor compliance – and adjust implementation strategies as necessary – in a timely manner. Mobile data collection software is a technology that can capture, upload, and organise data in real-time for expedited analysis and reporting that strategically informs enforcement efforts.

Intervention or response: This study assessed compliance with tobacco advertising, promotion, and sponsorship (TAPS) bans at point-of-sale (POS) in 5 cities in the Russian Federation utilising a mobile-based data collection software application installed on smartphones. The assessment instrument was input to the application and reviewed by an in-country lawyer familiar with the tobacco control law prior to pilot testing the tool with data collectors. Data from observations of 786 unique points of sale were collected and uploaded in real-time to a cloud storage service that is accessible through a web-based interface.

Results and lessons learnt: In addition to POS characteristics, the application captured time, date, and the geo-location of each POS, and allowed for the capturing of photos. The real-time upload of collected data allowed project staff immediate access to POS observations in order to monitor data quality and validity. The geo-location and time stamp features helped ensure that data collectors followed the assessment protocol correctly. Ability to capture photos can be used to validate observations, for further analysis, and/or for advocacy efforts. The cloud storage service and data management interface allow the visualisation of POS clusters on a map that can be enhanced by map-layers from a geographic information system. A thorough pilot testing of the assessment instrument and daily monitoring of collected data were essential to the success of this protocol. The instrument used in this assessment is customizable, so could be used to rapidly assess a variety of policies.

Conclusions and key recommendations: Mobile data collection technology offers a rapid, efficient, low-cost method for assessing compliance with tobacco control policies. Both enforcement agencies and civil society

should consider this approach in their monitoring and surveillance efforts.

PD-749-19 Examining routes and sites: a TAPS compliance study in Brazil and China

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Background: Federal and local governments forbid certain tobacco advertising, promotion, and sponsorship (TAPS). This pilot study works with community members (college students) to explore the presence of TAPS in Brazil and China, and assess compliance with current TAPS regulations.

Methods: In March 2014, local college students from Rio de Janeiro (N=28) and Shanghai (N=30) received the guide “Assessing Compliance with Tobacco Advertising, Promotion, and Sponsorship (TAPS) Bans” and attended a formal two-day training on TAPS, local regulations, and study procedures. Each student collected data on 10 different routes and 10-14 community sites (e.g., schools, retail outlets, restaurants, and health centres). Route observations assessed the presence of TAPS and compliance with respective in-country regulations. The exterior and interiors of sites were also examined for the presence of and regulation compliance of TAPS.

Results: Students walked 641 routes and visited 749 specific sites. Tobacco advertisements, promotions, and sponsorships were on 7.3% of the observed routes. Most (93.7%) of the Brazilian TAPS were deemed non-compliant, compared to a quarter (25.2%) of the Chinese TAPS ($p < 0.001$). Considering various sites, TAPS was found on 4.1% and 11.9% of the Brazilian and Chinese exteriors ($p < 0.001$). Overall, 26.7% of these TAPS were non-compliant, with no significant difference by country. TAPS appeared in 42.2% and 30.3% of the site interiors in Brazil and China ($p < 0.001$). A fourth (25.6%) of the site interiors was non-compliant, regardless of country.

Conclusions: This study offers information on natural environments, collected by community members. Walking neighbourhood routes in Rio de Janeiro and Shanghai, it is likely that one will see tobacco advertisements, promotions, and sponsorships. On these routes, non-compliance for TAPS regulations was a bigger issue in Brazil than China. Few sites featured TAPS on exteriors; it was more common to observe TAPS in interiors spaces. Non-compliance in both countries was problematic with a quarter of these observations. Study strengths include the wide-range of routes and sites, done by local observers. Limitations are the narrow geography of data collection and that students worked individually, so reliability cannot be determined. The methodology described here can be used in other jurisdictions to assess the presence and compliance regulation of TAPS.

14. BREAKING DOWN THE BARRIERS FOR SMOKE-FREE

PD-750-19 High smoking rates among Australian prisoners: evaluation of a comprehensive smoke-free policy

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Background: Despite Australia's impressive record of comprehensive tobacco control, smoking prevalence remains high in some population groups. Among prison inmates, smoking prevalence is approximately 80%, more than four times the national average. In 2013, the Northern Territory (NT) became the first jurisdiction in Australia to introduce a complete ban on tobacco products in all correctional facilities, as part of a comprehensive healthy lifestyles strategy. Over 80% of inmates in the NT are Indigenous, a group with an overall smoking prevalence 2.6 times higher than the general population. This study is a preliminary evaluation of the policy.

Design/Methods: In-depth individual and small group discussions with inmates, custodial staff, prison health clinic staff, correctional centre management, and inmates' families; analysis of routine quantitative data.

Results: Modelled on New Zealand's comprehensive approach to a national smoking ban introduced in 2011, the ban was preceded by 12 months of community consultation, staff training and an extensive, culturally-appropriate communication strategy. Cessation support, including nicotine replacement therapy and unmonitored access to a free Quitline, was provided from 12 months prior to implementation. Additional healthy food options and sport and recreation activities were offered in the first six months of implementation. Compliance with the ban is high among inmates, staff and correctional centre visitors. No major incidents in association with the ban were recorded. Collaboration with custodial operations staff was important to identify and resolve potential problems before the ban came into force.

Conclusion: The policy is well accepted and adhered to by inmates, custodial staff and the general public, likely attributable to the comprehensive, culturally appropriate and holistic approach. Future research should focus on the impact of the ban on post-release smoking intentions and relapse, and opportunities for post-release support to remain quit.

PD-751-19 Physicians' attitude towards smoker patients in an urban population of Bangladesh

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Background: Smoking is now recognised as a major public health problem in Bangladesh. Smoking is not only a personal problem but it is a problem of community because not only smokers are affected but people around smokers are also suffering from harmful effect of second hand smoking. In developing countries like Bangladesh physicians can play a major role in societal efforts to reduce smoking. Physicians can best persuade patients to quit smoking. In Bangladesh a large number of physicians are smoker and they are oblivious about second hand smoking and usually do not inquire about smoking status of patients during their encounter with patients. This study was aimed to elucidate physicians' attitude and practice towards smoker patients.

Design/Methods: 671 male physicians working in six medical colleges of Dhaka city were randomly selected for the study. The period of study was January to May 2014. Information regarding their smoking status, knowledge about second hand smoking, and anti-tobacco strategies, practice related to smoking cessation of smoker patients were collected through pre designed questionnaire.

Results: The mean age of the participant physicians was 32 years. Out of 671 physician, 306 (45.6%) were smoker. Among the smokers 59.5% started smoking due to friend's influence and the mean age of initiation of smoking was 18 years. 76.8% physicians who smoke regularly stated that they cannot quit smoking due to strong addiction. 94% of physicians were aware of the anti-tobacco law and 88.4% physicians agreed that second hand smoking is harmful to health. However, 65% physicians smoke in front of friends and family members. 98.5% physicians had negative attitude towards smoking and 43.8% smoker physicians gave advice to their patients for tobacco cessation strongly where as 87.9% non-smoker physicians advocated their patients strongly to quit smoking.

Conclusion: Despite incremental government and non-government efforts for tobacco control and increasing awareness, large number of physicians continues to smoke and unable to get rid of this habit due to strong addiction. Smoking behaviour of physicians affects their practice towards smoker patients with regards to smoking cessation. The development of a smoking cessation programme meant specifically for physicians need to be taken to utilise the effective role of physicians for tobacco control.

PD-752-19 Pilot programme of creating 100% smoke-free schools in three cities in China

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Background and challenges to implementation: China has 130 million adolescents aged between 13-18, in which about 15 million are smokers and more than 40 million have attempted smoking. In 2010, China Ministries of Education and Health jointly issued a Smoke-free Standard for Elementary, Middle and Vocational Schools and Colleges, encouraging national schools to create 100% smoke-free environment accordingly. In order to explore successful experience, CATC was commissioned by MoE to initiate a one-year pilot programme in 30 schools in three cities (Zhengzhou and Kaifeng are two cities of Henan province, representing less-developed inland cities, in contrast to Beijing, one of the wealthiest and most-developed cities), which includes 6 elementary schools, 6 junior middle schools, 6 high schools, 6 vocational schools and 6 colleges.

Intervention or response: Working with local education bureaus and patriotic health campaign centres, CATC assisted the schools to formulate strict SF regulations and implementation plans and to set up supervision and inspection systems. Intensive tobacco control advocacy and intervention activities were conducted on and out of campus.

Results and lessons learnt: After one-year intervention, 30 schools established long-effect tobacco control mechanism systems. 27 schools out of 30 were evaluated "pass" according to MoE's national standards. 13 schools were scored 100 in the evaluation. Smoking rate among students and teachers were dropped by 5.1% and 5.9%. Especially in vocational schools, teachers smoking rate dropped from 18.1% to 7.1%. Students' awareness to tobacco hazards increased observably.

Conclusions and key recommendations: The programme has set up best practice models. Its experience has already been introducing to other schools in other cities in China. Also, it provides support for the coming national smoke-free legislation in public places. With the best practice, the national standard could be included as important content in the national SF law.

PD-753-19 Making a tertiary health care institution a model tobacco free educational institution: a case study from Indira Gandhi Medical College Shimla in India

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Background and challenges to implementation: Indira Gandhi Medical College and Hospital (IGMC) Shimla in Himachal Pradesh is one of the largest and oldest teaching institutions in Northern India having 872 bed strengths

and more than 1200 daily OPD registration. One-fifth of adults in the state are tobacco users. Indian tobacco control legislation (COTPA) bans smoking in public places and sale of tobacco products in and around an educational institution; however the implementation has been sub-optimal. The present case study enumerates the steps taken by the department of hospital administration to make IGMC- a model tobacco free educational institution.

Intervention or response: A high level institutional core committee for tobacco control was constituted. A strategic and comprehensive action plan was formulated. Department wise nodal officers were notified to ensure enforcement in respective departments and buildings. Circular was shared to all departments, students and employees association to comply with the law. Signage as specified under the law was displayed at all prominent places on campus. Several boards having anti-tobacco messages were displayed across the hospital campus, walls and also on OPD slip. Strict law enforcement was ensured, till date more than 300 violators has been punished and fine amount of Rs 54630/- has been collected.

Results and lessons learnt: There is an overwhelmingly positive response from all sections of peoples, employees, students, patients and visitors. The smoking has been literally banned throughout the campus. Department of hospital administration is doing regular monitoring of enforcement activities. The number of people seeking tobacco cessation services in the TCC is increased; from January 1, 2014 to date 277 persons had sought help from TCC to quit tobacco. There is no tobacco selling shop inside and within 100 yards of the premise. The institute qualifies for the model tobacco free educational institution.

Conclusions and key recommendations: IGMC and associated hospitals becomes a model for tobacco free educational institution in India demonstrating successful implementation of tobacco control policies. Other tertiary care health institutions and teaching hospitals in India or in similar settings in other countries can also be made tobacco free educational institutions.

PD-754-19 Innovating fining mechanisms lead to a smoke-free state: a case study from Himachal Pradesh in India

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Background and challenges to implementation: Himachal Pradesh (Pop: 7 million, Area 55,673 km²) state is not covered under India's National Tobacco Control Programme unlike the other 20 states, which enjoys continued financial support from Government of India. However, the state adopted several innovations and showed tremendous progress in implementing smoke-free policies. As per the central legislation, the fine amount collected from the violators has to be deposited with the respective state government treasury. The law enforcing agencies in

the state found this provision- a demotivating step for two reasons; fine amount once deposited in the treasury is not readily (sometimes never) available for the tobacco control activities, secondly the department's/authorised officers efforts are not recognised by the state.

Intervention or response: Following several rounds of deliberations, the state government in 2009 issued an innovative notification, stating that the fine amount will be retained by the individual offices and will be utilised for the tobacco control activities at their own level.

Results: This decision started giving dividends immediately. The individual offices in each of the key departments proactively started enforcing the law and challenging the violators. Since 2009, the challenging has been increased by more >40 % each year. Till date (May, 2014), Rs. 90 lakh has been collected as a fine amount across different offices in the state. The fine amount collected is being used for meeting out the expenses related to awareness generation and enforcement which include (but not limited to) printing of challenge & receipt books, "no-smoking signage" and IEC material and celebration of World No Tobacco Day. Several departments are also meeting out vehicles expenses used during the enforcement drives. The best performing departments and offices are being felicitated by the authorities. This resulted in a whole tobacco control movement to become a self-sustained model. The state of Himachal Pradesh has been declared "smoke free" on July 3, 2013 by Health Minister of the State.

Conclusion: Empowering the respective department, agencies and institutes to collect, retain and utilise the fine amount was an innovative idea thought and implemented by Himachal Pradesh Government. Several state governments in India are studying and adopting this approach. This approach showed promising signs of expediting the smoke-free state to tobacco-free state in coming times.

PD-755-19 Opinion poll of 2000 people across five districts of the Bhopal division of Madhya Pradesh regarding tobacco control

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Background: The Indian Tobacco Control Act (COTPA) covers various provisions of Framework Convention of Tobacco Control and MPOWER. The act covers prohibition of smoking at public places, ban on indirect advertisement, display of pictorial warnings, prohibition of sale to minors etc. The study was conducted. In order to understand the opinion of general public regarding various aspects of tobacco control and Indian tobacco control act and to assess the level of public awareness on harmful effects of second-hand smoke, public support and opinion regarding smoke-free jurisdiction policies.

Design/Methods: The target population for this survey were the residents of 5 districts of Bhopal division of Madhya Pradesh, India who access public places frequently. A sampling size of 2000 people (above 15 years) has been ar-

rived at from a population of approximately 8 million for an opinion survey. 400 samples collected from each district. Simple random sampling was done to collect information from all 5 districts. The field investigators in each district headquarter visited and took interviews of individuals. The simple random sampling ensured probability of selection of all the individuals. The data collection was done through semi structured schedule/questionnaire.

Results: 94 percent of the respondents demanded for smoke-free public places, 57% knew that passive smoking is as dangerous as active smoking, 58% have seen sale of tobacco by minors and, 48 % said that pictorial warnings on tobacco product will make people aware of ill effects of tobacco, 92 % demanded for removal of tobacco shops near educational institutions, 95 % said that tobacco advertisements should be prohibited in the districts, 60% have seen sale of tobacco products near educational institutions, highest number of smokers were seen by respondents at eateries 45% and most commonly visited places 24% and least 1 % in health care institutions, 71 % of the respondents seen tobacco related advertisement on TV and 15 % in newspapers. 92 % said that government should take strong step to prohibit smoking. Out of the total respondents 32 % were smokers and 34 % were using chewing form of tobacco.

Conclusion: Understanding the opinion of general public about various issues related to tobacco control is very helpful in implementation of tobacco control efforts.

PD-756-19 How effectively do Indian tobacco control laws protect minors and students from tobacco use: results of sub-national compliance surveys in India

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Background: GATS India report 2009:10 revealed that 42% of all current tobacco users in India initiated tobacco consumption before the age of 18 years. Protecting minors and students from tobacco use is the basic premise of India's Cigarette and Other Tobacco Products Prohibition Act (COTPA). Section 6(b) of the Act puts a ban on sale of tobacco products in an area within 100 yards of an educational institution. This Act specifically mandates to protect minors and students from an early initiation of tobacco use; however the implementation of Act has always been sub-optimal. Present study was conducted across four districts in India to assess the tobacco-free status of educational institutions and the level of compliance with respect to Section 6(b) of COTPA.

Design/Methods: Cross-sectional surveys were conducted in total 1386 educational institutions in the four districts (Ernakulam, Indore, Jhunjhunu and Una) in Jan-Feb 2013.

These institutions were selected through a stratified sampling based on population proportionate to size (PPS). A pre-tested checklist based on the criteria specified under COTPA and Government of India's guidelines on tobacco free institutions was used. The data was collected, entered and analysed district wise using MS Excel. Proportions were calculated for each domain of the checklist.

Results: In all districts, display of mandatory signage was low. Section 6(b) signage were displayed in near half (53%) of the institutions, whereas no smoking signage were found in near one-fourth (30%) of institutions. In near one-tenth of educational institutions across all districts, at least one tobacco vendor was located within 100 yards. Other forms of violations such as active smoking, presence of tobacco littering and smoke odour were observed in near 1% of educational institutions. Near half of the educational institutions had displayed posters and wall writings on harmful effects of tobacco use. Tobacco control committees were formed in less than one-fourth (23%) of institutions.

Conclusion: This is the largest comprehensive survey of districts for Section 6(b) compliance in India. Our result shows that tobacco products are accessible and still widely prevalent in use within and around educational institutions. Other provisions of the Act are also not being complied with. There is an urgent need for stricter enforcement of Section 6(b) and adoption of the model guidelines for tobacco-free educational institutions.

PD-757-19 Increasing smoke-free public places & creating tobacco-free educational institutions

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Background and challenges to implementation: Second Hand Smoking, early age of initiation of tobacco use and the lack of awareness regarding the Cigarette & Other Tobacco Products Act (COTPA), 2003 amongst the community are among the key challenges in tobacco control and health promotion. In order to educate and empower the community and initiate a bottom-up streamlined, administrative mechanism, Voluntary Health Association of India (VHAI) implemented the project, titled, Partnership Against Tobacco & Action for Policies, Politics Legislation and Empowerment Phase III (PAT & APPLE) over 18 months in 5 settings in India.

Intervention or response: To gauge public opinion regarding awareness of the law and implementation of smoke-free rules, a compliance survey on Section 4 & 6 of COTPA was conducted before interventions. Thereafter, interventions included engaging with key stakeholders - District Administration, Community, Media, Village Council Institutions, Education Department, Health Department, Home Department and volunteers; sensitisation and capacity building, awareness building campaigns and media advocacy. Technical support and guidance was extended to the govt. administration to institutionalise the enforcement mechanism. A Post-intervention survey

was also conducted by an independent agency to evaluate progress and monitor changes, if any.

Results and lessons learnt: Compliance studies conducted in all settings on smoke-free public places post-interventions revealed that compliance in Budgam district (J&K state), went up from 14.8% to 91%, in Srinagar (J&K state), from 43.3% to 80%, in Golaghat (Assam), from 7.6% to 42%, in Jagatsinghpur (Orissa), from 23.3% to 96%, in Jhunjhunu (Rajasthan), from 5.6% to 78% and in Shahjahanpur (Uttar Pradesh), from 1.6% to 88%. Other results were Tobacco Free Educational Institutions' declaration in Five Districts by the Department of Education and a strong enforcement mechanism set up in 8 districts in 5 settings. Lessons learnt were that a multi-sectoral approach, multi-stakeholder engagement & ownership are important to ensure significant progress in the project.

Conclusions and key recommendations: There was a variance in the success and progress across the 10 districts due to different socio-political and administrative factors. The achievements and challenges across the different settings helped in evolving best practices that are now being duplicated in other parts of the country.

PD-758-19 Public perceptions and support following implementation of a national tobacco control law

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Background: Tobacco control law 174 went into full effect in Lebanon in September 2012, including measures banning smoking in all indoor public places, ban on all tobacco advertising, promotion and sponsorship (TAPS), and increasing warning labels to 40% of pack size. This research was carried out to evaluate perceptions of the public on the implementation of the law, as well as support for its measures.

Design/Methods: A questionnaire tool was adapted from previously validated tools used by the National Tobacco Control Programme and materials provided by the World Lung Foundation. The tool included 18 items on smoking behaviour, attitudes towards current and possible future measures, perceptions on law implementation and socio-demographic information. The questionnaire was translated into Arabic and pilot-tested. A cross-sectional design was used on a randomly selected sample of 1,800 household numbers from the national telephone authority registry (5% approximation, CI 95%). The questionnaire was administered by a trained team of public health graduates to all willing adult participants between mid-August and mid-October 2013.

Results: A total of 698 individuals participated (38.7% response rate). Cigarette smoking prevalence (30-day) was higher among men than women (32.8%, 23.0%, p=0.005), as was overall smoking (39.4%, 31.9%, p=0.048). A total of 64.4% of participants who had been at Lebanese-kitch-

en restaurants/cafés in the past 3 months reported regularly seeing people smoke, compared to 42.3% in international-kitchen locations. Advertising and promotion was reported by 19.5% in supermarkets, 12.2% on television, 11.8% on printed media and 6.5% on radio. The majority agreed that banning indoor smoking benefits one's health (91.7%), is fair (83.0%) and should be done (82.8%). Most participants also agreed the TAPS ban (78.7%) and that it is fair (78.4%), that the state should do more to enforce the law (83.1%), and that tax on tobacco products be increased (75.9%).

Conclusion: Smoking prevalence in Lebanon remains high relative to other countries in the region. The majority of people support the tobacco control law including the ban on all indoor public smoking and TAPS ban. Efforts should be focused to address smoking ban infringement in Lebanese-kitchen restaurants/cafés and enforcing the TAPS ban in particular in supermarkets. Tobacco taxation is a popular measure and population-approaches for increasing cessation should be considered.

PD-759-19 Improved indoor air quality at workplaces with smokers support: outcome of the Penang Survey

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Background: Exposure to second-hand tobacco smoke can result in various illnesses for both adults and children. Article 8 of the WHO FCTC recommends the implementation of a 100% smoke-free environment to eliminate health risks caused by second-hand smoke. This paper examines changes in indoor air quality in enclosed area and smokers' support for smoke-free workplaces in Penang between 2009 and 2011.

Design/Methods: Concentration of smoke particles (PM_{2.5}) in 47 workplaces and recreational venues were evaluated using a TSI SidePak AM510 Personal Aerosol Monitor over a period of three years from 2009 to 2011. ITC Malaysia data from three surveys (n=341 per wave) collected over the same period involving adult smokers in Penang were also used to evaluate smokers' perceptions and support for smoke-free policy at worksites.

Results: The evaluation of IAQ found that geometric mean PM_{2.5} was highest in entertainment venues, i.e. pubs/bars (220.84µgm⁻³), discotheques (207.13µgm⁻³) amusement centres (111.66µgm⁻³). Two venues that ban indoor smoking, i.e. health centres and the airport had

the lowest PM_{2.5} reading of 8.32µgm⁻³ and 13.25µgm⁻³ respectively. Over the three years evaluations, the geometric mean in most of the surveyed workplaces in Penang had declined significantly. However, the geometric mean in entertainment venues rose 86% from 2010 to 2011. The decreased geometric mean in other surveyed indoor workplaces and public areas is consociated with adherence to total smoking ban as well as supporting for a smoke-free environment. The ITC study showed at least 60% of smokers reported that smoking is not allowed anywhere at their workplaces. 83% of smokers agreed that smoking should never be allowed anywhere in an enclosed air-conditioned restaurants and coffee shops. **Conclusion:** This study showed that where indoor smoke-free policy is in place and complied with, tobacco smoke exposure is low but where it is not like in recreational venues; exposure is high and appears to have gotten worse over time.

PD-760-19 Health care professionals' support for smoke-free policies: are we overlooking pharmacists?

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Background: There are no safe levels of exposure to second-hand smoke and smoke-free policies have been shown to be effective in reducing the burden of tobacco related diseases and deaths. Pharmacists, as a unique group of health professionals might be able to play a role in the promotion of smoke-free policies. This study set out to determine the tobacco related knowledge and assess the support for smoke-free policies among community pharmacists in Lagos state, Nigeria.

Methods: A cross sectional descriptive study design using both quantitative and qualitative methods. Two hundred and twelve randomly selected eligible community pharmacists were surveyed using a pre-tested self-administered questionnaire. In addition one focus group discussion was conducted with ten members of the Lagos state Branch of the Association of Community Pharmacists of Nigeria.

Results: Majority (90.1%) were aware that tobacco is harmful to health. Slightly less (75.8%) were aware that second hand smoke is harmful to health. Among the listed diseases, Lung (84.4%) and Oesophageal (68.9%) cancers were the commonest diseases associated with tobacco use. Less than half of them associated tobacco use with Heart disease (46.9%), chronic obstructive pulmonary disease (27.8%), bladder cancer (47.2%), peripheral vascular disease (35.8%) and sudden death (31.1%). Only 51.9% had heard of the WHO FCTC and 53.8% were aware of any law in Nigeria controlling tobacco use. Majority supported a ban on smoking in homes (83.5%), in public places (79.2%), restaurants, nightclubs and bars (73.6%). For every point increase in the number of clients attended to daily, knowledge scores increased by 0.022 points. Current

smokers were 1.3 times less likely to support smoke-free policies compared with non-smokers.

Conclusion and recommendations: The pharmacists have a good general knowledge of the harms of tobacco use but knowledge of the specific conditions caused by tobacco use was poor. Awareness of the WHO FCTC tobacco laws in Nigeria was low, however majority supported smoke-free policies. Current smokers were less likely to support smoke-free policies. Community pharmacists should therefore be considered as a group of healthcare workers worth engaging for the promotion of smoke-free policies. Efforts should also be made to educate pharmacists about tobacco related health risks and country level smoke-free laws.

PD-761-19 Going out, drinking, smoking: the sociocultural context of smokers in entertainment venues vs. the smoking ban

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Background: Smoking is not only dangerous to smokers but also to those around them (the “second-hand smokers”). Thailand has thus enacted a smoking ban in restaurants, workplaces, and entertainment venues. However, customers still find ways of covertly smoking inside these places. The objectives of this paper are to (1) describe the nightlife behaviour and smoking patterns of entertainment venue customers, their ways of negotiating smoking with the venues, and the cultural meanings customers give to smoking, with particular emphasis on waterpipe smoking and smoking inside entertainment venues; (2) describe the social context of entertainment venues—their ways of dealing with customers who covertly try to smoke inside, information campaigns about the law on smoke-free entertainment venues, and the ways in which the tobacco industry and venue owners promote tobacco sales within entertainment venues; and (3) analyse the implications of this sociocultural context on the entertainment venue smoking ban.

Design/Methods: A mixed qualitative/quantitative methodology was used. Altogether 76 entertainment venues were studied in Bangkok and Pattaya. Covering both study sites, quantitative data were collected from 76 owners, 37 waiters, 37 bartenders, and 357 customers, and qualitative data from 81 owners, 37 waiters, 37 bartenders, 228 customers, 5 police officers, and 3 public health officials. Data collection methods included a questionnaire with fixed response options, in-depth interviews, focus group discussions, and participant observation.

Results: Customers mainly visit entertainment venues to meet friends and to drink. The main reasons for smoking included relaxation and entertainment, and that smoking and drinking were things to be done in tandem. The cultural meanings given to smoking included letting loose and relationship-building. Many also considered that entertainment venues in and of themselves are playgrounds

for vice and thus not places where one should be concerned about health or smoking. For women, smoking in entertainment venues is linked to identity building aimed at portraying a public image of a “hot” woman, in the same way that clothing, handbags, and dancing style are.

Conclusion: The paper also proposes a context-specific measure for more effective banning of smoking in entertainment venues.

PD-762-19 Global smoke-free worksite challenge: motivating employers to make their worksites smoke-free

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Background and challenges to implementation: Despite recent progress in establishing smoke-free laws, millions of people globally continue to be exposed to second-hand smoke. To address workplace exposure, the Global Smoke-free Worksite Challenge was launched in 2011 as a Clinton Global Initiative “Commitment to Action.” Leading Partners represent the public, private and non-profit sectors. The Challenge’s goals are to motivate employers to make their worksites smoke-free, help smoking employees quit, and build public support for national smoke-free laws. Obstacles included influencing employers to prioritize smoke-free worksites and determining where to focus the Challenge’s limited resources.

Intervention or response: Four criteria helped Challenge partners select priority countries: 1) growing momentum for smoke-free workplaces; 2) supportive local partners; 3) potential to affect large numbers of employees; and 4) opportunity for the country to serve as a model for others in its region at similar development levels or with linguistic ties. Initial countries selected were Russia, China, Brazil, Jordan and Japan. Together with in-country organisations, the partners provided technical assistance to employers to support smoke-free workplace policy development and implementation.

Results and lessons learnt: Good progress has been made across the selected countries. In Russia, efforts of the Challenge and others led to the Duma passing a national smoke-free law in 2013. In China, almost 300 employers committed to implementing smoke-free worksite policies. The governments of the U.S. and Brazil are developing a bilateral collaboration supporting smoke-free worksites, including educational campuses. In Jordan, a smoke-free certification programme—recognising 30 key employers that established smoke-free worksites was supported. In Japan, efforts by the Challenge and others led to Parliament strengthening the Industrial Health and Safety Law, calling on employers to make their worksites smoke-free.

Conclusions and key recommendations: Outcomes from the Global Smoke-free Worksite Challenge have shown that a multi-sector collaboration can influence employers and governments to take action on establishing smoke-free spaces. Recruiting corporations to participate in the group of Leading Partners (contributing funding or in-kind support) remains an obstacle for sustaining the programme. Increased leadership by the private sector is crucial to the programme's continued success.

PD-763-19 Facilitators and barriers to 'smoke-free home' interventions in mosques: the MCLASS study

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Background and challenges to implementation: Reducing exposure to second-hand smoke (SHS) is a key aim of tobacco control. SHS exposure reduced in the UK following comprehensive smoke-free legislation but exposure levels are still high among Bangladeshi and Pakistani populations which have much higher than average smoking rates among men and fewer smoking restrictions in the home. The MCLASS study (Muslim Communities Learning About Second-hand Smoke) was a pilot RCT which explored the feasibility and acceptability of implementing SHS education in mosques with the aim of reducing children's and non-smoking adults' SHS exposure in the home.

Intervention or response: Fourteen mosques were recruited from three large cities in the North of England. Half were randomly allocated to the intervention and half to the control group. Training and an educational package was provided to three key groups of Muslim religious leaders in the intervention mosques: Imams who mainly interact with adult males and children; Qur'an teachers who mainly interact with men, women and children; and women circle leaders.

Results and lessons learnt: Qualitative interviews and focus groups were undertaken with mosque leaders, teachers and members of the congregation at the end of the intervention. Most of the intervention mosques delivered some education on SHS but the nature and extent varied. This reflected the considerable diversity among mosques in terms of their size, congregation, organisational structure, activities, involvement of women, and their perceived role and function. Developing trusting relationships with Mosque leaders was time consuming but crucial in gaining access, support, and in the intervention being delivered. While participants thought that it was acceptable and appropriate for mosques to be involved in health promotion on SHS, views on the importance of SHS as an issue for their communities differed. Participating in research which involved taking saliva samples to validate SHS exposure was also problematic for some who were mistrustful of what the data would be used for.

Conclusions and key recommendations: The qualitative findings indicate that mosques offer an acceptable and feasible setting for delivering education on reducing SHS in the home. However, a range of factors need to be addressed when developing and delivering such interventions relating to the diversity of both mosques and Muslim communities.

PD-764-19 Protecting children from secondhand smoke: the success of an integrated approach in the north-east of England

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Background and challenges to implementation: Smoking rates in the North East of England (population 2.6 million) have reduced from 29% in 2005 to 22% in 2012 as a result of tobacco control delivery at national, regional and local levels. The UK has had smoke-free legislation in place since 2007 with 98% compliance in enclosed public places and workplaces but domestic exposure to second-hand smoke (SHS) remains a concern, particularly amongst children. FRESH, the North East's locally-commissioned tobacco control programme has developed an integrated approach to protecting children from SHS to broaden the protection afforded through legislation.

Intervention or response: Reducing exposure to SHS is a key strand within the FRESH programme. FRESH has implemented an integrated package to support stakeholders in a variety of settings to promote smoke-free lifestyles. This includes: - an insight-led media campaign 'Take 7 Steps Out' to keep homes smoke-free, developed in partnership with Tobacco Free Futures who led this work - a tobacco control module for further education to build capacity amongst future childcare, health and social care workers - a suite of resources to help local government councils implement smoke-free playgrounds - a training programme for staff working in the community to support smokers to keep their homes and cars smoke-free - ongoing advocacy around the need for further legislative protection of non-smokers

Results and lessons learnt: The proportion of smoke-free homes in the North East has risen from 43% in 2009 to 67% in 2014, demonstrating ongoing shifts in the social norms around smoking behaviour. Hundreds of staff have been trained to promote smoke-free homes and cars. Many North East local councils are implementing or discussing smoke-free playgrounds as part of local tobacco control strategies. The North East public has high support for legislation to ban smoking in cars with children present at 84%.

Conclusions and key recommendations: Reducing exposure to SHS is a key objective towards the ultimate goal of making smoking history and much progress has been made over the last 10 years. In addition to comprehensive smoke-free legislation, integrated complementary resources help develop infrastructure and change social

norms. In January 2014 UK parliamentarians voted in favour of protecting children from SHS in cars and we are advocating for an extension of the smoke-free law to

include this. The challenge ahead is to ensure continued progress is made.

15. E-CIGARETTES, WATERPIPE AND DOKHA: PRACTICES AND IMPACTS

PD-765-19 Prevalence and correlates of e-cigarette relative risk perceptions under the different regulatory environments of Australia and the UK

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Background: E-cigarettes (ECs) are restricted products under existing laws in Australia whereas they are readily available in the UK. How these different regulatory environments in the two countries might affect smokers' beliefs about the harmfulness of ECs relative to conventional cigarettes is unclear. This study aims to examine the prevalence and correlates of relative harmfulness beliefs about ECs in Australia and the UK; and determine whether these have changed over time.

Design/Methods: Australian and UK data collected in 2010 (n=1511) and 2013 (n=1106) of the International Tobacco Control Four-Country project were analysed. Prevalence estimates of EC risk perceptions for 2010 and 2013 were computed. Generalised estimating equations were used to examine correlates of EC risk perceptions and test for changes over time controlling for socio-demographic, smoking-related variables, survey mode and wave of recruitment.

Results: Overall level of belief about ECs being less harmful than conventional cigarettes was significantly higher in the UK than in Australia (OR=2.37, p<.001). However, prevalence of belief about lower harm of ECs in both countries declined between 2010 and 2013 (OR=.52, p<.001), with evidence of greater decline in Australia (from 70.9% to 52.6%) than in the UK (79.7% to 72.1%). Notably, reported "don't know" responses had increased three folds between 2010 and 2013 in Australia (12.1% to 38.3%) as compared to a two fold increase in the UK (10.9% to 19.4%). Younger smokers, those who had tried ECs, those with high income and from English-speaking backgrounds were more likely to perceive ECs as less harmful than conventional cigarettes. Correlates of risk perceptions did not differ between 2010 and 2013.

Conclusion: Smokers in both Australia and the UK are increasingly becoming uncertain and confused about the

harm of ECs compared to conventional cigarettes. The greater prevalence of uncertainty in Australia is consistent with the restrictive nature of the environment in Australia for the sales of, and access to, these emerging products, particularly if they contain nicotine. The increase in public debate in recent years on the potential benefits and the feared negative consequences of using ECs is likely a contributing factor for the increased uncertainty. Public education, based on science, may be helpful to remedy such situation in both countries.

PD-766-19 Use of electronic cigarettes in Germany

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Background: Worldwide sales of e-cigarettes are increasing markedly as well as their use by adults and youth. Increasing use among youth – especially non-smoking adolescents – is a matter of concern, as e-cigarette use is suspected to lead to nicotine addiction and smoking initiation. Currently, for Germany, data on e-cigarette use are sparse.

Design/Methods: The German Cancer Research Center conducted representative cross-sectional surveys in 2012, 2013, and 2014 including persons aged 16 and older. Respondents were asked about awareness and use of e-cigarettes. In 2012 and 2013 only smokers were asked, in 2014 non-smokers and former smokers were included, too. In 2014, smokers and former smokers were also asked about the cessation aid they used at their last quit attempt. **Results:** Awareness of e-cigarettes increased and was nearly 100% in 2014 in all age groups. Ever use of e-cigarettes increased markedly in all age groups; in 2014 8.5% of all respondents had ever used e-cigarettes. Experimentation with e-cigarettes was much higher in the younger age groups than in the older ones. More smokers (19.1%) than former (3.7%) or never (1.3%) smokers have ever used e-cigarettes. Current use was low: At the time of the questionnaire only 0.6% of smokers, 0.2% of never smokers and none of the former smokers currently used e-cigarettes (overall current consumption: 0.4%). As less as 0.2% of former smokers successfully stopped smoking by using e-cigarettes and 2.9% of smokers unsuccessfully had tried cessation with the aid of e-cigarettes.

Conclusion: In Germany, experimentation with e-cigarettes is increasing, but long-term use seems to be rare. Especially younger people and smokers try e-cigarettes.

E-cigarettes do not appear to be effective in smoking cessation. To protect youth from use of an addictive product with unknown long-term health effects, strong regulation is necessary.

PD-767-19 Particle emissions of e-cigarettes: impact of the refill liquids used on the number and size distribution of emitted particles

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Background: Electronic cigarettes are widely used nowadays. An electronic cigarette has a heating device, where a mixture of a basic liquid (usually propylene glycol or glycerol or their mixture), nicotine and flavours are vaporized and inhaled by the user. The constituents (liquid, nicotine and flavours) of e-cigs are vaporised in a quite high temperature and thus particles are generated. Until now only passive inhalation of e-cig vapour has been studied. We studied direct particle emission of 7 liquids of e-cigs with a Scanning Mobility Particle Sizer (SMPS) in order to determine the number, size and distribution of nanoparticles inhaled by e-cigs users.

Design/Methods: We studied direct particle emission of 7 liquids of e-cigs with a Scanning Mobility Particle Sizer in order to determine the number, size and distribution of nano-particles inhaled by e-cigs users, as shown above

E-cig liquid compositions studied:

1. 100% Propylene Glycol (PG)
2. 100% Glycerol (G)
3. 50% PG- 50% G
4. 49% PG – 49% G- 2% Perfume (P)
5. 47,5% PG-47,5% G- 5% P
6. 49,4% PG- 49,4% G- 1,2 % Nicotine (N)
7. 48,4% PG-48,4% G-2% P- 1,2% N
8. SMPS measures the number of particles emitted in the range of 10-500nm.

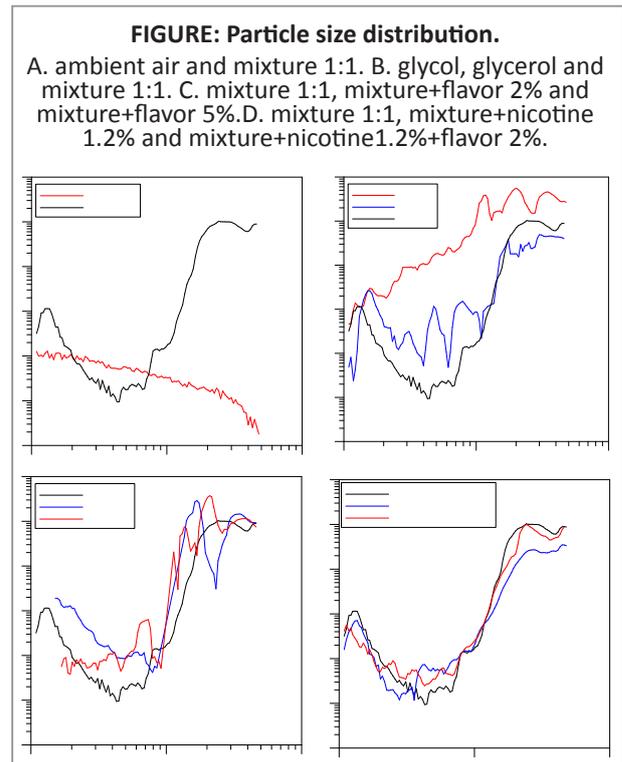
Results: E-cigs emit particles:

1. With a size distribution peaked at 10-20nm and 100-500nm FOR ALL of liquid compositions A-G (figure). The addition of flavour and nicotine in the mixture does not change the general shape of particle size distribution, except the 2-3 peaks found at the area of 100-500 nm (III, IV).
2. 300-3000 times more than those of ambient air (Fig.2) (p:0.03)
3. With a median diameter of 200-400nm vs 30nm of ambient air (Fig.3) (p<0.001).

Shown below are the numbers of emitted particles of the 7 liquid compositions studied: **A** vs **B** (204nm vs 340nm, p=0.04) and 10 times more (p=0.05). **D,E** vs **C** generates particles 30% bigger in size (p=0.05), and 50% and 80%

more respectively. **F** 1.2% decreases the number by 70% and increases median diameter by 20%. **Fvs G** 2% 2,5 folds (p:0.05) the number but has no effect on size.

Conclusion: CONCLUSIONS: 1. E-cigs generate numerous nanoparticles that could be inhaled. 2. The composition of the liquids used in the e-cig has no, or a small, impact on the distribution, size and number of emitted nano-particles. 3. Since numerous particles that can be inhaled are produced from e-cigarette irrespectively of nicotine, studies reflecting the impact of e-cigarette liquids to respiratory and general health should be done.



PD-768-19 Acute effect of waterpipe smoking on Ankle Brachial Index

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Background: Since few data exist about health effects of Hookah smoking and considering this type of tobacco smoking is extensively used in Iran, we evaluated acute effect of Hookah smoking on Ankle Brachial systolic pressure index which is a standard test to diagnosing peripheral arterial occlusive disease (PAOD) severity, is considered a marker of atherosclerosis and an independent predictor of mortality.

Design/Methods: This prospective study was done on 80 male volunteers. Ankle brachial index was measured before and after of a 30 minutes session waterpipe smoking by using an automatic device. Data were analysed using SPSS software.

Results: 80 persons participated in this study. All of them experienced waterpipe smoking. The mean age of them was 32.2 ± 9.09 . The mean of ABI before waterpipe smoking was 1.06 ± 0.1 whereas it was 0.88 ± 0.1 after waterpipe consumption. $P=0.001$

Conclusion: These results demonstrate that the acute effect of Water pipe smoking lowers the ABI in our subjects. Our findings revealed a transient deleterious effect of waterpipe smoking on the cardiovascular system function.

PD-769-19 Second-hand exposure to e-cigarette emissions in confined spaces

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Background: One of the open questions concerning electronic cigarettes (e-cigs) is second-hand exposure of non-users to the emissions exhaled to the environment by the e-cigarettes users, particularly in small confined places. Our aim was to analyse the particulate matter and nicotine emissions from e-cigarettes in homes and cars.

Design/Methods: We obtained data by means of two studies: an observational study among volunteers in their homes and a controlled study in a car. The observational study included 54 non-smoker volunteers from different homes: 25 living at home with smokers, 5 living with nicotine e-cigs users, and 24 from smoke-free homes. We measured airborne nicotine and particulate matter (PM_{2.5}) at their homes and cotinine in their saliva. The experimental study included 10 trips (90 min each) under different experimental conditions: 5 trips with e-cig use and 5 trips as controls. Each trip included a 15 min control period, 30 min in movement with open windows, 15 min wash out with open windows in movement, and 30 min stopped with closed windows. We sampled air in the rear seat of the car. In both studies, we assessed particulate matter (PM) by means of a SidePack monitor. We analysed nicotine and cotinine concentrations by means of gas chromatography/mass spectrometry. We computed medians and used the Mann Whitney U-test for independent samples to compare them.

Results: Airborne nicotine concentration was $0.11 \mu\text{g}/\text{m}^3$ in the e-cigs users' homes and $0.01 \mu\text{g}/\text{m}^3$ in the smoke-free homes. The PM_{2.5} median concentration was $9.88 \mu\text{g}/\text{m}^3$ in the e-cig user's home and $9.53 \mu\text{g}/\text{m}^3$ and $9.36 \mu\text{g}/\text{m}^3$ in the smoke-free homes. Salivary cotinine concentrations of the non-smokers exposed to e-cigs emissions at home were higher than concentrations in non-smokers living in smoke-free homes. In the experiments measuring nicotine with the car in movement and the car windows open, the median concentration was $0.09 \mu\text{g}/\text{m}^3$ (e-cig) and $0.01 \mu\text{g}/\text{m}^3$ (control). With the car stopped, the median nicotine concentrations were $1.00 \mu\text{g}/\text{m}^3$ and

$0.01 \mu\text{g}/\text{m}^3$, respectively. Regarding PM_{2.5} and the car in movement, the median concentrations of PM_{2.5} were $20.3 \mu\text{g}/\text{m}^3$ (e-cig) and $10.4 \mu\text{g}/\text{m}^3$ (control). With the car stopped, PM_{2.5} concentration was $22.9 \mu\text{g}/\text{m}^3$ (e-cig) and $3.6 \mu\text{g}/\text{m}^3$.

Conclusion: In homes and cars, the concentration of particulate matter and nicotine from the emissions or vapour generated by e-cigarettes users are significantly higher than those measured in the absence of e-cigarettes users.

PD-770-19 Analysis of nicotine content in dokha samples by HPLC and estimation of the quantum of nicotine inhaled using a standardised midwakh pipe

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Background: The popular forms of smoking in the UAE are cigarettes, shisha and dokha. Dokha is a form of Iranian tobacco mixed with herbs; it is smoked out of a narrow pipe called midwakh. It is usually loaded by dipping the bowl into a container of dokha flakes. The lit pipe is smoked rapidly and the tobacco fully consumed in one or two puffs. Dokha' smoking provides a strong 'buzz' which has been referred to as 'laf ra'as' (Arabic for head spins). Dokha has emerged as the second most common form of smoking (15%), after cigarettes (77.4%) within UAE. This study aims to quantify the amount of nicotine in dokha samples so as to develop a hypothesis on the reasons underlying laf ra'as is proposed.

Methods: A range of midwakh pipes available were examined for length, bowl diameter and depth. A standard pipe was selected used for the study. Twenty eight dokha samples were collected for the study. The weight of the dokha loaded into the pipe was measured using a Mettler balance. Nicotine was extracted using an alkaline ethanoic extraction procedure, spotted on Silica gel HPTLC plates and separated using a mobile phase. Densitometric scanning was performed using a CAMAG HPTLC scanner and identification and estimation of nicotine was done at a max of 258 nm. The total amount of Nicotine in each Midwakh full of tobacco was calculated by multiplying the average weight of dokha contained in the standard pipe, with the nicotine concentration of each sample.

Results: The standard midwakh pipe used in this study was 13 cms long with the approximate volume of the bowl being 1.2 mL. The weight of dokha loaded in the pipe was $137 (\pm 3)$ mg of dokha. The dokha samples examined contained $43.64 (\pm 7.95)$ mg of nicotine per gm. Approximately $5.97 (\pm 1.1)$ mg of nicotine was contained in each pipe full of dokha sample smoked.

Conclusions: Our study suggests that smoking a midwakh pipe full of dokha may result in a maximal delivery of approximately six mg of nicotine over a period less than 30 seconds. In a 60 Kg adult considering that only 20% of

the smoked nicotine is absorbed and assuming that there is uniform distribution of the nicotine in the blood, tissue and body fluids, an approximate concentration of 20 ng/mL of nicotine will be achieved. This is much higher than that obtained by cigarettes and pipes and may be the prominent factor underlying *laf ra'as*. Further studies on blood levels of nicotine on *dokha* smokers are proposed to be carried out.

PD-771-19 Prevalence and factors influencing *dokha* use among male secondary school students in Ajman, UAE

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Background: *Dokha* is a novel form of smoking in UAE on which there is very little published literature especially among adolescents and this form of smoking has been not been addressed adequately in the smoking cessation strategies in UAE.

Objectives: To assess the prevalence of *dokha* smoking among male high school students in Ajman, to identify the factors that influence them to smoke *dokha* and to study the attitudes of student towards *dokha* smoking.

Materials and methods: A cross sectional survey was conducted by multi stage stratified random sampling among male secondary school students in Ajman, UAE. A total of 560 participants filled using self-administered questionnaires

Results: The prevalence of ever smokers was 39%; ever *dokha* smokers was 36% and current *dokha* smokers was 24%. The prevalence is very high when compared to other forms of smoking in the region and globally. Majority of the current smokers smoke for all 30 days of the month and most of them smoke four times or more per day. The main factors that increase the risk of ever and current *dokha* smoking were friends, parents and relatives smoking behaviour, non-refusal by shopkeeper to sell *dokha* and positive attitudes towards smokers; after adjusting the confounders the most significant factor for ever smokers and current *dokha* smokers that emerged was friends smoking behaviour. More than half of the current and ever *dokha* smokers think of quitting the habit in the next twelve months.

Conclusion: The prevalence of ever smokers, ever *dokha* smokers and current *dokha* smokers is very high when compared to other studies in the region and globally. There is an urgent need for specific health promotion programmes tailored to this age group on prevention of *dokha* smoking and policies restricting the availability of *dokha* to this age group.

PD-772-19 Salivary cotinine concentration and breath carbon monoxide levels in young adults smoking *midwakh* in comparison to cigarettes and shisha

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Background: Popular forms of smoking in the UAE are cigarettes, shisha and *dokha* using *midwakh* pipe. Little is known about the ingredients of *dokha* and the effects of this form of smoking on the nicotine and carbon monoxide levels in the body. The primary metabolite of nicotine is cotinine. NicAlert is a semi-quantitative immunoassay to detect salivary cotinine with a specificity of 95% and sensitivity of 93%. Another non-invasive method of assessing smoking status is the measurement of breath CO level. Salivary cotinine measurement outperforms CO measurements and a combination of the two tools is recommended in research. The present study aims at comparing the breath CO and salivary cotinine levels among four groups of volunteers namely, non-smokers, and smokers of cigarettes, shisha and *midwakh*.

Design/Methods: A cross sectional survey is planned in males aged 18 years and above in Ajman. The study will include 200 participants 50 each of non-smokers, cigarette, shisha and *midwakh* smokers. Salivary cotinine testing will be done using a semi quantitative method 'Nic alert' rapid test strips. Breath CO monitoring will be performed within eight hours of smoking using the EC50 Smokerlyser. To test the difference in mean values in the four groups' analysis of variance with post hoc Duncan test will be done, and Chi square test for associations

Results: This is an ongoing study funded by research centre, New York University, Abu Dhabi and will finish by the end of January. The detailed results will be presented at the conference

Conclusion: The study will compare the breath carbon monoxide and salivary cotinine of cigarette and shisha smokers with those using *dokha*. We hope to share the results of this study with the relevant agencies in the UAE to include *dokha*/*midwakh* in the regulatory and educational 'tobacco control strategies'

PD-773-19 Smoke-free.gov Journey Campaign: how e-cig communities hijacked a national promotional campaign

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Background and challenges to implementation: The National Cancer Institute's (NCI) Smoke-free.gov project provides web and mobile cessation resources, and in 2013, Smoke-free.Gov celebrated its 10 year anniversary by launching the Smoke-free.gov Journey Campaign. The Journey Campaign and accompanying Journey Map were intended to raise awareness about Smoke-free.gov's resources and drive potential quitters to the Smoke-free.gov website. Users were invited to click on the Journey Map and share their quit journey with others who have quit smoking, or were in the process of doing so. Although the campaign was successful in increasing traffic to Smoke-free.gov, the Journey Map was quickly co-opted by multiple electronic cigarette (e-cig) online communities, primarily forum and blog based, who used this digital space to promote their products as well as the perceived health benefits of e-cig use. To date, over 500 stories have been shared on the Journey Map, 50% of which include non-scientific e-cig based content or promotional efforts.

Intervention or response: This presentation will describe the response of Smoke-free.gov's social media team to this viral event, including tactics used to characterise the sources of the e-cig content, rapid response content management strategies, and modifications in the implementation of the Journey campaign. A content analysis of the e-cig posts will also be presented.

Results and lessons learnt: The experience of Smoke-free.gov's Journey Campaign suggests that cessation-focused social media campaigns should be aware of the powerful online presence of e-cig communities, and have a strategy in place to monitor and manage content generated by these stakeholders, which may or may not be scientifically accurate, and may contain explicit product promotions.

Conclusions and key recommendations: Public health communities would do well to learn from the organising powers of the vocal community of "vapers" in order to promote evidence-based cessation messaging.

PD-774-19 Permitting or prohibiting the use of electronic cigarettes in the workplace: lessons from English policy development

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This presentation considers the process and lessons learnt in developing employment policies on the use of electron-

ic cigarettes in the workplace.

Public health challenge: Increasing numbers of people wish to use electronic cigarettes at work and in public places to help them to quit or temporarily abstain from smoking, whilst employers are facing a range of challenges in deciding how to manage their use in the workplace. Comprehensive smoke-free legislation throughout the UK prohibits smoking in virtually all enclosed workplaces and public places. This legislation does not apply to the use of electronic cigarettes. However, there has been a growing debate over how to manage the use of electronic cigarettes in the workplace. Many employers have decided simply to ban their use. There is evidence to show that use of electronic cigarettes can support smokers' efforts to stop smoking but allowing their use in the workplace poses challenges which need to be considered and managed. If we are to obtain a public health benefit from the use of electronic cigarettes then employers need to be advised on how to use the evidence available to develop their policies, to secure agreement and maintain compliance. This requires a careful consideration of the available evidence.

The presentation: Action on Smoking and Health (ASH) and the Chartered Institute of Environmental Health (CIEH) have supported a number of organisations through the process of policy development and implementation on the use of electronic cigarettes and other nicotine containing products (NCPs) in the workplace and public places. The experience of these organisations has been documented by the authors and the wider lessons for policy development will be discussed in the presentation. They include:

- Engagement with a wide range of internal stakeholders
- Surveying use and attitudes among workforce
- Disseminating the evidence base among decision makers and the workforce
- Considering electronic cigarette use in the context of local approaches to stopping smoking and harm reduction.

Conclusion: There is no one size fits all policy for the use of electronic cigarettes in workplaces. However, organisations wishing to have an approach that will support better public health should carefully consider their policy development process and ensure they are taking account of all factors, including the potential for electronic cigarette use to support stopping smoking and tobacco harm reduction.

PD-775-19 Smokers' and ex-smokers' understandings of electronic cigarettes in the United Kingdom

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Background: Electronic cigarettes are a highly contested and debated new technology. They may have an important contribution to make to tobacco harm reduction but significant concerns have been raised about their role in

tobacco control. Very little is known about the meanings that electronic cigarettes have for smokers or how they understand and assess the risks and benefits of using them. This presentation will report on findings from a qualitative study whose aim was to explore among a diverse range of smokers and recent ex-smokers how nicotine-containing products, particularly electronic cigarettes are understood and experienced.

Methods: A qualitative study of 64 smokers and ex-smokers in Central Scotland (United Kingdom). Twelve focus groups and 11 individual interviews were carried out with a range of purposively selected groups in 2013-14.

Results: Nicotine replacement therapies and electronic cigarettes were regarded as being very different products. Nicotine replacement therapies were viewed as medical products for smokers who want to quit, whilst electronic cigarettes emerged as an ambiguous product whose meanings are still being negotiated. Participants' attitudes and intentions about smoking and quitting were especially important in shaping their understanding of these products. Participants' views on using electronic cigarettes fell into three categories: definitely interested, potentially interested and not interested. The acceptability of continued nicotine addiction and the similarity of electronic cigarettes to conventional cigarettes were central themes on which participants held conflicting views. There was considerable uncertainty amongst participants around the constituents and safety of electronic cigarettes.

Conclusion: Different groups of smokers bring diverse expectations, requirements and concerns to their evaluations and therefore potential use of nicotine-containing products. The ambiguity around electronic cigarettes in public health debates and medical practice is reflected in the positions and concerns of smokers. There is a need for both clear, up-to-date trustworthy information about their benefits and risks, and stronger regulation.

PD-776-19 Why do smokers use electronic cigarettes?

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Background: Department for smoking cessation exists for 23 years at the Clinic for Pulmonology of the Clinical Centre of Serbia. It implements the individual approach, with use of all official methods represented by the WHO.

Design/Methods: To assess if smokers attending our institution for smoking cessation use electronic cigarettes (e-cigarette). How long they use it? What were the reasons for use of e-cigarette? Study subjects voluntarily participated in smoking cessation programme at the Smoking cessation counselling department of the Clinic for Pulmonology of the Clinical Centre of Serbia in 2013.

Results: Among 354 included subjects there were two thirds of women and one third of men. Their mean age was 40.2 years (range was from 21–73), without significant difference between genders. Average Pack/Years (P/Y) Index was 54.8 years (range 11.6–99.3). Males had significantly higher average P/Y (64.1) than females (40.8) ($p < 0.01$). Mean level of nicotine dependence (Fagerstrom score) was 7.1 (range 2–10). Higher levels were seen in men (7.9) than in women (6.6), but without significant difference. The mean level of measured carbon monoxide in exhaled air was 43 ppm (range 12–78). It was higher in men than in women, but without significant difference. Out of 354 subjects, a third of them (35.0%) used e-cigarette. They used it in average 3 months (range 0.15 day – 6 months). Regardless for the reason for use of e-cigarettes, 88.7% of subjects were not satisfied and besides them also smoked conventional cigarettes since e-cigarettes did not help. The most frequent reason for e-cigarettes use among 16.9% subjects was smoking cessation. Women more often used e-cigarettes for quitting 20.5% in comparison with men 10.0% ($p < 0.01$). Women more believed the marketing messages that e-cigarettes are good choice for smoking cessation. The second, less frequent reason for e-cigarettes use 11.3% is its use indoors where the cigarette smoking is forbidden. This reason was more frequent for men (20.0%) than in women (6.8%) ($p < 0.001$). The third reason is not so frequent, but it's not less dangerous. It's the opinion of our subjects that e-cigarettes are less harmful than the conventional cigarettes, and therefore 7.3% subjects used e-cigarette due to this reason. Significantly more men 11.7% than women 5.1% had this reason for e-cigarettes use ($p < 0.01$).

Conclusion: Both men and women used e-cigarettes together with conventional cigarettes. That is the reason for their arrival to the counselling department for smoking cessation. In average men had higher level of carbon monoxide in exhaled air than women, and that means they were more frequent smokers. Aware of the dangers of conventional cigarettes smoking, smokers influenced by the advertisements for e-cigarettes, believed that this is their right choice. There is no reason that justifies the use of e-cigarettes, especially because there are many unknowns about it.

PD-1370-19 The association of waterpipe smoking with quantitative CT measured emphysema in a community based sample

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Rational: Waterpipe smoking has gained popularity and has become an emerging global trend. A perception of reduced harm is a potential factor contributing to this increase in popularity. Emerging evidence is linking waterpipe smoking to respiratory disease; however, the quality of

the evidence was deemed low. Quantitative CT measured emphysema is a marker of respiratory disease that was associated with the extent of emphysema on autopsy, lung function decline and COPD symptoms and prognosis.

Objective: To evaluate the association of waterpipe smoking with % emphysema and emphysema volume determined by quantitative chest CT.

Methods: Cross-sectional study including 220 exclusive daily waterpipe smoker and 220 never-smokers aged 40 years or older recruited from the community in Beirut and Doha. Smoking was assessed using a validated questionnaires and plasma cotinine levels. Lung and emphysema volumes were determined using quantitative chest CT images reconstructed using the Philips 256 ict extended brilliance workspace software. Emphysema was defined as voxels with density <-950HU. %Emphysema was calculated by dividing emphysema volume by total lung volume. The study is funded by Qatar National Research Foundation.

Results: To date quantitative CT measures were obtained on 52 waterpipe smokers and 30 never-smokers who are included in this analysis. The average age of waterpipe smokers and non-smokers was 55.6 and 53.9 years respectively. 48.1% of waterpipe smokers were female vs 60.0% of non-smokers. Smokers reported smoking on average 2.2 waterpipe per day over 28.7 years for an average of 63.5 waterpipe-years. The mean total lung volume in waterpipe smokers and non-smokers were respectively 3870 mL (SD 1377) and 3374 mL (SD 1111), while the tracheal volumes were respectively 44.9mL (SD 17.4) and 40.0mL (SD 15.1). The mean emphysema volume in smokers and non-smokers were respectively 69.0mL (SD 89.5) and 41.5mL (SD 55.3) while the %emphysema were respectively 1.4% (SD1.4) and 1.0% (SD 1.1). The differences in the emphysema volume and %emphysema between smokers and non-smokers did not reach statistical significance (p=0.09 and p=0.1 respectively).

Conclusion: In a community-based sample, compared to non-smokers, waterpipe smokers had larger lung volume, emphysema volume and % emphysema, markers of anatomic emphysema and correlates of lung function decline and COPD symptoms and prognosis. However, the difference in %emphysema and volume between waterpipe smokers and non-smokers did not reach statistical significance. A larger well-powered study is warranted to better evaluate this association and potential confounders.

PD-1371-19 The association of waterpipe smoking with coronary artery calcium score in a community based sample

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Rational: The evidence linking waterpipe smoking to cardiovascular disease is Limited. The waterpipe smoking epidemic is recent and the cardiovascular effects of

smoking are often latent. It is therefore advantageous to examine the association between waterpipe smoking and measures of sub-clinical cardiovascular disease. Coronary artery calcium score (CAC) is a validated predictor of cardiovascular events (myocardial infarction and death) independent of other risk factors.

Objective: To evaluate the association of waterpipe smoking with CAC an established marker of coronary artery disease (CAD) risk in a community-based sample.

Methods: Cross-sectional community-based study including 220 exclusive daily waterpipe smokers and 220 never-smokers age 40 years or older recruited from the community in Beirut and Doha. Smoking was assessed using a validated questionnaire and urine cotinine levels. CAC was assessed using cardiac gated chest CT. The study is funded by Qatar National Research Foundation.

Results: To date CAC was assessed in 77 waterpipe smokers and 50 never-smokers who are included in this analysis. The average age and BMI in smokers and non-smokers were 54.1 vs. 51.2 years and 30.7 vs. 29.4 Kg/m² respectively. 40.3% of waterpipe smokers were females vs. 42% of non-smokers. Smokers reported smoking on average 2.3 waterpipes per day over an average duration of 27.7 years for an average of 61.0 waterpipe years.

The average CAC was 182.8 Agatston unit (SD 610.9) in waterpipe smokers and 56.2 Agatston unit (SD 199.8) in non-smokers; however, the difference between smokers and non-smokers did not reach statistical significance. The average individual artery CAC were also higher in waterpipe smokers compared to non-smokers although the difference did not reach statistical significance.

Using absolute CAC thresholds to categorize CAD risk, 27% of waterpipe smokers had CAC in the intermediate to high-risk category (>100 Agatston units) versus 12.0% of non-smokers (p=0.04).

The frequency distribution of waterpipe smokers and non-smokers along CAD risk categories defined by age, sex and race predicted CAC are presented in the below table.

% Predicted CAC score for age, sex and race	Smoker N (%)	Non-Smoker N (%)	P-Value
Low risk (<25%)	38 (49.4%)	37 (74.0%)	0.025
Low intermediate risk (25 - 49%)	4 (5.2%)	3 (6.0%)	
Intermediate risk (50 - 74%)	14 (18.1%)	5 (10.0%)	
High risk (≥75%),	21 (27.3%)	5 (10.0%)	

Conclusion: In a community-based study, waterpipe smokers had a higher CAD risk as defined by percent predicted or absolute CAC compared to non-smoker. The absolute CAC were also higher in waterpipe smokers compared to non-smokers but the difference did not reach statistical significance. A larger study is warranted to better assess this association and adjust for potential confounders.

PD-1372-19 Benzene uptake in hookah smokers and non-smokers attending hookah social events: regulatory implications

Reference: Kassem NOF, Kassem N, Jackson S, Liles S, Daffa R, Zarth A, Younis M, Carmella SC, Hofstetter R, Chatfield D, Matt G, Hecht S, Hovell M. Benzene uptake in hookah smokers and non-smokers attending hookah social events: Regulatory implications. *Cancer Epidemiology, Biomarkers & Prevention*, accepted for publication, August 29, 2014. doi: 10.1158/1055-9965.EPI-14-0576⁹¹

Background: Benzene is a human hematotoxicant and a leukemogen that causes lymphohematopoietic cancers, especially acute myeloid leukemia. We investigated uptake of benzene in hookah smokers and non-smokers attending hookah social events in naturalistic settings where hookah tobacco was smoked exclusively.

Methods: We quantified S-phenylmercapturic acid (SPMA), a metabolite of benzene, in the urine of 105 hookah smokers and 103 non-smokers. Participants provided spot urine samples the morning of and the morning after attending an indoor hookah-only smoking social event at

a hookah lounge or in a private home.

Results: Urinary SPMA levels in hookah smokers increased significantly following a hookah social event ($p < .001$). This increase was 4.2 times higher post hookah lounge events ($p < .001$), and 1.9 times higher post home events ($p = .003$). In non-smokers, urinary SPMA levels increased 2.6 times post hookah lounge events ($p = .055$); however similar urinary SPMA levels were detected pre and post home events, possibly indicating chronic exposure to benzene ($p = .933$).

Conclusions: Our data provide the first evidence for uptake of benzene in hookah smokers and non-smokers exposed to hookah tobacco secondhand smoke in social events in private homes compared to their counterparts in hookah lounges. Hookah tobacco smoke is a source of benzene exposure, a risk factor for leukemia.

Impact: Because there is no safe level of exposure to benzene, our results call for interventions to reduce or prevent hookah tobacco use, regulatory actions to limit hookah-related exposure to toxicants including benzene, initiate labeling of hookah-related products, and include hookah smoking in clean indoor air legislation

16. EMPOWERING CIVIL SOCIETY

PD-777-19 Are smoking cardiologists interested in smoking cessation?

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Smoking is one of the first risk factor for cardiovascular diseases. The cardiologists are confronted every day with those aspects. We did a study which has as primary objective: smoking prevalence (this is the first study on this aspect) and the secondary objective was to determine their interest in smoking cessation and in spirometric evaluation. The study was based on a questionnaire of smoking habits which was direct distributed and we also invited them to a discussion on smoking cessation in a separate place. The distributed questioners number was 500, and we recover 283 (194 men; 89 women). The smoking prevalence was 48.3% with similar absolute number by sex (52 men; 48 women) with a total smoked cigarettes $11,62 \pm 9,85$ cig/day and a total years of smoking $12,004 \pm 12,89$ years. The prevalence was high in Cardiologists with higher practice experience $24.48 \pm 12,89$ years and with a lot of years on night shifts (on duty) 73,2%. A few of them were ex-smokers (20 men, 13 women). This prevalence is higher than any other specialists, like pneumologists with a 10% (2007), maybe because the last ones are more involved in smoking cessation activities. Regarding the second objective, just a few of them want to discuss about it, and only from the doctor's point of view, not from themselves.

Conclusion The prevalence in cardiologist is high, they know the cardiovascular effects of smoking, but they are not interested in smoking cessation information and in spirometric evaluation. We have to involve them in anti-tobacco activities, because one of the end-game-objective is education and specialties collaboration is essential.

PD-778-19 Use of credibility in medical professionals to address public and reduce tobacco consumption

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Background and challenges to implementation: The role of health care professionals should not be limited to treating patients, but should be extended to educating people on the hazards of smoking, prevent people from initiating to smoking, helping smokers to quit, building awareness, influencing policy makers, and reacting to industry strategies. Since health care professionals are highly regarded by public and policy makers, their active role and contributions cannot be ignored in this field. Since most of them are limiting their service to treating patients there is an urgent need for a stronger and wider contribution of health care professionals by extending their potentials in Sri Lanka to advocate for stronger tobacco control policies and to educate people.

Intervention or response: In view of obtaining maximum cooperation and contribution of health care professionals to support public health policies by pressurising policy-makers requesting stricter enforcement process of

tobacco control measures, called for a forum for medical professionals and enlightened them on the national and international law (FCTC), status of the amendments, to discuss gaps and needs, invited them to lend their support for the movement. Formed a core group and earned media opportunity quoting them frequently to make stronger statements and called upon the government to take action. Through the organised core group to work on targeted policy change advocacy efforts and maintained follow up meetings on a regular basis. To enable this task participation of medical professionals scattered in the country were utilised.

Results and lessons learnt: Medical professionals taking a keen interest on the subject were observed. They raised their voice very often requesting stricter implementation of tobacco control law for protection of health through pressurisation of policy-makers. People becoming more health conscious and prevent from smoking was observed.

Conclusions and key recommendations: Medical professionals holding key positions and leading medical institutions having access to policy makers, becoming interested in tobacco control and doing their role in a favourable manner. Medical professionals taking part in media programmes frequently on tobacco control issues and making comments through media. Public becoming more health conscious and prevent from smoking by adhering to advice of doctors.

PD-779-19 Those who seek the truth: tobacco litigation in the United States

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Background: This presentation reviews the history of tobacco litigation in the United States..

Methods: Data for this study comes from industry business records available online through the UCSF Legacy Tobacco Documents Library, transcripts of court proceedings, and news and stock analyst reports on tobacco litigation.

Results: Litigation against the tobacco industry began in 1954, corresponding to the emerging evidence linking smoking and disease. A total of 109 lawsuits were filed between 1954 and 1970, but only eight were tried and all ended in defence verdicts. Another 150 cases were filed between 1970 and 1985, but none went to trial. There was a second wave of cases filed during the mid-1980s that led to jury trials, but only one, *Cipollone v. Liggett Group*, was a plaintiff verdict. *Cipollone* was later overturned on appeal. A third wave of litigation followed in the early 1990s, with several plaintiffs' verdicts. By 1999, juries were

awarding punitive damages against the defendants. The state Attorney General cases against cigarette manufacturers resulted in the Master Settlement Agreement in 1998, which, among other things, required that the cigarette companies release millions of pages of business records. These documents have played a key role in fuelling subsequent litigation and winning cases. The *Engle v. Liggett Group* class action verdict on behalf of injured smokers in Florida in the late 1990s helped to change the industry's long held position that smoking was unproven as a cause of disease and that nicotine was not addictive. Decertification of the *Engle* class action lawsuit spawned several thousand individual lawsuits against the cigarette industry in Florida, which have resulted in dozens of verdicts favouring plaintiffs since 2009. Additional litigation against the tobacco industry continues nationwide on the "light" cigarettes fraud and on individual personal injury cases that have resulted in notable verdicts against the tobacco industry.

Conclusion: In the United States, litigation against the cigarette industry began in 1954 and has accelerated over the past 60 years with a growing number of verdicts favouring plaintiffs since the mid-1990s. Litigation has proven to be a powerful tool for tobacco control efforts helping to change public sentiment about the industry and its products, increasing the costs of cigarettes, and forcing the industry to accept responsibility, in front of a jury, for its deceptive practices.

PD-780-19 Engage youth in an anti-tobacco campaign: an example from Bangladesh

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Background and challenges to implementation: As Tobacco Company targeting youth and doing most of their promotional campaigns to addict youth into smoking; consumption of tobacco and smoking is increasing among youth, including teen age. Tobacco companies provided free cigarettes of new brands, organized events for youth etc. It is difficult for authority to monitor tobacco companies since only executive magistrates are authorised to implement the law. Even by the law titled 'Smoking and Tobacco Products Uses (control) Act 2005' (amended in 29 April 2013), there is no responsibility of market owners for doing illegal promotions. It is only the small shop owner's responsibility and magistrates fine them. Promotions of cigarettes to youth are totally company's responsibility and use small shop owners as medium. Though selling tobacco products to below 18 years old is banned, it is also not monitored and enforced as law enforcement is weak. Pratyasha Anti-Drug Club, 100% volunteer based organisation based in Old part of Dhaka. Pratyasha engages youth into various kinds of tobacco control activities.

Intervention or response: Pratyasha organised various kinds of events on tobacco control through engaging

youth; such as 'six a side cricket tournament' on our national victory day, 'football tournament' on our national independence day, 'body building competition', cycle rally, skating rally etc. Youth are frontier force to organize these events and all these events promote no-smoking healthy life style. Thousands of youth attended each of events, and all of them are non-smokers.

Results and lessons learnt: When youth become have the opportunity to organise anti-tobacco events, they tried their best and involved with all the process. Engaging youth in anti-tobacco campaigns benefits in many ways; first inspired youth themselves to be non-smoker, second monitor illegal promotions by tobacco companies, third helped anti-tobacco activists to monitor law violation to provide report to government authority.

Conclusions and key recommendations: Youth always wants space to show families and friends their leadership skills, innovation for betterment of society. If they get proper support, they can be champion tobacco control activist. We had lot of examples in Bangladeshi tobacco control movement in which youth play important role. Innovative idea can encourage youth to be no-smoking life and it needs minimum resources.

PD-781-19 Happiness in adolescence and maternal smoking during pregnancy

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Background: Prenatal smoking exposure has adverse psychological effects on offspring. The objective of the present study was to assess the association between smoking during pregnancy and happiness of the child at age 18, as well as depression.

Design/Methods: A birth cohort Study in the city of Pelotas, Brazil. The participants were individuals born in hospitals during the calendar year of 1993 whose mothers lived in urban areas of the city. Happiness was measured by Subjective Happiness Scale, a likert-like scale with four questions generating a score from 1 to 7, with ≥ 6 indicating "happiness". Depression was measured by the Mini International Psychiatric Interview.

Results: We traced 81.3% of the 5,249 original cohort members at age 18. About one third of mothers reported that they smoked during pregnancy and 4.6% reported to have smoked 20 or more cigarettes a day. The prevalence of happiness was 32.2% (95% CI 30.8-33.7), depression was 6.8% (95% CI 6.1-7.6), and simultaneous happiness

and depression was less than 1%. The adjusted odds ratio for happiness was 0.83 (95% CI 0.70-0.99) for adolescents whose mothers smoked less than 20 cigarettes per day and 0.84 (95%CI 0.59-1.22) for adolescents whose mothers smoked 20 or more cigarettes per day ($p = 0.04$). Regarding depression, we found a dose-response relationship according to mean number of cigarettes smoked per day during the pregnancy (<20 cigarettes/day OR = 1.27 (95% CI 0.95-1.71, and ≥ 20 cigarettes/day OR = 1.89 (95%CI 1.16-3.08 ($P = 0.008$)).

Conclusion: Offspring were less likely to be happy and more likely to be depressed if their mother smoked during pregnancy. Although we cannot affirm that this is a "causal pathway" public policies to reduce smoking in pregnancy could improve the health of the offspring.

PD-782-19 Large life-shortening effects for smokers with increasing heart rate: a cohort study of 202,581 adult males in Taiwan

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Background: Both smoking and elevated heart rate are known to increase mortality risks, but the combined effect has not been studied. The goal is to see if the increased heart rate can be used as a motivating factor for smokers to quit.

Design/Methods: The cohort consisted of 202,581 male adults, with half of them smokers, went through a self-paying health screening programme between 1994 and 2008. Resting heart rate was determined from 6-lead EKG during screening programme. National death file identified mortality. Life expectancy was calculated by life table method. Hazard ratios (HRs) were calculated by Cox proportional hazard model and were used to compare mortality risks of heart rate above 80/minute with those with 70-79/minute, adjusted for 14 confounding variables.

Results: Two thirds of smokers had heart rate between 60-79/ minute (min) and one fifth, or 19.8% of smokers, had heart rate above 80/min. With 70-79 /min as reference, all cause mortality increased step wise beyond 80/min for both smokers and non-smokers. The smoker's risk, 1.80, 2.38 and 3.01, for 80-89, 90-99 or 100/min., significantly increased from the reference group with 70-79/min, was higher than the corresponding non-smoker risk, 1.15, 1.39 or 2.33, respectively. For heart rate of non-smokers 90/min, life span was shortened by 5.7 years at age 35 relative to those at 70-79/min. However, smokers with 90/min were shortened by 9.3 years within smokers, but further shortened to 13.3 years compared to non-smokers. Smokers with heart rate 100/min had their life expectancy cut short by 16.6 years, in contrast to only 4 years shorter for smokers with heart rate at 70-79/min.

Conclusion: Smokers with rapid heart rate beyond 80/min had poor mortality outcome. Those 90/min shortened their life span by more than 13 years and 100/min by 16 years. Survival can be greatly extended if smokers

could all quit, but far more benefits available for those with elevated heart rate. Monitoring smoker's heart rate, and when found increased, can be used as a motivating factor to counsel smokers to quit.

Table1. Life expectancy at age 35 and all-cause mortality by smoking status for male cohort.

(Total deaths: 5,757)	All (N=202,581)				Nonsmoker (N=98,474)					Smoker (N=104,107)				
	N	%	Deaths	HR	N	%	Deaths	HR	LE*	N	%	Deaths	HR	LE*
Heart Rate(beats/min)														
<50	1147	(0.6%)	35	0.92	475	(0.5%)	7	0.84	82.92	672	(0.6%)	28	1.43	84.70
50-59	21828	(10.8%)	464	0.95	9810	(10.0%)	134	1.04	92.22	12018	(11.5%)	330	1.39*	85.81
60-69	67465	(33.3%)	1517	0.98	31734	(32.2%)	456	1.03	91.32	35731	(34.3%)	1061	1.44*	85.67
70-79	68788	(34.0%)	1837	1.00	33708	(34.2%)	559	1.00	88.58	35080	(33.7%)	1278	1.51*	84.58
80-89	31681	(15.6%)	1167	1.18*	16296	(16.5%)	354	1.15*	87.00	15385	(14.8%)	813	1.80*	80.96
90-99	8912	(4.4%)	488	1.51*	4803	(4.9%)	138	1.39*	86.27	4109	(3.9%)	350	2.38*	76.20
≥100	2760	(1.4%)	249	2.11*	1648	(1.7%)	98	2.33*	76.53	1112	(1.1%)	151	3.01*	71.94
>=80	43353	(21.4%)	1904	1.32*	22747	(23.1%)	590	1.44*	85.82	20606	(19.8%)	1314	2.00*	79.23
>=90	11672	(5.8%)	737	1.67*	6451	(6.6%)	236	1.65*	82.90	5221	(5.0%)	501	2.53*	75.29

Hazard ratios were adjusted by age, BMI, drinking, physical activity, systolic blood pressure, total cholesterol, high-density lipoprotein, triglycerides, , glucose in a multivariate Cox model.

Reference group: heart rate in the 70-79 beats/min group.

* p<0.05.

*LE: Life expectancy at age 35.

PD-783-19 Empowering youth to use existing tools to improve implementation of tobacco control laws in the state

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Background information: The objective was to foster youth leadership and increase social responsibility among the youth from across the state by mobilising and training them extensively on existing tobacco control laws; build their capacity to document violations of tobacco control laws; produce an evidence based Report Card on implementation of tobacco control laws and submit it to the concerned government departments, state/districts administrations and also release it to media.

Methods: We have conducted a series of school based interaction programmes for students and workshops for health volunteers on the theme of 'tobacco or health'. A week long Rights and Responsibilities Training camp is organised every year for interested youth/student health volunteers to build their capacity in (i) documenting photographic evidence of violations of main provisions of COTPA 2003 law; (ii) monitoring the compliance of tobacco control laws in

the city; and (iii) using existing tools (such as Right To Information Act 2005) for improving implementation of tobacco control law. This is an ongoing activity.

Results/Outcomes: Youth have demonstrated unprecedented commitment towards improving compliance of tobacco control laws in the city. Participants of every Rights and Responsibilities Training camp produce 'Report Cards' on the status of implementation of tobacco control laws in Lucknow city which are released to the media, submitted to the UP state tobacco control cell (UP-STCC), and posted to government authorities for appropriate action. Taking cognizance of these Report cards the State/district administration has taken some action and removed tobacco retails shops located within 100 yards of educational institutions and also initiated the process of imposing fine on violators of smoke-free policy. The youth groups have also filed more than 100 RTI applications seeking, among other things, information on implementation of specific tobacco control laws in the city

Conclusions/Lessons Learnt: Trusting in youth competence and empowering them with knowledge and skills brought about a great difference. Using help of laws, other than tobacco control laws (such as child rights laws, right to information laws, and others), that help complement salient features of tobacco control laws has been helpful in improving implementation of tobacco control laws.

PD-784-19 Improving monitoring and compliance of smoke-free policy in Lucknow**R Dwivedi,^{1,2} B Ramakant,^{1,2} S Tripathi^{1,3}**¹Health, Vote For Health Campaign, Lucknow, ²Health, Citizen News Service (CNS), Lucknow, ³Tobacco Control, UP State Tobacco Control Cell (UPSTCC), Lucknow, India. Fax: (+522)2358230. e-mail: rahul@citizen-news.org**Background information:** Although India has put a complete ban on smoking in public places since 2nd October 2008, implementation of the law has been very weak. The objective of this initiative was to develop a mechanism for monitoring and improving the compliance of smoke-free policies in the city, with coordinated efforts of the UP State Tobacco Control Cell, district administration and civil society partners.**Design:** CNS coordinated with UP State Tobacco Control Cell, District Tobacco Control Cell, Education Department, Food and drugs Department, Excise Department and Police Department (Law and Order), to form a District Level Enforcement Squad Team for monitoring implementation of tobacco control law. The team conducted random vigilance checks on the compliance of smoke-free policy, twice a week, at various public places (such as bus/railway stations, cinema halls) including government offices and imposed monetary fines on the violators on the spot.**Result:** A first of its kind district level enforcement squad team was formed in the state of Uttar Pradesh and a circular was issued by the district administration to all government departments in this regard. The squad team conducted monitoring checks twice every week. Since the inception of this enforcement squad the number of people who were fined for violating the smoke-free law increased manifold in the district as compared to previous years. More such enforcement squad teams are planned to be set up by UPSTCC in other districts of the state in future.**Conclusion:** The random check of the enforcement squad team has created a favourable environment for improved compliance of smoke-free laws and also to deter people from smoking in public places. Government offices have become more vigilant about enforcing the law in their premises.**PD-785-19 Assessing the influence of tobacco use by family members and peers on tobacco use behaviour of adolescents living in urban slums of Delhi, India****S Bassi,¹ V Gupta,² M Arora,^{1,2} M H Stigler,³ C L Perry,³ K S Reddy²**¹**, Health Related Information Dissemination Amongst Youth (HRIDAY), New Delhi, ²**, Public Health Foundation of India (PHFI), New Delhi, India, ³Michael & Susan Dell Centre for Healthy Living, School of Public Health, University of Texas, Texas, United States of America. Fax: (+91)11-26850331. e-mail: shalini@hriday-shan.org**Background:** Tobacco use is the biggest threat to youth's health worldwide, as well as in developing countries like India. In India, 5500 youth initiate tobacco use every day

with current prevalence of tobacco use being 14.6% (13-15 years; school going youth). In India, 60-80% of youth live in low resource settings, and tobacco use starts as early as six years in these settings. Easy availability and accessibility of tobacco products in these settings is a cause of high prevalence especially among adolescents. It is imperative to understand various factors that influence and persuade adolescents to start tobacco use. The behaviour of the family members/people in the environment of the adolescents plays a key role in potentiating or protecting them against the risky behaviours like use of tobacco.

Design/Methods: Project ACTIVITY (Advancing Cessation of Tobacco In Vulnerable Indian Tobacco consuming Youth), community-based, cluster-randomised trial, aimed to test the efficacy of an intervention to reduce and prevent tobacco use among adolescents (10-19 years) residing in 14 low socio-economic status (SES) communities (7 intervention and 7 control), including resettlement colonies and adjacent Jhuggi Jhopris (JJs) of Delhi, India. Adolescents (n=1720) belonging to low SES from control communities, who were non-tobacco users at baseline and participated in all the three surveys (baseline, intermediate and endline). The main outcome measure was current tobacco use at endline. Tobacco use by family members, friends and role models was measured at baseline. Mixed effect logistic regression models were applied. Tobacco use by friends and role models were adjusted.**Results:** The influence of tobacco use by friends is significant (OR=2.68, 95% CI=1.27-5.64) but the influence of tobacco use by brother was stronger. The odds ratio of using tobacco was 4.36 times (95% CI=1.66-11.45) higher among adolescents whose brothers were tobacco users at baseline than those who did not have brothers using tobacco after adjusting for socio-demographic variables, tobacco use by friends and role models. The effect of tobacco use by brothers was found significant for almost all the groups.**Conclusion:** The results indicated a stronger influence of tobacco use by brothers and friends on tobacco use status of adolescents, than parents. Thus, there is a need to engage siblings in efforts to prevent tobacco use and promote tobacco cessation among youth and adolescents in slum communities in India.**PD-786-19 Youth movement for tobacco control: a movement to break the tobacco industry chain in Indonesia****Zakiah,¹ I Johnson¹**¹Youth, Indonesian Student Movement for Tobacco Control, Jakarta, Indonesia. Fax: (+62)217393181. e-mail: zakiah.giziui@gmail.com**Background and challenges to implementation:** Tobacco control industries are mostly aiming the youth as their captive market. To break their chain and control to the youth, a youth movement that support tobacco control is needed. Youth movement is very unique: they speak with fresh voices, bring energy and conviction, as well as non-traditional ideas and strategies to achieve smoke-free In-

onesia. Since August 2011, several students from Indonesia take initiative to build a youth movement for tobacco control. These students have varying background of studies, which not only dominated by public health students but also medical students and health-related students. Few of capacity building programmes were held to prepare this new wave of tobacco control activists with help from NGOs that have been working on tobacco control issues before. A review of this new wave in tobacco control is needed, including strategies that they have done and emerging innovations that have not yet been assessed for efficacy.

Intervention or response: The study is done by interviewing tobacco control youth movement leaders and conducting a literature review of their documents.

Results and lessons learnt: Youth movement for TC are fighting against tobacco industry using policy advocacy and public campaigns. They fight for their ideas by making study about tobacco control policies and send it to the parliament and the MOH; they oversee the implementation of government regulation No.109 about TC, and also make petitions to strengthen tobacco control policies. They campaign by building TC awareness among their peers, endorsing smoke-free campus and making tobacco control creative campaigns using social media & fresh ways of communication.

Conclusions and key recommendations: Youth movement for TC is valuable to develop leadership for tobacco use prevention that will serve the entire nation and to break the tobacco industry chain in Indonesia. This part of tobacco control efforts should be maintained and supported well for the future of tobacco control, not only in Indonesia but also in other countries. A wider-scale and inter-regional youth movement are meant to be build.



PD-787-19 Tobacco industry interference via use of front groups: Mexican case

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Background: In Mexico, the tax on tobacco was increased in 2010. In reaction, a tobacco black market started to grow in Mexico and the tobacco industry started to react against it. A campaign was developed by a front group called "Alliance Against Illegal Products". The images that they used (attached) made it look as a campaign against illicit trade, but instead they promoted the consumption of tobacco. The campaign was designed to spread the idea that there is such a thing as a "good or healthy" tobacco, the licit one, different from the "bad or non-healthy" tobacco, the illicit one. Also it broadcast the idea that illicit tobacco is more harmful than the "licit" tobacco. The opinion of the experts was that instead of being an informative campaign, the purpose was to encourage people to smoke tobacco. The main target was the population of Mexico City. The advertisement could be found in theatres, stores, the metro and in buses.

Intervention or response: As soon as we heard about this campaign we developed a legal and media strategy against it. For the legal strategy we made a claim before the Federal Agency of Sanitary Risk arguing that as a campaign which shows the effects of tobacco on health, it must have the requisites of the law. In other words, it should not create false impressions to the consumers, it should not make comparisons between two tobacco products (in this case the legal and healthy tobacco against the illegal not so harmful tobacco), and, as the advertisement shown on tobacco packs, these must have the tobacco labelling as it is demanded by the law. After the claim was presented, we made a media conference in order to show the wrong impressions the campaign had created, how a front group was actually in charge of it and how the tobacco industry was hiding behind this group.

Results: A few weeks later the Federal Agency called us to tell us that the campaign had been removed and that they will consider if the group must be punished for violating the law. We made a monitoring of the campaign and it was removed.

Conclusions: This experience showed us that there is a way for the civil society to denounce the tobacco industry harmful interference. The main purpose was achieved: removing the campaign and avoiding the diffusion of false expectations of the tobacco products among the public. Letting the campaign as it was would have entailed an irreversible damage for tobacco control. This was an achievement for civil society.



17. MONITORING COMPLIANCE WITH SMOKE-FREE LAWS

PD-788-19 Restrictions on tobacco use in households with children up to 9 years of age in Brazil: data from Global Adult Tobacco Survey (GATS) 2008

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Background: Smoking prevalence in Brazil is twice as high among persons of high education level compared with people with low education level. Exposure to second-hand smoke (SHS) is associated with an increased risk of adverse health effects among children such as increased risk of sudden infant death, lower respiratory tract infections, middle-ear disease, and exacerbation of asthma. Smoking in the home is the major source of exposure to SHS. Brazil has a comprehensive tobacco control policy and ratified WHO-FCTC in 2005. A federal legislation restricted and later prohibited smoking in enclosure public places in 2002 and 2012, respectively. Less is known about rules on smoking in home and about children SHS exposure at home in the country. The present study aimed at describing rules of smoking restriction on households with children up to 9 years old in Brazil according to socioeconomic indicators. Design: The analysis was performed in a subsample of Global Tobacco Adult Survey (GATS-Brazil), conducted by Brazilian Institute of Geography and Statistics in 2008, including 14,078 households with children up to 9 years old. The question "What is the rule about smoking inside of your home?" were used to classify households according to rules to smoke at home. Those households in which smoking was allowed inside of home or smoking was generally not allowed inside of home, but there are exceptions, were considered to have partial or no rule.

Results: Approximately 52% of households with children up to 9 years old had partial or no restrictions in relation to smoking. The following individual characteristics of the household head were associated with partial or no smoking restriction at home: low income, low level of education, living in rural areas, being smoker, and low knowledge about the health risks related to environmental tobacco smoke.

Conclusion: In Brazil there is a high compliance to smoke at home and exposing children to environmental tobacco smoke. Children with low socio-economic level are those most exposed to the risks associated with passive smoking, suggesting that tobacco control policies affect this population group on a smaller scale. Brazil must develop tobacco-free environments policies aimed at the lower income population in order to reduce smoking prevalence and tobacco related mortality and morbidity inequity in the country.

PD-789-19 Research on the influential factors of enforcement of smoke-free law in five cities in China

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Background: As WHO FCTC took effect in China, more and more cities have legislated or amended laws against smoking in public places. But there still existed many kinds of barriers and problems to enforcement. This study focused on the activities took by enforcers and owners of places to evaluate situations that influence the effect of laws and regulations against second-hand smoke.

Methods: This study combines methods of interviews and field observation. Haerbin, Shanghai, Tianjin, Guangzhou and Hangzhou, cities that had enforced smoke-free laws or regulations were chose as study sites.

Results:

1. Compliance situation in the net bars were far from the legal requirements, only 56.3% set comprehensive smoking ban in places, 38.1% allowed smoking indoor, and 8.3% break the regulation with setting smoking area/room which provided no protection for surfers and attendants. Smoking behaviours were found in 69 net bars, attendants from only 2 bars discouraged smokers but failed. Smoking ban in bars didn't improve no-smoking environments in the bars. There was a significant correlation between no-smoking signs at entrances and smoking status ($\chi^2=7.104$ $P<0.05$). The information on the signs was "only 'no-smoking'", complaints phone, penalty, health tips.
2. City supervision and enforcement environments need to be improved.
 - 2.1 Some provisions of the smoke-free law bring about barriers in enforcement activities, such as applicable scope, comprehensive and partial smoke-free places, penalty process and amounts.
 - 2.2 Social advocacy and mobilization did not fully play its important role in the supervision and enforcement.
 - 2.3 Funds and personnel are far from enough for a fully coverage of all public places, which also reduced initiative of enforcers.
 - 2.4 The enforcement coordination mechanism and enforcement pattern is limited by authority, function and power reference, initiative and focus of enforcers.
3. Various factors influenced owners to take responsibility in the enforcement of law
 - 3.1 Inspection activities and penalty for violation are contingences to the owners which promoted a smoke-free environment in places, but without a frequent supervision and enforcement activities, the owners would seek to escape their responsibility.
 - 3.2 There were misinterpretation of the economic impact of smoke-free bars, bar owners were so afraid of losing customers and incomes that they would not fully comply with the law.
 - 3.3 Improvements of knowledge of hazards of second-hand smoke and the protection provision increase the demand of the public for smoke-free public places, which influence determination and will of owners to comply with the law.

Conclusion and recommendation:

1. Effect of the enforcement is poor, smoking status in the net bars is serious, and not all of the net bars comply with the law. Ensure implementation of the law, and make plan according to the provision strictly;
2. Power of the coordination, initiation and knowledge of hazards of smoking and second-hand smoke of the enforcers, all of these influence power of enforcement of net bars
3. There is no difference of enforcement strategy between single department and multiple departments; all what counts is the initiation of enforcement based on a sufficient resource.
4. Failure of creating social atmosphere of smoking ban before and after the law impairs effect of enforcement of the law.
5. There has not a monitoring and evaluation platform established in cities.
6. Amending the law or making detailed enforcement regulation

PD-790-19 Public opinion on smoke-free laws in Middle East countriesG El-nahas,¹ W Abdel Mageed,² G Nasr³

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Background and challenges to implementation: In developing countries, there is a general lack of data about the public attitudes, and compliance with smoking restrictions in indoor and public settings. Thus assessing public opinion on smoke-free policy and laws is crucial to understand the public perception concerning smoke-free legislation, how well they are educated about the hazards of second-hand smoke and their awareness about the benefits of smoke-free environments. This information will help stakeholders in better tailoring their public information campaigns, and provide them with concrete percentage of the public who are in favour of smoke-free policies which is a strong advocacy tools to be presented to the legislators. The polls were conducted by the Tobacco control National bodies in 3 countries in the Middle East to assess awareness among a sector of smoker and non-smoker adult population.

Intervention or response: The opinion polls were conducted to explore and demonstrate public opinion; data were compiled from the national bodies of 3 countries, namely Egypt, Lebanon and Turkey. Two of which were conducted to assess public support to smoke-free policies and legislation on a nationwide scale (Lebanon and Turkey), and one, which comes from Egypt, was conducted at a governorate level.

Results and lessons learnt: Despite the fact that the 3 countries are currently at different stages in the policy process, there was a wide support by the public to the enactment of the law and implementation of smoke-free

policies which is consistent with results of polls on smoke-free policies in many countries all over the world.

Conclusions and key recommendations: The findings of these polls are important to assess and reflect public readiness, to document levels of public support, and to establish a baseline assessment to help measure change over time in those countries. This information will help stakeholders in better tailoring their public information campaigns

PD-791-19 Low compliance even after declaration as smoke-free city: experience from Shimla cityD Singh¹

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Background and challenges to implementation: Despite the declaration of Shimla as a smoke-free city, the effective implementation of a comprehensive tobacco control law known as Cigarettes and Other Tobacco Products Act (COTPA 2003), which prohibits smoking in public places, still remains a challenge. An unbiased, comprehensive Compliance survey of smoke-free law is required to assess the progress towards a smoke-free society. This can help policy makers to take action wherever strengthening of measures is required.

Intervention or response: A cross sectional study was conducted in the month of April, 2014 in Shimla city. The public places including government offices, educational institutions, healthcare facilities, hotels, restaurants/bars, shopping centres, and transit stations were surveyed.

Results and lessons learnt: The overall compliance rate towards section 4 of COTPA was poor at 55.5%. Active smoking was observed in majority of the public places with low compliance rates of 38.4%. Even in restaurants and bars, compliance rates were only 58.8% with presence of smoking aids in almost half of the eating joints. In 72% of the public places 'No Smoking' signage were displayed as per COTPA. Health and educational institutions had maximum compliance with the smoke-free law while residential areas showed the least compliance.

Conclusions and key recommendations: Declaring any city as 'smoke free' without putting in place an aggressive and efficient implementation mechanism to monitor the compliance of COTPA is likely to end in failure. The poor compliance found in this survey will serve as an evidence to advocate necessary corrective actions. Sensitization workshops of different stake holders such as youth organisations, NGO's, industry leaders and media need to be organized to raise awareness regarding the provisions under COTPA. Follow up compliance surveys on yearly basis by unbiased, competent agencies will help in guiding the authorities to take immediate corrective actions Regular monitoring of all public places by the health authorities followed with punitive action against the violators will lead to effective implementation of COTPA thereby making true progress towards the goal of making cities 'smoke free'.

PD-792-19 Low compliance with smoke-free laws in Mumbai coffee shops

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Background: Approximately 40% of Indian youth are exposed to tobacco smoke outside of their homes (GYTS, 2006). There is substantial support for protection measures against second-hand smoke (SHS) exposure. The TCP India Wave 1 Report (2013) found wide support for smoking bans in public spaces (97.8%). Despite support for smoking bans, knowledge of regulations in India's tobacco control law COTPA (Cigarettes and Other Tobacco Products Act, 2003) to prevent SHS exposure remains low (69.0%). More than one third of surveyed individuals observed smoking in restaurants (TCP, 2013).

Methods: An observational survey was conducted in 92 randomly selected coffee shops across Mumbai in November 2013. Compliance with COTPA Section 4 (banning smoking in public places) was measured. Coffee shops were designated as having full compliance, incomplete compliance, or non-compliance.

Results: None of the coffee shops surveyed met COTPA Section 4 requirements. Only 14.6% (n=13) of coffee shops displayed an anti-smoking sign of any kind. Only 6 coffee shops displayed a sign meeting the size and language standards for COTPA. However, despite limited compliance with the law, tobacco use was not observed in any coffee shop.

Conclusions: While there is strong support for anti-smoking policies covered in COTPA, compliance in coffee shops, popular meeting places for youths in Mumbai, was minimal. However, despite noncompliance, tobacco use was not observed. Given prevalent exposure to SHS among Indian youth, greater compliance with anti-smoking laws should be enforced. Research should examine the relationship between anti-smoking signage and tobacco use in public space in India.

PD-793-19 Reduction of second-hand tobacco smoke in public places following national smoke-free legislation in India

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Background and challenges to implementation: The Cigarette and Other Tobacco Products Act 2003 in India prohibit smoking in public places. A city can be declared smoke-free when the smoke-free law is complied, there is a systematic reporting mechanism to lodge complain against violation of the rules of the law. The city/ jurisdiction can be declared smoke-free by an appropriate government authority. A compliance monitoring study was conducted to assess the level of compliance of smoke-free law. A compliance level above 80% to 90% can be set as a standard for declaring a city Smoke Free. Lack of awareness among the common people and even some of the

government officials about the smoke-free laws in the State Of UP.

Intervention or response: To overcome the challenge, awareness campaigns were organised at village level for common people and various stakeholders meetings were conducted at districts and state level to make government officials aware about smoke-free laws and their importance. There were structured questionnaires and observation sheets to assess the level of compliance. There were interviews of public place managers, visitors to the venues and intensive observations in these public places where study was conducted.

Results and lessons learnt: The data collected in the study were compiled and analysed. The broad heads of the analysis and results thereof are:

- Warning of No Smoking in English or any Indian language.
- No Smoking signage of board size 60X30cm prominently displayed at entrance.
- Provision of designated smoking area

Conclusions and key recommendations: A multi-sectoral approach, multi-stakeholder engagement & ownership ensured the significant progress in the project. There was a variance in the success and progress across the 10 districts due to different socio-political and administrative factors. The achievements and challenges across the different settings helped in evolving best practices that are now being duplicated in other parts of the country.

PD-794-19 National compliance with 100% smoking ban in indoor public places

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Background: Lebanon banned smoking at indoor public places in September 2011, with the ban including the hospitality sector (cafes, restaurants, hotels) a year later (September 2012). The purpose of this research was to evaluate the nationwide compliance with the indoor smoking ban beyond the initial six month period, including public transport.

Design/Methods: An 11-item questionnaire tool was developed by the National Tobacco Control Programme, following a review of similar tools used by national/international authorities for evaluation of smoking bans. The tool was reviewed by experts, piloted and revised. A team composed of seven public health graduates and students was trained in using the questionnaire. Samples were defined to reflect both population within each of the six regions (mouhafazat) of Lebanon, as well as the proportion of indoor place profiles (healthcare facility, school/university, café/restaurant, pub/nightclub, hotel, private company, shop, supermarket, governmental building, shopping mall, bus and taxi). Within each region a convenience sample was used, keeping in line with the

pre-defined proportion of indoor place profiles. A total of 1200 locations were sampled in two phases in April-May 2013 and July-August 2013.

Results: Overall compliance with the indoor smoking ban was 69%, and varied widely between locations. Compliance was highest in nurseries and cinemas (100%), universities (91%), hospitals (88%), supermarkets (86%), private companies (85%), schools (84%) and hotels (80%). Compliance was moderate in governmental buildings (66%), taxis (59%), pubs/nightclubs (55%), malls (54%) and buses (51%). Cafes/restaurants varied by franchise status, with franchises having 81% compliance and non-franchises 45% compliance. In addition, among stores that sold tobacco, only 9% had products within direct reach of the customer.

Conclusion: Despite weak enforcement by limited state agencies, compliance of the 100% smoking ban in most indoor public places is high. Hospitality sector compliance is low-moderate, with particular note to the low compliance in individual non-franchise restaurants, pubs/nightclubs and malls, as well as public transport. More efforts should be focused by state and municipal authorities on increasing compliance in the hospitality sector and public transport.

PD-795-19 Going smoke-free: enforcement of tobacco control policies at the local government level

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Background: The Philippines, as a signatory to the WHO FCTC, is duty-bound to implement smoke-free policies. A 2003 national law also prohibits smoking in certain public areas, but there is little awareness and compliance to the law. There is a need therefore to localise these policies through the development of smoke-free ordinances to effectively implement them.

Interventions: Fifteen (15) provinces, comprising of 272 local government units (LGUs), were selected as pilot sites for the project which received technical and grant support from the Union under the Bloomberg Initiative to Reduce Tobacco Use. Through policy advocacy and social marketing, the project aimed to achieve enforcement of smoke-free policies and behaviour change in the project sites. The project oriented local officials, provided ordinance templates, assisted during legislative deliberations and trained smoke-free enforcers. The project also adopted two international graphic campaigns and aired them in local TV and radio stations with support from World Lung Foundation and LGUs. Research was undertaken to

assess effectiveness of interventions.

Results: From September 2009 to June 2014, 58% of LGUs in the project sites have implemented smoke-free policies while 48% of LGUs received training for enforcers. Twenty (20) LGUs from the project sites have also won Hall of Fame Red Orchid Awards for the sustained implementation of their smoke-free policies, three years in a row. Best practices in the LGUs include forming an alliance among mayors to advocate for smoke-free policies, signing of a manifesto to counter tobacco industry interference and research showing decrease in second-hand smoke exposure in public transportation, restaurants and government buildings after the enforcement of a smoke-free ordinance.

Conclusion: Localising national tobacco control laws, through the passage of smoke-free policies, paved the way for the strong implementation of tobacco control measures that people can benefit from. Once the LGUs have been empowered, they are able to sustain implementation of their ordinances, fight tobacco industry interference and serve as positive role models that influence other LGUs to go smoke-free.

PD-796-19 One year of smoke-free law implementation: a cross-sectional survey from the Krasnoyarsk region, Russia

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Background: In 2013 Russia introduced its Federal Tobacco Control law governing restrictions on smoking in public places, workplaces and public transport, banning tobacco advertising, promotion and sponsorship, as well as to regulating tobacco packaging and labelling.

A prevalence study was conducted in 2013 and repeated in 2014 in Krasnoyarsk using the same study design and had an objective to measure law compliance as well as change in awareness, attitudes and behaviours over a year of a Smoke-free law in action.

Design/Methods: The survey was conducted in the Krasnoyarsk region of Russia in 2013 and repeated in 2014 using the same methodology. A probability sample of 1000 adults (18+) was quoted by age, sex and territory. 2013 survey results were compared to 2014.

Results: Support of the SF law has noticeably grown in the Krasnoyarsk region since the adoption of the smoke-free law in 2013. More respondents are supportive of such measures as increase of taxation and sale restrictions. Fewer respondents are sceptical towards enforcement of the law. There is a 3.9% decline in smoking among the respondents from 32.3% in 2013 to 28.4% in 2014. Yet, still half of the smoking respondents acknowledge they

sometimes smoke in places where they believe smoking is forbidden. A slight positive dynamics has been witnessed in observed law compliance: 69% have observed smoke-free law violation which is 5% less than last year.

Since February 2013 local public health authorities have been steadily raising awareness on state institutions where citizens can report violation of law. The number of well-informed respondents has risen by 18% over the preceding year reaching to 64% in 2014. As compared to the last year a much lesser share of respondents believe that there is no way we can influence smokers who infringe the law. Elder people are more willing to be active in reporting SF law violations.

Conclusion: In spite of the decrease in smoking prevalence and significantly improved awareness on the responsible state institutions, law infringement is still high. Hence, a consistent smoke-free enforcement is crucial in all public premises.

PD-797-19 Smoke-free hospital in Thailand: intermediate path to 100% smoke-free environment

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Background and challenges to implementation: Based on Non-Smokers' Health Protection Act B.E. 2535 (1992), and Announcement of Ministry of Public Health (No. 19) B.E. 2553 (2010), 100% Smoke-free hospital in Thailand has been active enforced. After that hospital administrators and staffs are not allow to smoke in hospital area, both indoor and outdoor. Hospital staffs who are smokers have been forced to reduce and quit smoking. However, due to addictive effect of nicotine, some hospital staffs were failed to quit and relapse. Objective: to help hospital staff

gain high motivation to quit and assessing tobacco situation around smokers and second hand smokers in Thai hospital environment was initiated. This mechanism will show objective evidence regarding harmfulness of tobacco smoke and motivate smokers to participate in cessation programme and expect to be a successful quitter later. Design: one group mix method was applied to recruited 52 smokers who were current work as full time staff in hospital after informed consent. Purposive sampling was used to recruit 8 smokers from each hospital under Ministry of Public Health and university hospital.

Intervention or response: Demographic questionnaire regarding personal history, smoking history, knowledge and awareness questionnaire regarding smoking harmfulness and impact on second handed smoke colleagues were completed. Each smoker applied air pump with fine filter and/or charcoal tube during smoking period for 8 office hours. All paper filter and Charcoal tubes were analysed for volatile organic compound and weight for less than PM10 dust volume by high accuracy measure. Then all filter and tubes were analysed for PAH and BETEX at Public Health Reference Laboratory based on ACGIH standard.

Results and lessons learnt: All samples showed a contaminated with small amount of cigarette smoking dust (Less than PM10). For PAH, samples were exposed less than 0.001 ug./sample and exposed with some form of volatile organic compounds includes Benzene, Toluene, Ethyl Benzene, and Xylene which was known as environmental carcinogen and accumulated in smokers' body. Finally, results of analysis were return back to each smoker.

Conclusions and key recommendations: This intervention make smokers reduce cigarette smoking and gain motivation enough to start quitting. So they are ready to adapt smoking behaviour and start quitting process. Assessing tobacco smoke situation should be applied to raise motivation to quit among staff.

18. INDIRECT MARKETING TACTICS

PD-798-19 Indirect tobacco advertising in Armenia

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Background: Comprehensive ban of all tobacco advertising, promotion and sponsorship (TAPS) is required under the WHO Framework Convention for Tobacco Control (FCTC) and is shown to be one of the most cost-effective ways to reduce tobacco demand. However, only 6% of the world's population was fully protected from the tobacco industry TAPS tactics in 2010. Indirect advertising, a form of trademark diversification, is often used by tobacco industry especially where partial bans are in force. Though a member of the FCTC, Armenia has taken only partial

measures to ban tobacco advertisement. This observational research aimed to document the current situation on indirect tobacco advertisement in Armenia.

Design/Methods: We targeted the following areas: a) cigarette claw game machines (in 10 locations), b) portrayal of smoking in TV soap-operas (5 episodes of all soap-operas on 3 popular Armenian channels) and by Armenian celebrities (Google and Facebook search) and c) display of tobacco products at point-of-sale (in 7 locations).

Results: Claw machines: Although illegal, cigarette claw machines were widespread in the capital city Yerevan and were popular pastime particularly among young men and boys. Machines were used for gaming 50% of the observed time and 49% of players were minors. Machines were mostly in child-friendly zones and marketed toward children. Portrayal of smoking: Out of watched 2,134 minutes of soap operas, the duration of smoking scenes was

70 minutes (3.3%). Three-quarter of the observed scenes were indoors and 65% in presence of others. In 56% of the scenes, the smoker was upset and in 25% was drinking alcohol. The online search revealed that 41.7% of celebrities identified as role models by high school students were portrayed as smokers. Display of tobacco products at point-of-sale. Tobacco product display at point-of sales is legal and power walls are aggressively used in supermarkets, grocery stores and gas stations. All seven conveniently visited supermarkets and grocery stores had prominent, sophisticated tobacco displays (power walls) with cigarette brand advertisements.

Conclusion: Armenian indirect tobacco advertisement regulation is not comprehensive and is not properly implemented. The legislation and enforcement of indirect tobacco advertisement needs to be considerably strengthened since it serves as a powerful tool for maintaining a product brand identity, promoting smoking culture and positive social norms concerning tobacco use.

PD-799-19 A Study on indirect advertising of smoking scenes in TV dramas in Bangladesh

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Background: Broadcasting smoking scene in TV drama is an important strategic promotional activity that raises interest among audience in smoking and also fulfil the purpose of tobacco companies. In 2013, Bangladesh amended its Tobacco Control Act which imposed a comprehensive ban on all kind of advertising by tobacco companies in point of sale, TV, film and online. The objective of this study is to observe tobacco and smoking scene in different TV channels. The study also scrutinizes how strategically tobacco and smoking scene broadcasted in drama.

Methods: In order to examine smoking and tobacco scene purposive random sampling was used as a way of drama selection. Study duration was from January 2014 to February 2014. The selected channels under this study were Channel I, NTV, ATN Bangla, Masranga, Bangla vision, channel 9 and Asian TV of Bangladesh. During this time, total 28 dramas including seven dramas are one episodic, twelve mega serial and nine crime-related broadcasted dramas were surveyed and analysed.

Results: There is a misconception about the use of tobacco scene in TV drama. Some people think that tobacco and smoking scene can be broadcasted by using scroll on TV screen. But it is not applicable in TV programme under the existing law. Among the analysed TV dramas smoking and tobacco scene was found in 60.71% dramas. There was no smoking and tobacco scene in 39.29% dramas. Among the analysed crime related drama smoking and tobacco related scene was found in all of them. Among this drama smoking scene was broadcasted on an average 30 seconds and highest duration was 40 seconds. Not only smoking but also gaza, alcohol and yabba taking scene also broadcasted in crime related drama. Smoking scene, in front of child and women, was also found in many dra-

mas. Among the analysed drama in 3.57% dramas was found where women smokes. Even women's smoking was also broadcasted in promo of the specific mega serial. Instead of smoking scene, 7.14% drama demonstrated cigarette stick and cigarette packet for a moderate time. Using of pipe and shisha scenes were also found in TV drama, though it is not significant in number.

Conclusion: A strong and workable monitoring mechanism should be incorporated under concern ministry to observe these kinds of violation of law in TV channels. TV channels which are violating tobacco control law should be under the litigation.

PD-800-19 Incidence of tobacco images in Brazilian free-to-air television channels: a pilot study

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Background: According to scientific literature, tobacco companies advertising and promotions affect awareness, attitudes and behaviour related to smoking. In line with WHO-FCTC's Article 13, Brazil has banned direct advertising, promotion and sponsorship in all type of media since 2002. Tobacco industry efforts to include indirect advertisement in movies and TV programmes is a major strategy to overcome advertisement restrictions. This study aimed at describing procedures and results of a pilot study to count and characterise tobacco appearances in Brazilian television channels programmes.

Design/Methods: We adapted 'Thumbs Up! Thumbs Down!' of Breathe California of Sacramento-Emigrant Trails, USA, methods for counting and analysing tobacco use portrayed in movies. Data collection procedures and instruments were translated and adapted for television programmes. Four young adults (18 to 27 years old) conducted programme reviews. The reviewers were trained on screening soap operas, Brazilian miniseries, reality shows and movies with highest audience in Brazilian free-to-air channels. Every week project team met to confirm screening procedures. For the pilot study data, two of the four trained reviewers analysed 10 hours of mentioned programmes to assess data reliability.

Results: Of the 11 programmes examined, 3 contained tobacco incidents. The following variables showed high level of inter-observer consistency: location where the characters/participants smoked, type of tobacco used, personal characteristics of actors/participants involved. Number of incidents, call-minutes of these appearances, and whether the message was pro- or anti-tobacco showed lower consistency. As a result of this pilot study, the team improved incident definition and adjusted the data collection instrument. A full-scale assessment including 400 hours of programming of the same type of programmes analysed on pilot study is under way. Additionally, this pilot study confirmed

the initial assumptions of higher incidence of smoking imagery in reality shows, but some incidence of imagery in soap operas and mini-series was also identified.

Conclusion: The pilot study appeared successful to disclose tobacco related scenes with the potential for advertising. The study indicated procedures adjustments needed to improve data reliability and accuracy. As reviewer's discordance can be partially attributed to individual perception differences a margin for disagreements was established for analyses.

PD-801-19 Six-year investigation into smoking scenes in Chinese movies and television dramas

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Background: Smoking scenes in movies and television dramas, especially teen idols smoking, is one important factor influencing young people to start smoking. Its effect is as the same as tobacco advertising. In 2009 and 2010, China State Administration of Radio, Film and TV (SARFT) issued two directives requiring strict regulation for unnecessary smoking scenes in film and television works. The present research was conducted with the objectives to evaluate implementation of the directives, providing evidence for future tobacco control work on adolescent.

Design/Methods: The most popular 40 movies and 30 teleplays of each year of 2007, 2009, 2010, 2011, 2012 and 2013 were chosen for the research. All the works were watched thoroughly and the frequency, duration and occasion of all the smoking scenes were quantified.

Results: Frequency and length of the smoking scenes were declining by each year. For movies, numbers of the scenes dropped 30.6% and total length dropped 60.7%. For teleplays, the numbers decreased 71.2% and length decreased 72.6%. Family is the place where smoking scenes happen the most frequently. All the plays with military theme have smoking scenes.

Conclusion: The percentage of smoking scenes in movies and TV series in the research has been going down in recent six year. It suggests that SARFT's directives have effectiveness in some way. However, smoking scenes still exist, especially in military theme plays. The content of directives should be included in the future national tobacco control law.

PD-802-19 An analysis of indirect advertisements of tobacco products in two major leading newspapers of Madhya Pradesh

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Background: In a country like India the trend of consuming Pan masala is increasing day by day. Pan Masala is mix-

ture of areca nut and other flavouring agents and it is the first stage of addition to chewing tobacco products. Section 5 of Indian Tobacco Control act prohibits all direct and indirect advertisements of tobacco products. Most of the tobacco companies have a strategy of having same brand name of pan masala and tobacco products. Thus tobacco companies market their tobacco product and pan masala product with same name which is an example of indirect advertisement. Print media is a major means for indirect advertisement. The analysis was done in order to have an idea of advertising pattern of newspapers.

Design/Methods: The study was conducted by analysing the Indirect advertisement of tobacco products in two leading newspapers of Bhopal edition of Madhya Pradesh state of India i.e. Dainik Bhaskar and Patrika newspapers. The study was carried out for a span of 6 months May 2013 to Oct 2013. The advertisements of pan masala were analysed on the basis of brand, page number, total size of ad, frequency of ad etc.

Results: A total of 49 advertisements of Pan Masala products published during a span of 6 months in two major newspapers Dainik Bhaskar(67%) and Patrika (33%). The most widely publicized brand was Vimal Pan Masala (45 %), Mahak Pan Masala (25%) and Pan bahar(14%). A total of 7 brands of Pan Masala were advertised in the newspapers. Brands were Vimal, Rajshree, Adani, Bahar, Guru, Mahak, Pan Bahar. Maximum number of advertisements was published on 3rd page and 5th page. 4 percent ads published on first page. Minimum size of ad was 80 sq. cm and maximum size was 800 sq. cm. Maximum number of advertisements were of size 240 sq. cm (35%). Mean size of the advertisement was 286 sq. cm. Ads of Vimal Pan Masala were published maximum i.e. 58% in Dainik Bhaskar newspaper. A total of 14032 sq. cm was occupied by the advertisements: 8208 sq. cm in Dainik Bhaskar and 5824 sq. cm in Patrika newspaper. The analysis also found that special one pager advertisements were published on special occasion like festivals etc.

Conclusion: The study suggests that tobacco companies are using indirect forms of media specially to promote chewing form of tobacco. Print media is widely used for indirect advertisement. Strict enforcement of tobacco control act is required.

PD-803-19 Pan masala and mouth freshener serve surrogate for tobacco product advertisements in India

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Background: Article 13 of FCTC and Indian tobacco control legislation (COTPA) prohibit direct and indirect advertisement of tobacco products in any media. However, tobacco industry is circumventing the law and adopting below the belt strategies; there are several advertisements of non-tobacco products such as pan masala (a non-tobacco product containing areca nut) and mouth freshen-

ers having same brand name and similar packaging design to tobacco products seen in Indian print and television media. Current study was carried out to know whether advertisements in Indian print and television media were for the intended products or serve as a surrogate for tobacco products.

Design/Methods: Investigators did a cross sectional survey using a pre-tested checklist in Shimla city in April-May, 2014. Three vernacular newspapers were scanned, selected 30 matches of Indian Premier League (Cricket) telecasted live on a Sports TV channel were observed for any advertisement of pan masala and mouth freshener. Total 286 tobacco shops in Shimla city were also surveyed for availability of these products in the market.

Results: Total 13 advertisements (of four brands) of pan masala and mouth fresheners were observed in the newspapers. On an average, four advertisements of pan masala/mouth fresheners (of three brands) were aired in each of the 30 IPL matches telecasted in a Sports TV channel. Field survey revealed that the advertised non-tobacco products and tobacco products of same brand name and package design are also available in the market. Total 223 (78%) shops were selling at least one brand of pan masala/ mouth fresheners and zarda (raw tobacco product) of same brand name and package design. Overall, total 12 brands of pan masala/ mouth fresheners and zarda (including the advertised brands) were available in the market.

Conclusion: The advertisements in Indian print and television media is serving dual purpose. Tobacco industry is advertising the non-tobacco products (pan masala and mouth fresheners) but also the tobacco products (zarda) of same brand and packaging design, which otherwise under the law was totally banned. Pan masala and mouth fresheners advertisements become surrogate for tobacco products (zarda) in India. There is an immediate need for enforcement of complete ban on such advertisements.

PD-804-19 Curbing surrogate tobacco advertisements? Mumbai Busses Case Study

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Background: Smokeless tobacco use is prevalent in India - 21% of Indian adults use smokeless tobacco. Under Indian Tobacco Law (COTPA, 2003), direct and indirect tobacco advertisement is illegal. As a result, surrogate advertisement of tobacco products has risen. Advertisements for pan masala (a mouth-freshening product made with areca nut and lime) have increased. Pan masala advertisements are a form of surrogate advertisement for smokeless tobacco - the products use the similar and even identical branding and the products are considered interchangeable to many users.

Methods: A survey of 1,500 youth and 1,500 adults in Mumbai was conducted in 2011. The study aimed to understand the public's perception of popular pan masala products and to obtain context-relevant evidence to per-

suade policy makers to implement the tobacco control law. Participants viewed flashcards of existing pan masala advertisements and were asked to identify the product associated with the brand. Students participating in the Salaam Bombay Foundation's Super Army programme with stakeholders in the municipal government conducted evidence-based advocacy efforts. An evaluation was later conducted to assess the effectiveness of advocacy on surrogate advertisements on local busses and bus stops.

Results: The study revealed that all three brands tested were associated with smokeless tobacco instead of pan masala among adults and youth (84% and 82%). Following advocacy by students with the Superintendent, Bombay Municipal Corporation (BMC) License & Advertisement Department and Chairman, Bright Media Outdoor, the vendor having rights to display of ads on buses, the municipality banned the use of surrogate advertisements for tobacco products. The follow up evaluation found all surrogate advertisements were removed from bus shelters and.

Conclusions: Evidence-based advocacy involving engaged youth was successful in compelling decision-makers to enforce strong tobacco control.

PD-805-19 Advocacy impedes tobacco surrogate advertisements in Tamil Nadu, India

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Background and challenges to implementation: FTC Article 5.3 requires the parties to refuse to partner with tobacco corporations. Section 5 of COTPA, the Indian tobacco control law, prohibits all forms of direct and indirect advertisements of tobacco products. Ignoring the laws the Tobacco industry in India maintains a close nexus with legislators and enforcers and gain access to promote tobacco products. In September 2011 the manufacturers of tobacco product Chaini Khani and in February 2012 manufacturers of Kajah Beedi entered into agreements with government transport corporation Chennai to advertise their brands of tobacco products indirectly on the government run Metropolitan Transport Corporation buses under the disguise of Chaini Chaini and Kajah matches. The colour, design, layout and presentation exactly matched the popularly known tobacco products Chaini Khani and Kajah Beedi.

Intervention or response: Documenting violation with photo evidences, informational briefing with authorities and adoption of strategic intervention.

Results and lessons learnt: The Metropolitan Transport Corporation internalized that the advertisements were indirect/surrogate advertisements and immediately removed the advertisements from all the displayed buses and intimated Pasumai Thaayagam Foundation that the advertisements were removed. The interventions impacted in the removal of the advertisements from the buses. They assured that there will be no more such advertisements from any tobacco company.

Conclusions and key recommendations: Investigative documentation of violation, strategic usage of legislative provisions and advocacy actions can effectively counter tobacco surrogate advertisements.

PD-806-19 Strategic intervention ensures regulation on smoking in movies

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Background and challenges to implementation: The Indian government's new restrictions on tobacco usage in Films & Television Programmes banned display of brands of cigarettes or other tobacco products or their use in the promos and poster of films and television programmes. Using this law Pasumai Thaayagam Foundation challenged the violation of the first-look posters that displayed the picture of a lead Tamil film actor smoking a large size cigar in his forthcoming film.

Intervention or response: Collection of evidences and strategic intervention of engaging media, the law enforcers, press release. Pasumai Thaayagam filed a complaint seeking action against the culprits responsible for release of poster and against the newspapers that carried the advertisements.

Results and lessons learnt: Press release by the former central government cabinet minister was widely published and sensitized that depicting smoking scene in posters and advertisements were violation under law. The police commissioner convened a meeting in which persons from the media and the author participated. The media acknowledged that they were unaware of the legislative provision and assured to be more alert in future. Pressurized the film director gave media declaration that the film would be smoke-free and assured compliance of legal requirements.

The posters were withdrawn and movie was released without smoking scenes and with disclaimer.

Conclusions and key recommendations: Tobacco industry's influence over film industry can be effectively circumvented with appropriate application of legal provisions coupled with advocacy actions.

PD-807-19 Tobacco advertisement promotion and sponsorship violations in Indian television channels: a metacentric study from India

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Background: Indian tobacco control legislation (Section 5, subsequent rules dated October 2nd, 2012 of COTPA, 2003) puts complete ban on Tobacco Advertisement Promotion and Sponsorships (TAPS), but industry is adopting manipulative tactics and circumventing the law to carry the business. Rules also mandate that, if there are tobacco uses scenes in a movie or television programme, a health spot, an audio visual disclaimer and health warning must be displayed during the telecast. However, industry is continuously targeting television channels in India to carry out TAPS and deceitful business. It is important for the law enforcers to understand the nature and various types of TAPS violations being carried out through television channel. This will help them to design the enforcement plan.

Design/Methods: In first quarter of 2013, total 97 television in three cities [Chandigarh (32), Patna (29) and Chennai (36)] selected through stratified random sampling were observed during prime time for their compliance to the provisions of Indian cinema and television rules, 2012. The TV programmes, serials, advertisements in between the programmes were assessed as per the pre-tested checklist.

Results: Direct advertisements were not found in any of the channel. In near one fourth of television channels, TAPS was carried out as surrogate advertisements in the form of mouth fresheners and pan masala and brand stretching/trademark diversification. At least one smoking scene was found in 27 television channels playing the movie, however, specified health spots, audio-video disclaimer and health warnings could be observed in eight channels. News channels and regional channels had comparatively more surrogate advertisements and smoking violations as compared to other channels.

Conclusion: Cinema and television rules are not strictly implemented in Indian television channels. TAPS are being carried out as surrogate advertisements, brand stretching and trademark diversification. Statuary requirements recommended under the rules for scenes showing tobacco uses are not followed. A stronger action from authorities is needed against the violators.

PD-808-19 Tobacco and alcohol portrayals in nationally-produced films from Europe and Latin America, from 2004-2009

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Background: Studies in multiple countries have found a relationship between exposure to onscreen movie smoking and adolescent smoking and between onscreen alcohol use and adolescent drinking. Many of these studies have focused only on tobacco and alcohol content in U.S. produced films, neglecting nationally produced films, which may be targeted by the tobacco and alcohol industries in response to monitoring and civil society action in the US. Our aim is describe tobacco and alcohol portrayals in nationally produced films from six European countries (Germany, Iceland, Italy, Netherlands, Poland, and UK) and two Latin American countries (Mexico and Argentina).

Methods: The sample included 337 national films (220 European & 117 Latin American) that were among the top grossing films in each country from 2004 to 2009. A

reliable methodology for coding tobacco and alcohol appearances was used. The prevalence of tobacco or alcohol use was calculated and compared overall and by age rating categories. The prevalence of tobacco and alcohol was determined for each rating category and for all films by country, with chi-square to assess difference across countries.

Results: A high percentage of national films included tobacco and alcohol content, with significant differences in tobacco ($p < .001$) and alcohol ($p < .05$) across all 8 countries. The Netherlands had the lowest percentage of films with any tobacco (58%) or alcohol (76%) content, while Iceland had the highest percentage with tobacco (94%) and Italy had the highest percentage with alcohol (97%). Across countries, there were also significant differences in percentage of films with tobacco or alcohol in the "ages 0-11" rating category (range for % of films with tobacco=0%-90%; alcohol range=40%-100%), but no difference in this content for films in the higher age rating categories of "12-15" (tobacco range=77%-100%, alcohol range=89%-100%) and "16 and older" (tobacco =100%, alcohol range=75%-100%).

Conclusions: Nationally produced movies depict characters that may embody shared cultural values and therefore have a larger impact on youth than Hollywood films. Because of this, research is needed to assess youth exposure to tobacco and alcohol content in nationally produced films, determine their impact relative to Hollywood, and to assess relationships between film, alcohol and tobacco industries. These data may be necessary to promote policies that reduce the ability of industry to use entertainment media to impact youth risk behaviours.

19. CROSS-CUTTING ISSUES IN TOBACCO CONTROL

PD-809-19 The Tobacco-Free Investment Initiative

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Background and challenges to implementation: Australians are contributing to the tobacco epidemic by unwittingly investing in tobacco companies via their Superannuation Funds. The Australian superannuation industry is the world's fourth largest, with approximately \$1.8 trillion AUD in total assets. An estimated 0.5% of that total (\$9 billion AUD) is invested in tobacco companies. This financial support of the tobacco industry stands in sharp contrast to the Australian Government's excellent record on tobacco control, clear community awareness of the dangers of smoking, and an ongoing decline in the per-

centage of Australians who smoke tobacco.

Intervention or response: In 2010 the Tobacco-Free Investment Initiative was founded, aiming to reduce investment in the tobacco industry by Australian Superannuation Funds. Engagement was actively sought with superannuation industry leaders and peak bodies. At first, Funds with health professionals as members were pursued and the case for tobacco divestment was presented. As progress was made, attention then turned to government-controlled Funds and large mainstream Funds.

Results and lessons learnt: Since the commencement of the Initiative, 16 large Australian Superannuation Funds have divested tobacco stocks worth more than \$1.2 billion AUD. Conversations are currently taking place with a further 20 Funds. Presentations are delivered to Superannuation Fund investment teams, executives and board members, at private meetings and at industry conferences. Key tobacco facts are detailed and information is provided regarding tobacco-related disease. Tobacco industry activities are outlined. Common issues relating to tobacco divestment are actively addressed, including to which

companies divestment should apply (manufacturers only); why tobacco is a unique product; why tobacco divestment should encompass all investment options within a fund; how super fund trustees can divest tobacco while maintaining fiduciary duty.

Conclusions Financial support of the tobacco industry must be reduced across the globe, with a view to diminishing its power and influence and thus decreasing the number of smokers worldwide. An educational, informative and low profile campaign, led by medical specialists, can successfully drive change within the investment community. International expansion is the next step for this Initiative.

PD-810-19 Benefits and challenges of adopting, monitoring and surveillance systems to inform chronic disease prevention: a case study example

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Background: The links between chronic diseases and unhealthy behaviours such as tobacco use, unhealthy eating, physical inactivity and mental fitness (sense of wellbeing) are major public health challenges to chronic disease prevention. Monitoring and surveillance systems document the trending behaviours, and the impact of interventions and can track progress towards specified goals. The purpose of this study is to share benefits and challenges of developing and maintaining such systems and consider how global monitoring systems could contribute to chronic disease prevention initiatives for the future.

Design/Methods: Surveys with students (grades 5 to 12) from 61 schools in Prince Edward Island, Canada on tobacco use, physical activity, healthy eating, and mental fitness. School administrators/teams complete a school environment assessment tool (policies and programmes). Partnerships are established, presentations/meetings are held with stakeholders and the School Health Grant Programme is offered to support schools in responding to their data.

Results: Between 2008 and 2010 current smoking rates decreased Gr 6-9 = 3% to 2%; grade 10-12=from 13% to 10%; Never smokers increased from 67% to 74%. 63% females and 48% males do not meet Canadian Physical activity guideline; 53% females and 65% males eat breakfast daily. Schools are informed about student data that can support priorities, programmes and initiatives. Provincial decision makers have province-wide student and school health data not previously available. Major blocks to mobilizing the data to action will be discussed.

Conclusion: Monitoring risks and improvements in the wellbeing of youth and ultimately chronic disease patterns for the future through platforms such as the Canadian Students Tobacco Alcohol Drug Survey (YSS) (2002-2014), and the School Health Action, Planning, and Evaluation System—Prince Edward Island (SHAPES-PEI; 2008-2014) is critical. However, major road blocks exist in moving that data to action. The audience will be invited to discuss global solutions to action.

PD-811-19 The Quebec class action lawsuits: a game-changer for tobacco control in Canada?

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Background and challenges to implementation: Although litigation is identified as a component of the FCTC, only in a few countries have government or private lawsuits against tobacco companies been filed.

Intervention or response: Canada is home to more than one-half of the lawsuits faced by multinational tobacco companies outside of the United States. In addition to nine provincial government suits to recover the costs of treating tobacco-caused disease, ten class action suits have been filed. Although government and class action suits were filed in the late 1990s, only two of these cases have yet reached the trial stage. Hearings on the two Québec class actions (one on lung disease, the other on addiction) were combined in a trial that started in March 2012, and completed its evidentiary stage in June, 2014. The final arguments are scheduled to be completed by December 2014, with a ruling from the first court in 2015. If successful, these suits will likely redefine the tobacco business in Quebec and Canada. The penalties sought from the Canadian operations of BAT, Philip Morris and Japan Tobacco are around \$20 billion, or close to the global annual profits of those three companies. Governments too may feel the effect: the plaintiffs have asked the judge to rule on the legitimacy of tobacco sales under current consumer protection laws.

Results and lessons learnt: The Quebec class actions are the first major trial of tobacco multinationals outside of the United States. This may reflect legal reforms adopted in that province as well as administrative decisions by Quebec governments and institutions. This suit, and the factors which facilitated it as well as those which continue to challenge it, may provide guidance to other jurisdictions seeking to implement Article 19 of the FCTC. In the course of their defence, the tobacco companies have exposed their legal strategies and tactics.

Conclusions and key recommendations: The Quebec class actions are a case study of a prolonged legal action against multinational tobacco companies. Even before the outcome of these suits is known, they provide insight and guidance for other jurisdictions.

PD-812-19 Tobacco-free schools in the Budgam district of India

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Background: As per Indian Tobacco Control Act i.e. COTPA-2003 and guidelines issued by Department of Education that all educational Institutions should be Tobacco Free. As per the guidelines there should be no sale of Tobacco products within 100 yards and should be also smoke free. The District Educational institutions were not able to implement the guidelines effectively, then Voluntary Health Association of India in collaboration with The Union and CTFK carried strong advocacy policies both at higher level and bottom level, with result all institutions are tobacco-free with more than 98% Compliance.

Objectives: To analyse process of making all educational institutions tobacco-free in the Budgam district.

To assess the compliance level and also the strategies adopted in effective implementation of the Tobacco Free Guidelines.

Design/Methods: The process making tobacco free education institutions was assessed by Chief Education Officer (CEO) of the District with support from Voluntary Health Association of India by direct interaction with all Principals, Headmasters and Teachers of the schools and also observations by volunteers on basis of Tobacco Free Guidelines.

Results: With strong advocacy by VHAI and The Union; workshops, seminars, symposiums, quiz sessions on Tobacco Control and rallies were carried in all the schools of the District that created massive awareness among the Education heads and youth. The Funds for printing Anti-tobacco warning boards, Sec 6b boards and sec 4 boards (COTPA-2003) were generated by motivating state Government to utilise 2% of Revenue on Tobacco Control programme generated from Taxing Tobacco products. Monthly reporting system has been established by which all schools heads compile the report and forward to CEO, Police and District Magistrate that helped in monitoring the process of implementation. Introducing Tobacco control in the syllabus of students and 5 minutes discussion every day during the Morning Prayer time helped in 100% implementation of Tobacco Free Guidelines.

Conclusion: With regular follow ups, massive awareness, effective strategies and motivating the people really helped in making all education institutions Tobacco Free in real sense. The efforts were made to prioritize the Tobacco Control for all enforcement officers and adopt a self-monitoring system so that it sustains in future. . Involvement of NGO's, Government, local Community groups, media etc. created sense of responsibility among all inter-departments.

Tobacco Free Schools - School Level Report Form Principals/ Headmasters to ZEO/ CEO
Report to be submitted to the CEO before 15th of Every Month

Name and address of the School / Zone *Haseelapuzo*

Report Head *Gent. H/S Rawalpora* Month *6/2013* Suggestion 2

Section	Yes/No	Remarks/Action Taken
Section 4 board at Entrance and inside	YES	
Section 6(b) Board Outside the School	YES	X
Has action been taken by the SRO	—	X
Are there any shops selling tobacco products within 100 yards of your school	NO	X
Are any Tobacco products sold inside the institution (Canteen, Stationary shop etc.)	NO	X
If Yes, Whether it is Reported to concerned SRO	—	X
Has action been taken by the SRO	—	

Name & Signature *Ms. Ab. Wakeed Masood*

Submitted to worthy CEO Budgam for information and n/a
No: *HSRD/14/S-L-Report/2130*
Date: *14-07-2013*

Headmaster
[Signature]
Haseelapuzo
Gent. H/S Rawalpora

PD-813-19 Relationship between HIV positive status announcement and smoking

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Summary: The announcement of HIV seropositivity is a moment of psycho-social destabilisation that can induce changes in the behaviour of an individual such a beginning or increased tobacco consumption.

Objective: The objective was to study the relationship between the HIV positive status announcement and smoking behaviour among people living with human immunodeficiency virus (HIV) in Bamako after the discovering their status.

Methods: This was a descriptive cross-sectional study over six months from January to June 2012. Data were collected by interviewing HIV-infected patients in three health care centres, departments of pulmonary diseases, department of infectious diseases and the largest HIV association health centre in Mali (CESAC of Bamako). All participants have signed an informed consent before interview. Data were analysed using Stata 13 software.

Results: A total of 301 HIV-infected people were included, 24% patients were current smokers 6, 3% former smokers and 69.7% non-smokers. Smokers were male in majority with 93.2%. After their HIV infection status announcement, 64.9% have increased their tobacco consumption while 10.8% have decreased their consumption. Majority of patients have a good knowledge of the health risks of smoking. Of those who continue to smoke, 83.8% reported that they tried and failed at least one tentative of smoking cessation. The main reason of their cessation was the effect on their health. And the main reason for the failure was the constant thinking of the disease.

Conclusion: The announcement of the HIV positivity status must be accompanied by psychosocial support helping to overcome the emotion and stress and a smoking cessation programme must be added to HIV screening programme.

Keywords: HIV, announcement, smoking, Mali.

PD-814-19 Tobacco control and the reduction in smoking-related premature deaths in Uganda, 2005

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Objective: To model reductions in smoking-related mortality associated with implementation of tobacco control since 2005

Design, Setting, and Participants: Smoking histories for individual birth cohorts that actually occurred and under likely scenarios had tobacco control never emerged were estimated. National mortality rates and mortality rate ratio estimates from analytical studies of the effect of smoking on mortality yielded death rates by smoking status. Actual smoking-related mortality from 2005 through 2012 was compared with estimated mortality under no tobacco control that included a likely scenario (primary counterfactual) and upper and lower bounds that would capture plausible alternatives.

Exposures: National Health Interview Surveys yielded cigarette smoking histories for the Uganda adult population in 2005-2012.

Main Outcomes and Measures: Number of premature deaths avoided and years of life saved were primary outcomes. Change in life expectancy at age 40 years associated with change in cigarette smoking exposure constituted another measure of overall health outcomes.

Results: In 2005-2012, an estimated 2 million deaths were related to smoking, an estimated 8.0 million (credible range [CR], 4 million, for the lower and upper tobacco control counterfactuals, respectively) fewer premature smoking-related deaths than what would have occurred under the alternatives and thus associated with tobacco control (5.3 million [CR, 4 million] men and 2.7 million [CR, 2.5-2.7 million] women). This resulted in an estimated 2 million years (CR, 5-6 million) of life saved, a mean of 19.6 years for each beneficiary (3 million [CR, 5-6 million] for men,

12 million [CR, 5-6million] for women). During this time, estimated life expectancy at age 40 years increased 7.8 years for men and 5.4 years for women, of which tobacco control is associated with 2.3 years (CR, 1.8-2.5) (30% [CR, 23%-32%]) of the increase for men and 1.6 years (CR, 1.4-1.7) (29% [CR, 25%-32%]) for women.

Conclusions and Relevance: Tobacco control was estimated to be associated with avoidance of 8 million premature deaths and an estimated extended mean life span of 19 to 20 years. Although tobacco control represents an important public health achievement, efforts must continue to reduce the effect of smoking on the nation's death toll.

PD-815-19 Tobacco use and associated factors among school students in Dubai, 2010: intervention study

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Background: Tobacco use is one of the biggest public health threats the world has ever faced. It is the most preventable cause of death.

Objectives: To measure the prevalence rate of current tobacco use and its associated factors; in addition to determination of the impact of intervention programme on knowledge and attitude of students towards tobacco use and its hazards.

Design/Methods: A school-based intervention study (Quasi experiment) was carried out among school students in Dubai (grade 7 to 12). Data were collected through self-administrated questionnaire.

Intervention health education programme was carried out with a re-assessment of student's knowledge and attitude.

Results: It was found that, 14.6 % was tobacco users, 11.2 % were cigarette smokers, 2.2 % were using shisha, and 29.1 % were passive smokers. The most common cause of smoking was taking experience (29.4 %), followed by to relieve stress (22.5 %), then peer smoking (21.9 %) and 6.4 % was related to social problems. Stepwise logistic regression delineated seven predictors for tobacco use; increasing age, being in secondary grade of education, students in governmental schools, being locals(UAE national), males, with low knowledge score about tobacco and with family history of smoking. There is a significant improvement in knowledge and attitude level after the intervention programme.

Conclusion: Tobacco use among adolescents is constituted a real public health problem. Conducting an educational interventional programmes significantly improved knowledge and attitudes towards tobacco use among participating students. Continuity of campaigns in schools with the involvement of teaching staff and parents is important along with augmenting the incentives for students to attend counselling sessions in smoking cessation clinics are highly recommended.

PD-816-19 CT screening detection of noncalcified nodules affects smoking cessation

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Background: The most effective way to reduce risk of developing lung cancer is to quit smoking. Based on the National Health Interview Surveys in 2010, 69% of adults want to stop smoking, but only 6.2% successfully quit. Prior studies have shown that an abnormal CT scan results in an increased smoking quit rate if there is follow-up for CT scan abnormalities. We sought to identify specific CT findings that would affect smoking cessation. We hypothesised that since the biggest concern for smokers is the development of lung cancer, the presence of nodules on CT scan would influence smoking cessation.

Methods: This retrospective study reviewed subjects enrolled in the NYU Lung Cancer Biomarker Center from March 2001 to March 2010. We included all subjects who identified themselves as current smokers at the initial visit. Excluded from the analysis were current smokers with less than one year follow-up or who quit smoking after the diagnosis of lung cancer. After each screening visit, subjects were sent a copy of their CT report and received a phone call regarding their result and follow-up recommendations, which included smoking cessation. Baseline demographics, smoking status, CT findings, including nodule characteristics and size, pulmonary function tests, and symptoms were summarized.

Results: Of the 1305 subjects who were recruited during this period, 630 subjects self-identified as current smokers. Of these subjects, 210 individuals visited only once and 420 were followed up for at least one year. Of 630 subjects, 108 reported that they subsequently quit smoking (17.1%). The Kaplan Meier estimate of median time to quitting in these subjects was 38 months. Initial CT findings of solid nodules >4 mm among those patients with at least one year of follow up were associated with increased smoking cessation rate (32.1% not adjusted for follow-up time) compared to subjects without these nodules at initial CT screening (20.4%; Odds Ratio=1.8, p=0.003).

Conclusion: Smokers with >4mm nodules were more likely to quit, a finding that suggests that smokers' cancer anxiety affects smoking cessation. Lung cancer screening is a teachable moment to deliver an effective smoking cessation message.

PD-817-19 Systems change for sustainable tobacco cessation with provider referrals

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Background and challenges to implementation: Healthcare systems are ideal intervention sites to refer patients to

cessation services. Healthcare providers screen and counsel their patients about tobacco use at every visit. Quitlines are a type of tobacco cessation tool available to patients ready and willing to quit tobacco. Texas funds a Quitline service offering 3 to 5 telephone counselling sessions and up to 8 weeks of Nicotine Replacement. Our team has tested an electronic protocol to improve provider referrals to the Quitline. The protocol is implemented through Electronic Medical Records (EMRs) to assist providers with offering tobacco cessation to patients with one click. The purpose of this study is to examine the integration of the electronic protocol into all healthcare systems in Texas. A process evaluation was developed, based on the Consolidated Framework for Implementation Research. The process is meant to gather information from key stakeholders to identify challenges and create solutions for protocol integration. Key stakeholders include healthcare staff, administrators and EMR vendors. Information that is being collected includes the process for integration, complexities to consider, clinic environment, external policies, readiness for integration, relationship development with champions from the clinic system and overall programme outcomes.

Results and lessons learnt: To date, the process has been initiated in 57 healthcare systems in Texas. The initial results show clinic systems have a multitude of challenges to integrating a new process, including vendor issues (lack of support), software version (varies by clinic), internal staffing (workflow), and sustainability (training) within the EMR. Each challenge has a solution and this project connects the solution to each specific clinic system. The tool has proven to be effective at changing provider behaviour by increasing referrals in one year from 7 to 1,254 the following year. The true challenge now is getting widespread adoption.

Conclusions and key recommendations: Integration of the protocol in EMRs has shown great progress in getting providers to refer patients to the Quitline. Now that a state-wide approach has been developed, the findings from this study will help the team understand and generate solutions to challenges associated with a large-scale integration of an EMR system change specific to tobacco cessation.

PD-818-19 The filter fraud: perpetuating the myth of 'safety'

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Background and challenges to implementation: Although significant efforts have been made to eliminate the use of cigarette marketing descriptors such as 'low-tar', 'lights', 'ultra-lights', and 'mild', the cellulose acetate filter-which is attached to more than 95% of manufactured cigarettes consumed globally, and which does not provide any reduced risk to the tobacco consumer, has been all but

ignored in tobacco control as the most important deception in tobacco marketing. Although manufacturers have been careful over the past five decades to avoid making specific health claims for filters--thus putting the burden of blame on the consumer for choosing to smoke--the perception of health agencies, voluntary organisations, and clinicians regarding filtered cigarettes needs to be changed through new advocacy efforts. The 2014 Surgeon General's Report on the Health Consequences of Smoking and the 2001 National Cancer Institute Monograph 13 both agree that the widespread adoption of filtered cigarettes has not contributed to reduced risks for cancer and other diseases among smokers.

Intervention or response: An extensive review of tobacco marketing practices reveals the deception perpetrated by multinational tobacco corporations regarding filtered cigarettes. This fraud has succeeded in sustaining the belief that the filtered cigarette is somehow less harmful, but also in making the manufactured cigarette more palatable and thus more addictive for new smokers. This illustrated presentation will review tobacco industry documents, the tobacco industry trade press, and six decades of cigarette advertisements that have supported the filter fraud.

Results and lessons learnt: This review of the marketing practices regarding filtered cigarettes, light and low tar labelling, and other deceptions since the introduction of filtered cigarettes highlights the opportunities to explode the myth that filtered cigarettes are somehow safer. Instead, filters should be regulated out of the tobacco product.

Conclusions and key recommendations: Communication strategies regarding filtered cigarettes need to be reconsidered. Rather than solely educating the public about the generic dangers of smoking, a targeted consumer advocacy approach regarding filtered cigarettes needs to be further developed.

PD-819-19 Supporting smoke-free pregnancies: a success story

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Background and challenges to implementation: Whilst smoking rates have fallen across England, evidence suggests that over a quarter of a million infants are still exposed to maternal smoking each year. Smoking in pregnancy increases the risk of miscarriage, stillbirth, prematurity, low birth weight, perinatal morbidity and mortality, neonatal or sudden infant death, asthma, attention deficit disorder, learning difficulties, obesity and diabetes. Moreover the risk of cot death is trebled in infants whose mothers smoke both during and after pregnancy.

Intervention or response: Building on promising evidence of similar interventions in the United States, Tobacco Free Futures (a social enterprise based in the North West of England in the United Kingdom) led the implementation of the North West Smoking and Pregnancy Reward

Scheme and, following a positive evaluation of its impact, launched the Supporting a Smoke-free Pregnancy Scheme (SaSFPS) in June 2012. Evidence indicated that incentives with pregnant women and their 'significant other' within the target group provided a return on investment of up to £4 saved for every £1 spent on the intervention. The SaSFPS is structured around the key pillars of: - Quasi-financial incentives in the form of giftcards that could be spent at a range of high street shops. Each woman was eligible to receive, over specified phases, a maximum of £260 worth of gift cards if she remained smoke-free at the 12-week post-partum point - Regular (at least four-weekly) support from a stop smoking support advisor - including CO monitoring to confirm smoking status - The option to identify and recruit a "significant other supporter" entitled to receive additional vouchers if the woman remained quit at 12-weeks post-partum - Encouragement to make their home smoke-free.

Results and lessons learnt: Key project data shows that: - 69% of the 403 women recruited to the scheme set a quit date and achieved a CO validated four-week quit - 71% of those who were quit at 4-weeks went on to be still quit at time of delivery - 51% of those who were quit at 4-weeks were still not smoking at 12-weeks post-partum

Conclusions and key recommendations: Such schemes, combined with structured support from a stop smoking advisor, work. In particular, the high proportion (71%) of women who were quit at 4-weeks and maintained their quit at least until time of delivery is a powerful argument for stop smoking services to adopt the SaSFPS approach.

PD-820-19 TB patients learning about second-hand smoke (TBLASS): a pilot individual randomised controlled trial

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Background: Smoking tobacco, either active or passive is associated with TB infection and disease. Integrating tobacco control interventions within TB control offers opportunities to reduce their interactive disease burden. For active smoking, offering cessation support to TB patients as part of their treatment has been shown to be effective. For passive smoking, measures are required to protect non-smoking TB patients from second-hand smoke (SHS). Comprehensive smoking bans in enclosed public and work places is one such measure but it does not protect majority of non-smokers from SHS in their homes, especially those living in low- and middle-income countries. We report findings of a pilot trial of a behavioural intervention to encourage TB patients to implement smoking restrictions at home in Pakistan. Our intention was to assess the likelihood of such an intervention being successful and to inform the methods for conducting a definitive trial in future.

Design/Methods: Pilot randomised controlled trial in which non-smoking TB patients were randomised to receive either 'individual-based support' or 'individual-

based support' combined with 'family reminders'. We recruited patients living with at least one smoker in their homes. Our primary outcome was saliva cotinine level, as a measure of SHS exposure, two months post-randomisation.

Results: Out of those assessed for eligibility, 56% (150/273) patients were recruited. We were able to retain all but one participant in arm 1 (74/75) and one in arm 2 (74/75) at two-month follow-up. A statistically significant absolute reduction was observed in non-smoking participants' exposure to second-hand smoke measured by their urinary cotinine levels both in arm 1 (71% [95% CI 61-79%]) and arm 2 (76% [95% CI 67-83%]) between baseline and on

follow-up at two-months. Among secondary outcomes, post-intervention change was observed in both arms as more co-habiting smokers beginning to smoke outside homes and not in front of children. There was also a modest but significant reduction in cohabiting smokers and visitors smoking in front of non-smoking TB patients.

Conclusion: The recruitment and retention rates for trial participants make it feasible to conduct a definitive trial in future. The effect sizes observed in this pilot indicate significant potential in the intervention to benefit TB patients. Findings also make it likely to observe effectiveness in a future definitive study.

20. PARTNERS WORKING TOGETHER FOR BETTER RESULTS

PD-821-19 Enhancing access to smoking cessation supports: new opportunities to adopt a whole of population approach

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Cancer Council Victoria (CCV) provides tobacco cessation supports through a telephone based cessation support (Quitline) service; online tools; digital supports and through strategic partnerships with key organisations assisting them in integrating cessation support into their current offering of support. Victoria, Australia currently has an adult smoking prevalence of 13.3%, although many vulnerable populations experience much higher smoking rates. These populations include people living with mental illness; homeless populations; Aboriginal Australians and low-socio economic status populations. Examples of these partnerships are those created with local Aboriginal Health Services building internal cessation support capacity and promoting the Aboriginal Quitline service. This has led to an increase in the number of Aboriginal clients accessing Quitline support. Additionally a partnership with a homeless person's service has seen an increase of smoking care being provided in service and reduced barriers to nicotine replacement therapy for people experiencing homelessness. These strategies have increased the numbers of Victorian smokers who are being provided support to quit. Examples of these partnerships are those created with local Aboriginal Health Services building internal cessation support capacity and promoting the Aboriginal Quitline service. This has led to an increase in the number of Aboriginal clients accessing Quitline support. Additionally a partnership with a homeless person's service has seen an increase of smoking care being provided in service and reduced barriers to nicotine replacement therapy for people experiencing homelessness. These strategies have increased the numbers of Victorian smokers who are being provided support to quit. Through

enhancing the range of cessation supports and tailoring those supports Victorians are able to choose the cessation support option that best suits them. Furthermore through increased data analysis CCV has also been able to target segments of the population for whom smoking prevalence is higher than the rest of the population and promote cessation supports into these locations or settings. In addition through the partnership work with organisations that already have links into these settings, CCV has the opportunity to develop tailored supports that best meet the needs of target high prevalence populations, and deliver those supports in settings in which smokers feel secure.

PD-822-19 Amendment of tobacco control law in Bangladesh: best practice GO- NGO cooperation

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Background: Government-Non Government cooperation is one of the great strength of tobacco control in Bangladesh. Recently Bangladesh has amended the tobacco control law and also finalised the draft of the rule. Indeed this is a best practice for framing tobacco control legislation. Ministry of Health is the leading organisation for the government; however a number of NGOs worked hand in hand to make the work a success. It is always challenging to speak in a same language towards a demand to the government; moreover tobacco industry is always tried to make a division and conflict.

Intervention and Response: The organisation which bridge the relationship between government and NGO that is National Tobacco Control Cell (NTCC). At the initiation of framing the law and rule MOH officially included representatives of leading NGOs. A ten member committee has framed where five were from NGOs. The drafting was done mostly at NTCC, where NGOs own it

as a hub of all tobacco control activities in Bangladesh. The draft submitted to MOH was accepted as it is and defended in the cabinet, Ministry of law and finally in the Parliamentary standing committee. The strategy was that, NTCC always made the room and NGOs put their demand and suggestions to the ministers and secretaries. In December 2012 to April 2013 when the amendment bill was sent to the parliament – the coalition meet almost every week with different ministers, member of parliament and senior government officers. Side by side demonstration also organized to attract the media civil society's empathy. A common bargaining issue with same tune was developed and all the organisation moved together which did not give any space to the industry to divide the policy-makers.

Results and lessons learnt: On 28 April 2013 the amendment bill was passed by the national parliament with a unanimous majority. Moreover 3 prominent MPs from the government raise the issue to discard the provisions of the keeping DSA in the bill which was also a part of strategy taken by the GO-NGO collaboration committee. Involving the leading NGOs in formulating the legislation, setting strategy and advocacy policy sitting together, very close communication with each other make the difficult task easy.

Conclusions: Although it took a long time to pass the bill in the parliament, but with the collective and continuous efforts from both MOH and NGOs make it possible. The joint collaboration also could make it possible to take the rule in light.

PD-823-19 Regional youth networking to influence local actions

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Background and challenges to implementation: As it is a strong global issue that young people should be at the heart of every development issues, tobacco control requires a high level of youth engagement throughout countries where the epidemic is acute. Global organisations like CTFK reports, that every day, 80,000 to 100,000 young people around the world become addicted to tobacco. This fact alarms with a notion that tobacco industries are targeting young generation as their future consumers.

Intervention or response: A strong level of anti-tobacco advocacy by young people themselves was felt by a number of global young leaders. This resulted in the formation of APACT Youth Action Network (AYAN) at the 10th APACT Conference, 2013 in Japan where the APACT had its first Youth Pre Conference held ever. The 10th APACT secretariat took the prime role forming this network with an aim to promote youth led best advocacy practices and strong col-

laboration in Asia and Pacific. Its launching was addressed at the official closing ceremony of the 10th APACT and was assigned to advocate for youth engagement in such future dialogues in Asia and Pacific region. The network has at present 13 country representatives including Bangladesh, India, Nepal, Japan, China, Laos, Indonesia, Cambodia, Pakistan, Singapore, Malaysia, Philippines and New Zealand and it is expanding fast among other nations. It has two policies to engage young people against tobacco industry tactics that are creative and non-violent.

Results and lessons learnt: A large number of youth leaders and organisations have been connected with it and passionate country level representatives are being appointed to coordinate the youth interventions on tobacco control in that particular country. Soon after its inception, it held campaigns against Inter-tabac ASIA, the big tobacco exhibition in Bali, Indonesia and the Bali governor responded to this campaign and stopped this exhibition in the island in February, 2014. AYAN is active in monitoring this kind of tobacco industry interventions and prevent with youth forces in the region.

Conclusions and key recommendations: The learning from this networking is advocating at the regional level that pressurises local policy makers for taking action on tobacco issues. Moreover, it is also delivering opportunities for young people to show case their ideas and practices for better tobacco control in the region.

PD-824-19 Collaboration among Government and NGOs for better implementation of laws: examples from Bangladesh

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Background and challenges to implementation: Paribartan (meaning is "Change"), a local Non-Government Organisation (NGO) situated in sub-district Tarash under Sirajganj district in the north region of the country. Paribartan involved nationwide activities named "Strengthening Bangladeshi tobacco control through GO-NGO cooperation for improved FCTC implementation" in cooperation with national NGO Work for a Better Bangladesh (WBB) Trust, supported by The Union. Main objective was to sensitise the local government officials and civil society organisations about tobacco control law for ensure proper implementation of law.

Intervention or response: Through collaboration among Government, media and civil society organisations (CSOs) at local level, Paribartan organised various types of tobacco control programmes like: national and international relevant day's observation, organised capacity building and mass awareness campaign on tobacco control law as well as health risk of tobacco use and passive smoking. We assisted local government officials to organize meeting of task force committee and run mobile court for removing

illegal ads. We also distributed of No-Smoking signboards for ensure smoke-free environment in public places as per law. However, this programme covered 8 Unions with over two lac populations. With the continued implementation of several serial programmes on tobacco control, concerned people became motivated, convinced and encouraged to express their solidarity on law implementation.

Results and lessons learnt: Journalist and CSO leader became positive on tobacco control. Journalist themselves monitor violation of tobacco control law and inform authorities through reports. Government official declared all government offices smoke-free zone and display no-smoking signboards and also task force meeting held frequently and mobile courts operated. Thus the overall outcome was also very much positive and inspiring and it will obviously sustain through vibrant vigilance and further continuation by local community.

Conclusions and key recommendations: Tobacco control needs continue effort. For better movement on tobacco control at local level, including successful tobacco control law implementation, collaboration among GO-NGOs/CSOs is necessary. Local NGOs/CSOs needs to monitor tobacco control law violation and have to report to government authority for take action against law violation. This idea can be applicable any of local city in world.

PD-825-19 The China-United States partnership on smoke-free workplaces: a case study

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Background and challenges to implementation: China has the largest smoking population in the world—300 million adult smokers. According to the 2010 Global Adult Tobacco Survey, 6 out of 10 adults are exposed to second-hand smoke in the workplace. The China – United States Partnership on Smoke-free Workplaces (CUSW) is a bilateral, all of society approach to expand smoke-free work sites and improve employee health and well-being. CUSW was launched in Beijing on September 7, 2012 including partners from government, the private sector, civil society and academia.

Intervention or response: CUSW provides technical support to its members, including sharing best practices, assisting in smoke-free worksite implementation, helping publicise the many health and business benefits of smoke-free worksites, and leading advocacy efforts to expand smoke-free policies. Participants in the CUSW signed a pledge work towards creating 100% smoke-free workplaces and provide a clean and healthy working environment for their employees. CUSW held a series of consultations with private companies in 2012 and also conducted training sessions for companies in 2013, followed by sustain-

able technical assistance based on businesses' needs. The training sessions and CUSW handbook provide companies with guidance on how to develop a smoke-free policy, how to communicate it to staff and visitors, and how to evaluate its success.

Results and lessons learnt: To date, CUSW has recruited over 285 member companies covering about 500,000 employees in China. 60% of member companies have more than 200 employees. Approximately 70% of CUSW member companies report having a policy in place that prohibits smoking in all indoor spaces. However, companies sought further assistance in motivating employees to participate in smoke-free activities, appropriate incentive/punishment measures, how to persuade leaders to support smoke-free efforts, and how to respond to visitors to politely inform them of the policy. Companies also sought technical assistance in providing smoking cessation support to employees as few resources are currently available to help those who want to quit.

Conclusions and key recommendations: CUSW has increased awareness of smoke-free workplaces at companies in China and has created a network of companies that now have experience with implementing smoke-free workplace policies and programmes. However, additional needs have also been identified to further strengthen support for smoke-free workplaces.

PD-826-19 An exploratory analysis of the role of civil society organisations on joint tuberculosis and tobacco control programmes

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Background: Civil Society Organisations (CSOs) play a pivotal role in tuberculosis (TB) and tobacco control activities through advocacy, mediation between the recipients and state, regulation of national level policies, mobilizing social capital, influencing and ensuring political commitment and raising awareness. They function as key determinants in adoption of novel public health activities on a national and local level. This study explores the role and willingness of CSOs for involvement in a joint TB and tobacco control programme.

Materials and methods: A semi-structured questionnaire was administered among administrative and grass root level functionaries of CSOs involved in tuberculosis control programmes in collaboration with Project Axshya under Catholic Health Association of India among four states of India, Uttar Pradesh, Jharkhand, Punjab and Tamil Nadu. Information was gathered regarding the role of the CSOs, their area of function, involvement in tobacco control activities and tuberculosis control programmes and the number of years they were involved in these activities. Attitudes were assessed with regard to inclusion of tobacco control activities in RNTCP, role of CSOs in a joint programme if implemented, policy shaping, advo-

cacy and monetary support required for a collaborative programme of tuberculosis and tobacco on a three point Likert scale.

Results: A total of 215 functionaries among various CSOs participated in the study with a mean duration of functioning in tuberculosis programmes of 2.33 ± 1.83 years and in tobacco cessation activities of 0.73 ± 2.08 years. 201 (93.5%) of the respondents agreed that tobacco control is an essential prerequisite to TB control and 195 (90.7%) favoured the inclusion of tobacco control activities in RNTCP. 203 (94.4%) were willing to participate in fund raising for a joint TB-tobacco control programme and 194 (90.2%) were willing to participate in policy shaping activities for the same. 203 (94.4%) of the respondents also felt the need of a governmental initiative to develop a policy for a joint TB-tobacco control programme.

Conclusion: World Health Organization advocates a Practical Approach to Lung Health as a strategy to focus on the most prevalent lung diseases caused by TB and tobacco in countries with weak health systems, however the imperative need for a joint TB-tobacco programme has not percolated to India. CSOs favor and can influence a shift in policy towards this integrated approach.

PD-827-19 Ban on smokeless tobacco: enduring partnership between government and social sector

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Background: India has the highest number of oral cancer patients in the world. Chewing tobacco and gutkha or paan masala (crushed betel nut with tobacco and other additives) are a contributing factor in 90% of cases. Their easy accessibility, flavoured taste and low prices make them popular among children, youth and women. This paper discusses how strengthening partnership between the government and non-government organisation lead to ban on chewing tobacco in Maharashtra, India.

Intervention: Salaam Bombay Foundation, an NGO took an initiative to sensitise key stakeholders (like Ministers, FDA officials and Media) and did their capacity building. Several one to one meetings were done with FDA Maharashtra, Commissioner, focusing on the urgent need to ban smokeless tobacco product, which encouraged FDA to conduct a test on samples of gutkha and paan masala etc. The result found that 98% of samples (n=1153) tested contained magnesium carbonate in violation of the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011. Chief Minister, Deputy CM and Finance Minister of the state were also sensitised on the issue. In April 2012 – MLA Sensitisation workshop was conducted in the state legislative assembly for political leadership and support. Simultaneously media advocacy generated more than 160 news article in the year 2012 all alone on smokeless tobacco products. Result: As

a result, on July 20, 2012, Maharashtra became the first state in India to ban production, sale, storage and distribution of paan masala and gutkha under the Food Safety and Standards Authority of India Act, Clause 30(2)(a). Taking the ban to next level, in July 20, 2013, Food Safety Commissioner, Maharashtra State, prohibited the manufacture, storage, distribution, or sale of tobacco and areca nut (betel nut) which is flavoured, scented or mixed with any of additives harmful for health. This ban has not only decrease the prevalence of smokeless tobacco consumption but is acting as a barrier to initiation among new user especially next generation.

Conclusion: It is demonstrated that developing cordial partnership between the government and non-government organisation which is targeted, with sustained advocacy at the policy levels, along with willingness of the administrative machinery can present result-oriented tobacco control initiatives.

PD-828-19 Building tobacco control at the village level: the Salaam Mumbai model

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Introduction: Tobacco is a significant public health concern in Maharashtra, India – close to one third of adults use tobacco (31.64%). Tobacco control efforts in rural areas are hampered by low literacy levels, social acceptance of tobacco-use, and limited information about tobacco's health effects.

Method: In 2007, Salaam Mumbai Foundation launched a rural initiative to promote tobacco control and prevent tobacco use. A needs assessment survey found 45% of adults used tobacco, and spent up to Rs.100/day on tobacco products. Salaam Mumbai Foundation then partnered with the Ambuja Cement Foundation, which operates rural health, education and development projects, to provide tobacco control programmes with key local stakeholders: schools, village government, community health workers, and police. Programmes at each level include outreach with stakeholders and tobacco control capacity building workshops. Stakeholders are provided with training materials on tobacco health effects and advocacy measures. The development of tobacco-free schools and villages has been a priority of this programme. Criteria for establishing tobacco-free schools and villages has been developed based on India's tobacco control law (COTPA, 2003). Using a tiered system for implementing policies, schools and villages are given the tools and encouragement to ban tobacco.

Results / Outcomes: To date, Salaam Mumbai Foundation has reached 60 villages and 13000 schools in rural Maharashtra. 27schools have reached gold levels of tobacco-free. Three villages have become tobacco-free namely Thura, Mangi Budruk and Khainguda village. Stakeholders have taken ownership of tobacco control in their villages. They take pride in the efforts they have taken and see tobacco prevention as an important issue for the health and welfare of village residents.

Conclusion / Lesson Learnt: Targeted long-term engagement with key local stakeholders (school staff, village leaders, police and community health workers) is effective in curbing tobacco use and implementing tobacco control strategies.

PD-829-19 India: multi-sectoral partnerships for integrating tobacco control in response to NCDs

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Background: Rapid upsurge of NCDs around the world is a massive public health challenge. Globally tobacco use is the largest preventable cause of NCDs and can lead to cancer, diabetes, cardiovascular disease and chronic lung disease. India is the first country to adopt WHO's NCD Global Monitoring Framework to its context. Indian National NCD Monitoring Framework has 10 targets and 21 indicators. For tobacco use – the target is 15% reduction by 2020 and 30% reduction by 2025. Response Currently the Ministry of Health, Government of India and WHO India are deliberating with multi-sectoral partners on operationalising the National Action Plan for the prevention and control of NCDs, with specific focus on multi-sectoral engagement in achieving targets. At the behest of the Ministry of Health and WHO, a critical review of health policies and health programmes was undertaken. Potential sectors which need to work in tandem were identified, with a specific focus on advancement of tobacco control policies and programmes, through health promotion and advocacy.

Results: The review revealed that multiple partners, sectors, disciplines and key stakeholders need to take coherent and coordinated actions to help bolster capacity and mechanisms to ameliorate NCD risk factors. In case of tobacco as a risk factor, it is vital to ensure effective enforcement of the Indian tobacco control law and strengthen reporting mechanisms. This would entail increasing public awareness about perils of tobacco use by means of pictorial health warnings, offering support to people who wish to quit and reducing exposure to second hand smoke. Thus, effective and efficient adoption of these interventions involves a multipronged approach with joint efforts from sectors such as Ministry of Health and Family Welfare, Ministry of Human Resource Development, Ministry of Rural Planning, Ministry of Home Affairs, Customs and Excise Department, Non-Government Organisations and Community Based Organisations.

Conclusion: Since India is the second largest producer and consumer of tobacco globally, it is critical to garner support and foster collaborative initiatives to help thwart tobacco use, thereby providing a structured, and a sustainable road map towards combatting NCDs. The response to tobacco control is arguably the most advanced in the Indian context. This makes a strong case for presenting tobacco control as model of multi-stakeholder engagement for overall NCD prevention and control.

PD-830-19 The New Zealand Tobacco Control Data Repository (TCDR)

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Background: The New Zealand government aims to make New Zealand smoke-free by 2025. This is generally considered to reduce the prevalence of Tobacco Consumption to less than 5% of the population by 2025. Achieving this goal requires monitoring tobacco use trends over time to measure the effectiveness of policy-based government interventions.

Intervention/response: The current project aims to: (1) provide a freely available website to communicate all of NZ's tobacco control data in one location, (2) facilitate the uptake of that information by providing the information in an accessible form for all levels of users. With the support of the Ministry of Health (MoH), the Health Promotion Agency (HPA) undertook the design and creation of the Tobacco Control Data Repository (TCDR). Rather than a simple storehouse of databases tailored to academics and analysts, the project caters to a wide range of numeracy skills, and presents data as interactive graphs, to facilitate the uptake of the information by all sector users.

Results/achievements: As of June 6, 2014, the TCDCR is freely available online at tcdata.org.nz. The TCDCR currently includes data from: the Cancer Registry (NZCR) and Mortality Collection (MORT), the Health and Lifestyles Survey (HLS), New Zealand Census 2013, the New Zealand Smoking Monitor (NZSM), Quitline data, and the Youth Insights Survey (YIS). The site is flexible, catering specifically to users of different levels, allowing users to: (1) view a single summary report, (2) browse and interact with the graphed data either by dataset or by topic, and (3) create custom graphs. Each graph allows users to examine subsets of data, usually by key demographics, e.g. age, gender and ethnicity.

Conclusions: The TCDCR gives tobacco control practitioners of all levels fast and freely available access to the latest tobacco control information. The architecture of the TCDCR platform allows us to update each data source, which automatically updates the TCDCR, ensuring the site is always current. The TCDCR platform provides the tobacco control sector with tools and monitoring information to aid the sector and the government achieve their 2025 target.

PD-831-19 Working together for improving tobacco control in Romania

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Background and challenges to implementation: The WHO Framework Convention on Tobacco Control

(WHO FCTC) provides the foundation for countries to implement and manage tobacco control. Romania ratified the FCTC in 2006. This study aims to present the actions and partnerships developed by the non-governmental organisation Aer Pur (Pure Air) from Romania in order to improve tobacco control in Romania in the period 2006-2014.

Intervention or response: There are several strengths in the field of tobacco control in Romania such as performing of several studies for assessing smoking behaviour of several groups of population, improvement in the field of legislation regarding advertisement and promotion of tobacco products, implementation of some educational activities for smoking prevention and quitting smoking. Tobacco control in Romania is still confronted with several weaknesses, such as insufficient legislation or poor enforcement of several legislative measures regarding protection of exposure to passive smoking and missing of long term educational strategies for smoking prevention and reduction. In order to help and speed the implementation of WHO FCTC in Romania, Organisation Aer Pur has permanently sought to develop actions and to initiate and sustained partnerships with different professional organisations from Romania (e.g. Romanian Society of Pneumology), governmental institutions (e.g. Romanian Ministry of Health, Anti-Drug Agency, public health directorates) other non-governmental organisations, academic area, mass media. Cooperation with different institution from abroad involved in tobacco control and health promotion, including participation in European projects, was also very important.

Results and lessons learnt: The established partnerships allowed the development of different educational programmes (e.g. Smoke-free class Competition, I do not smoke, Adolescent Smoking Cessation), training for different health professionals, capacity building as well as policy actions addressing several issues related to tobacco control. Lessons learnt will help and stimulate building and sustaining actual and future partnerships.

Conclusions and key recommendations: Non-governmental organisations could play an important role in identifying and building cooperation in the field of tobacco control both at national and international level, with short and long term consequences on smoking prevention and cessation among different population groups.

PD-832-19 Locally together to make smoking history in the North East of England: the FRESH model approach

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Background: The North East (NE) of England (population 2.6 million) once had the highest smoking rates in England. In 2005 with adult rates of 29% the UK's first comprehensive regional tobacco control programme was launched and was based upon partnership working to de-normalise tobacco use. It is funded by all 12 local government councils on a per capita basis with a pooled annual budget of circa USD 1.3million.

Design/Methods: A small team leads the programme working with local, regional and national partners from health, local government, business and civil society. Eight strategic strands of activity are implemented 1) developing infrastructure, skills and capacity and advocacy and influencing 2) reducing exposure to SHS 3) helping smokers to stop 4) media and communications campaigns 5) reducing availability and supply of tobacco 6) reducing tobacco promotion 7) tobacco regulation and 8) research, monitoring and evaluation.

Results: Adult smoking rates in the NE have declined from 29% in 2005 to 22% in 2011 (this is double the decline nationally in England) representing one quarter fewer smokers. Since 2005 NE mortality rates have fallen more sharply across a number of smoking-related diseases than the England average. The NE has the country's most successful local stop smoking services with nearly 220,000 smokers supported to quit since 2005. The region now has the highest level of public support for a range of tobacco policy measures and year round public relations activity delivers USD 4.3 million annually in earned media. It is estimated that the savings to the health economy over a two year period are at least USD 17 million. The FRESH programme has received a number of awards in recent years including a WHO WNTD medal in 2014.

Conclusion: Programmes at an intermediate delivery tier between national and local action add value, achieve major economies of scale, avoid message fragmentation and can ensure a greater reach of evidence based interventions. Public support can be galvanised using a multi-agency approach and social norms around tobacco can be changed when a clear vision is communicated. The Making Smoking History in the North East Partnership has recently agreed a vision of 5% adult smoking by 2025 and is working now to secure commitment to this from the range of partners and to ensure that the success of the last decade continues and that tackling tobacco remains the number one priority for action in the region.

21. INTEGRATING CESSATION AND LESSONS LEARNT

PD-833-19 Investigating smoking relapse in women hospitalised due to coronary heart disease: a systematic review

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Background: Smoking cessation in hospitalised patients with cardiovascular disease (CVD) significantly reduces mortality. Nevertheless, one in five tobacco smokers hospitalised due to CVD will relapse, and continue to smoke following discharge. It is unclear whether susceptibility to relapse following hospitalisation due to coronary heart disease (CHD) differs between women and men, or whether there are gender based predictors of relapse. Our objective was to test the hypothesis that women hospitalised with CHD are more likely to relapse to smoking than men, and to identify other factors associated with smoking relapse.

Design/Methods: PubMed and Web of Science databases were searched for studies published in English in peer-reviewed scientific literature in the five years until October 2013. Eight articles met our objectives.

Results: Selected studies were conducted in Brazil, Italy, Greece, Romania, Japan, USA and one included data from 22 European countries. Patients were diagnosed with acute coronary syndrome (ACS) or admitted for any coronary intervention. One study found that women were more likely to relapse than men (74% vs. 60%, $p < 0.01$). There was no significant difference in smoking relapse by gender in any of the other studies. Predictors of smoking relapse included depression or anxiety, whilst participation in cardiac rehabilitation was a predictor of sustained abstinence.

Conclusion: This review suggests that men and women are equally likely to relapse post-hospitalisation for CHD. Gender differences may exist in predictors of smoking relapse and the experience of smoking cessation. Further research focusing on triggers and barriers to quitting amongst CHD patients and women is warranted.

PD-834-19 Developing a questionnaire to assess the treatment of smokers in the Brazilian public health system: lessons learnt

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Background and challenges to implementation: Assessing public health interventions is crucial for the development of public policies. Currently, there is no instrument to assess the treatment for smoking cessation at the Brazilian public health system. This study reports the development of a questionnaire for that purpose and assesses its suitability.

Intervention or response: Cross-sectional study involving health professionals. A multidimensional self-administered questionnaire was constructed. Assessing its suitability counted on the participation of experts of the Brazilian National Cancer Institute and pretesting with 18 health professionals working in eight different multidisciplinary teams that treat smokers. Descriptive statistics were computed to measure the characteristics of the population studied.

Sociodemographic data of the respondents

Variables	Result
Number of professionals interviewed	
Brasília	6 (33.3%)
Petrópolis	12 (66.6%)
Sex	
Male	1 (8.3%)
Female	17 (91.7%)
Age in years, mean (\pm standard deviation)	42.3 (\pm 11.7)
Professional category	
Physician	4 (33.3%)
Dentist	4 (33.3%)
Community health agent	3 (25.0%)
Nurse	2 (16.7%)
Social worker	2 (16.7%)
Nurse technician	1 (8.3%)
Nurse's aide	1 (8.3%)
Social service technician	1 (8.3%)
Type of health care facility in which they work	
Family Health Strategy	12 (66.6%)
Health care facility	6 (33.3%)
Total	18 (100.0%)

Results and lessons learnt: The instrument was well accepted, and considered clear and covering all parameters necessary to assess the treatment for smoking cessation by 100% of the respondents. The mean time spent to complete the questionnaire varied between 15 and 30 minutes. After performing the pre-test, the instrument was reformulated. Its final version was a self-administered, multidimensional questionnaire comprising 30 questions. To our knowledge, this is the first Brazilian study aimed at constructing and pre-testing a questionnaire to assess the treatment for smoking cessation. If on one hand, the orig-

inality of the initiative is evident, on the other, it does not allow discussing the results based on previously published work.

Conclusions and key recommendations: Pretesting provided a substantial enhancement of the questionnaire, minimizing difficulties in understanding the questions and perfecting the response options. Thus, an efficient, understandable and easy-to-use questionnaire with suitable content and well accepted by health professionals could be developed. It will contribute in the process of assessing the treatment for smoking cessation at health care facilities of the Brazilian Public Health System. Finally, being a pioneer study in Brazil, its results will be able to help other countries similar to Brazil to establish programmes for smoking cessation, using them as a start point to develop their own assessing instruments.

PD-835-19 Increasing tobacco treatment in primary care practice in Canada

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Background: There is a well-documented practice gap in the rates at which evidence-based smoking cessation treatments are delivered to patients in primary care settings. The 'Ottawa Model for Smoking Cessation' is a multi-component intervention designed for use in busy primary care practice setting.

Design/Methods: A pre-post trial was conducted to examine the effectiveness of 'Ottawa Model for Smoking Cessation' in a sample of thirty-five family medicine clinics in Ontario, Canada. Clinics were supported with implementing a multi-component intervention programme that involved outreach facilitation visits, provider training, real time provider prompts and patient tools, and performance feedback. Pre-post patient exit survey measurements was used to document improvements in evidence-based smoking cessation treatments (5As: ask, advice, assess, assist, arrange) before and after the multi-component intervention programme was implemented. All data was analysed using multi-level hierarchical modelling. Three-level models were used to examine the association between patients, providers, clinic factors on study outcomes.

Results: A total of 4,347 patients completed the exit surveys. The odds ratios (OR) and 95% confidence intervals (CI) for 5As delivery between the pre- and post-assessments were: "ask" (OR 1.5; 95% CI 1.1, 2.0; 55.3% vs 70.7%, $p < 0.001$); "advise" (OR 2.0; 95% CI 1.5, 2.7; 39.9% vs. 62.5%, $p < 0.001$); "assess" (OR 2.1; 95% CI 1.6, 2.9); "assist" with cessation (OR 2.30; 95% CI 1.70, 3.12; 37.1% vs. 57.0%, $p < 0.001$); "arrange" (OR 1.9; 95% CI 1.2, 3.0; 10.4% vs. 21.2%, $p < 0.01$). The study documented significant intra-clinic and intra-provider variability in the rates at which evidence-based smoking cessation treatments are delivered to patients.

Conclusion: The introduction of the 'Ottawa Model for Smoking Cessation' within busy primary care clinics was

associated with significant improvements in the rates at which providers deliver evidence-based smoking cessation treatments.

PD-836-19 Operation status of smoking cessation clinics in China

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Background: Providing smoking cessation help is a key solution of tobacco epidemic according to MPOWER policy series. Under the guidance of Tobacco Control Office, 201 hospitals with capacity have established smoking cessation clinics around China. The present study was conducted with the objectives to review the operation status and identify challenges.

Methods: Semi-structured questionnaire survey was conducted among cessation clinic physicians of 201 hospitals through telephone interview by the researcher in August-September 2013.

Results: The first two cessation clinics were established in 1996 in Beijing, while most of the others were set up during 2008 and 2011 nationwide. At the time of survey, only 94 out of 201 clinics were still in operation, mainly concentrated in six developed provinces. Of the 49 clinics those completed the survey, 51.0% were set up in Respiratory Medicine Department, and 12.2% were set up as an independent department. Health care professionals equipped were 3.3 persons on average. The mean of patients in the recent month was 7.0 (median: 2.5) and 65.7 (median: 20.0) in the recent year respectively. Around 55.1% of clinics had medicine as assistance (mainly Var-enicline).

Conclusion: Cessation clinics are facing the problem of no patients commonly. It's necessary to make greater efforts to increase people's awareness about cessation clinics and importance of quitting. Meanwhile, the referral mechanism and healthcare force of cessation clinics should also be enhanced.

PD-837-19 Nicotine dependence and barriers to cessation differences between exclusive cigarette smokers and dual (waterpipe) smokers among Arab Americans

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Background: Evidence suggests that dual cigarette and waterpipe use is growing among minority groups, particularly among Arab American. Nicotine dependence and barriers to smoking cessation could be different among such dual users. We examined potential differences that

may exist between exclusive cigarette smokers and dual smokers (cigarette and waterpipe) pertaining to nicotine dependence and barriers to cessation, among Arab Americans.

Design/Methods: We conducted a cross sectional study using a convenient sample self-identified Arab immigrants (n=131) smokers living in the Richmond, VA metropolitan area. We collected 4 questionnaires: Demographic and cultural information questionnaire, tobacco use questionnaire, Fagestrom test for nicotine dependence (FTND) questionnaire, and barriers to cessation questionnaire. We examined the difference in nicotine dependence and barriers to cessation between the two smoker groups. Further, we explored the correlations with select variables.

Results: There was a significant difference in the FTND scores between the exclusive cigarette smokers (M= 2.55, SD= 2.10) and dual smokers (M= 3.71, SD= 2.42) groups; $t(129) = (2.51)$, $p = 0.0066$. There was also a significant difference in the barriers to cessation scores between exclusive cigarette smokers (M= 38.47, SD= 13.07) and dual smokers (M= 45.21, SD= 9.27) groups; $t(129) = (2.56)$, $p = 0.0058$. Further, there was a high significant correlation between FTND scores, barriers to cessation, and past quit attempts in the dual smokers group.

Conclusion: Waterpipe use seems to be adding a significant potential to the addictiveness of cigarette smoking and enhancing barriers to cessation among our study sample. Further, the high correlation between quit attempts and FTND and barriers to cessation suggests that dual smokers might be using waterpipe in their transition to quit smoking. While there are previous studies that suggested that, longitudinal design studies can explore this assumption further. Further research needs to be performed within minority groups to explore dual use of tobacco products and its implications on the addiction potential to nicotine.

PD-838-19 Multi-component smoking cessation intervention in rural Kerala, India: results of a community intervention trial

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Background: Community intervention programmes were found successful for tobacco cessation since the coverage of such programmes are high. In India, where rural population is high, high smoking prevalence among men and minimal accessibility to health systems network, community centred smoking cessation programmes will be useful to reach a wider audience. The current study was conducted in Kerala state in India where nearly a quarter of the adult male population smoke. The objectives of the study

were to determine the effectiveness of proactive community based smoking cessation programme in rural Kerala using multiple approaches and further to understand the predictors of smoking cessation.

Design/Methods: Resident 'daily smoking' males in the age group of 18-60 years were identified through a house to house survey from four randomly allocated Community Development Blocks (2 each in intervention and control groups) and included in the study. Initially, the baseline characteristics of the intervention and control group were compared for homogeneity. Further, the intervention group received four rounds of counselling which included a group counselling session along with a medical camp, followed by face-to- counselling and telephone counselling by trained medical social workers. For both groups, leaflets on tobacco hazards were distributed initially. In addition to this, a tobacco cessation booklet in the local language was distributed in the intervention area. Self-reported smoking status was assessed after 12 months. Two sample t tests and chi square tests were used to compare the group characteristics. Binomial regression method was used to estimate the factors associated with smoking cessation.

Results: 928 smokers were identified (474 in the intervention vs 454 in the control areas) from a total of 3304 subjects interviewed. The overall prevalence of smoking abstinence was 14.7% in the intervention group compared to 6.8% on control group (RR:1.85, 95% CI 1.05, 3.25). Harm reduction strategies points to 13.6% reduction in smoking in the control area by 50% or more, while a three-fold reduction in the intervention area was noted at the end of 12 months. Lower number of sticks used, low nicotine dependence and doctor consultation were the significant predictors of smoking cessation

Conclusion: Multi component intervention programmes were found successful to increase quit rates in smoking in rural areas in India.

PD-839-19 National survey of the smoking cessation services in Iran's primary health care system

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Background: In Iran, with its population of about 75 million, tobacco-related diseases kill more than 75,000 people per year, so helping smokers to stop smoking is a health priority. Delivery of smoking cessation supports via primary health care settings could be an effective way to increase people access to cessation services. This study was aimed at evaluating structural characteristics of smoking cessation services established within the Iranian Primary Health care system.

Design/Methods: According to structure of primary health care system in Iran, in order to obtain structural information about smoking cessation services, firstly a phone call was made with coordinating authorities of tobacco control programmes in each university which are under supervision of Ministry of Health. Secondly, after describing the objectives of project they were asked to fill the related questionnaire. The questionnaire was available at MOH website and follow-up for its completion was done via telephone call.

Results: Smoking cessation centres started their activities in 2007 and their number increased between 2008 and 2011. In all primary health centres, smoking cessation services are provided free of charge. In sixty percent of centres individual therapy was used, a combination therapy (including pharmacotherapy) is highly preferred. Nicotine patch was the most common drug which is used (62 %) in smoking cessation clinics. General physicians are the main providers of smoking cessation programmes in health care centres (87%). The number of smoking cessation centres in primary health care system decreased during years of 2011 (89 centres) and 2012 (79 centres) compare with 158 centres in 2010. There isn't national quit line in Iran.

Conclusion: This study shows smoking cessation programmes provided in primary health care system in Iran. Delivery of smoking cessation supports via primary health care settings could be an effective way to increase people access to cessation services. Unavailability of smoking cessation drugs and financial barriers were the main reasons of reducing the number of smoking cessation centres. It could be due to sanction in Iran during past two years. It suggested for authorities to have more attention on smoking cessation activities in primary health care system in Iran.

PD-840-19 Pattern of tobacco use and cessation among men who have sex with men (MSM) in a homophobic African country

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Background: Men who have sex with men (MSM) have a high risk of HIV and smoking exacerbates HIV progression to AIDS. Given Africa's disproportionately high burden of HIV globally, little is known about the tobacco smoking and cessation pattern among men who have sex with men (MSM) in a homophobic African country setting. The Nigerian House of Representatives recently passed a same sex marriage prohibition bill. This study set out to assess the pattern of tobacco use and cessation among MSM in Lagos state, Nigeria.

Methods: Respondent driven sampling was used to recruit 320 MSM from known MSM 'hotspots' in the state using eight trained MSM data collectors in July 2013. Data was analysed using SPSS 17.0

Results: Majority of the respondents were aged between 20 and 29 years with a mean age of 26.3 4.8 years. Many (63.6%) of them had a tertiary education however only

about half (50.5%) were currently employed. Only 22.9% were openly gay. Prevalence of current smoking was 15.4%, more than half (55.1%) of whom were daily smokers and 38.3% smoked more than ten sticks per day. Using Fagerstrom's classification, 57.1% were nicotine dependent. About half (46.9%) desired to quit smoking and 57.1% had made unsuccessful quit attempts within the past year. Only 26.1% had ever received help with quitting and only 15% of these received help from a health care worker.

Conclusions and recommendations: Compared with population-based estimates, smoking rates are relatively high among this group of vulnerable men. Many of them desire to quit smoking but have not received the help they need. Government and non-governmental agencies should consider prioritizing efforts to integrate tobacco cessation within existing services for MSM in a largely homophobic country like Nigeria.

PD-841-19 Measuring nicotine dependence using the modified Fagerstrom Tolerance Questionnaire (mFTQ) for Thai youth smokers

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Background: The Fagerstrom Tolerance Questionnaire (FTQ) is an instrument to measure nicotine dependence to help validate smoking self-reports along with laboratory-tested biomarkers. This study is the first to examine the relationship between the mFTQ with self-reported smoking behaviours and biomarkers among Thai youth.

Intervention: A total of 98 youth smokers, between 14 and 19 years old, from two high schools in Bangkok were recruited and surveyed at base-line for the Project EX, a tobacco use cessation programme. The mFTQ consists of seven items. Self-reported smoking behaviours included frequency of cigarette smoking on the day of the survey and in the past month. The biomarker assessment method was saliva cotinine concentration strips.

Results: The mean and standard deviation mFTQ score was 3.82 ± 1.912 (range=0-9); 27.6% reported no dependence (0-2), 51.0% reported moderate (3-5), and 21.4% reported substantial (6-9). The total FTQ score was significantly related to self-reported smoking behaviours (average cigarette/day, $r = .574$, $p < .001$, frequency of smoking/month, $r = .228$, $p = .024$) and saliva test nicotine level ($r = .394$, $p < .001$).

Conclusion: The mFTQ is a valid measure for assessing nicotine dependence in Thai youth smokers. The mFTQ could be used to identify a subset of adolescents who may benefit from more intensive forms of smoking cessation treatment.

PD-1369-19 Competence and willingness to provide tobacco cessation services by trainee dental specialists in Southwest Nigeria**A Dedeke,1 O Popoola1**

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Background: Smoking is a common form of tobacco use in Nigeria and is prevalent among adolescents and youths. In Nigeria, the prevalence of smoking ranges from 3.4% to as high as 39%. As health professionals, dentists often encounter patients with oral consequences of tobacco use ranging from mucosal dysplasia, periodontal disease to frank carcinoma of the oral cavity. Dentists are therefore in a unique position to influence patients' choices as regards tobacco use but unfortunately, there is no structured tobacco cessation (TC) programme in Nigeria nor are there formal training programmes for dentists in this regard.

Methods: A descriptive study carried out in 2014 in which all trainee dental specialists in the University College Hospital (Ibadan), Nigeria were recruited to participate in the study with an 85.5% response rate. The aim of this study was to assess their willingness to provide tobacco cessation services and determine self-assessed competence to do so.

Results: Forty seven trainee dental specialists with a mean age of 33.5 ± 5.0 participated in this study. They consisted of 26 (55%) males, 27 (57%) junior trainees, 43 (92%) with only a first degree and 29 (62%) had 10 or fewer years of work experience. Although twenty (43%) reported being aware of TC guidelines only 8 (17%) reported having received formal training on TC and 14 (30%) reported having heard of the 5As of TC. Among these, only 1 participant was able to recall all 5As. Ninety five point seven percent, 79% and 72% of participants believed they'd be comfortable discussing TC with patients, developing a cessation plan and recommending pharmacotherapy. Also, 92% of participants agree that all dentists should receive formal training on TC while 85.1% were willing to do so.

Conclusion: Dentists in this environment have scant training in tobacco cessation but most are willing to get trained. Despite poor recall of constituent elements of TC participants erroneously consider themselves competent to provide TC according to establish guidelines. Provision of formal training suitable for dentists is required to improve competence in TC as well as development of a structured TC program.

FRIDAY, 20 MARCH 2015, 12:45-13:45 ORAL PRESENTATION SESSIONS

05. INNOVATIVE WAYS FOR ACHIEVING TOBACCO FREE GENERATIONS

OP-224-20 Effect of second-hand hookah smoke in hookah bar workers

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Background: With increasing globalization, the face of tobacco use in the USA and worldwide is changing as the public, especially youth, turn to alternative tobacco products such as hookahs (e.g., water pipes). Despite the popularity of hookah bars in urban settings, there is a paucity of research assessing the health effects of hookah smoke among those visiting or working in such establishments. This study investigated levels of multiple indices of air pollution in the ambient air of hookah bars and the effects of such exposure on hookah bar workers.

Design/Methods: Air samples were collected during the work shift of 10 workers in hookah bars in New York City. Potential changes in cardiac function and selected inflammatory markers were assessed in workers immediately prior to and after their work shifts. Measurements of fine particulate matter (PM_{2.5}), black carbon (BC), carbon monoxide (CO), and nicotine were collected over 8-12 hr work shifts. Heart rate was measured throughout the work shift. Blood was also sampled before and after the work shift and analyzed for cytokines

Results: The PM_{2.5}, BC, and CO concentrations varied greatly among the work shifts with mean levels of 364 µg/m³, 2.2 µg/m³, and 12.9 ppm, respectively. While the exposure to secondhand hookah smoke did not affect cross-shift heart rate or blood pressure measurements, blood cytokine levels were significantly elevated for IFN γ , a key immune cytokine. Exhaled CO levels were also significantly elevated after the work shift with 3 of 10 workers having values over 90 ppm exhaled CO, which is equivalent to approximately 17% COHb, a level which would be considered potentially harmful, especially in individuals with pre-existing compromised cardiopulmonary function.

Conclusion: These results, the first ever that we are aware, concern individuals occupationally exposed to second-hand hookah smoke. They demonstrate that hookah bars have elevated concentrations of indoor air pollutants that appear to cause adverse health effects in employees. Therefore, there is a need for better air quality monitoring in such establishments and workplace policies to combat this threat to hookah workers worldwide

OP-225-20 Effect of hookah smoking on indoor air quality in homes

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Background: While cigarette use has declined by 33% in the past decade, the use of alternative tobacco products (ATPs), such as hookahs (water pipes), has increased an alarming 123% in the U.S. We recently reported that nearly 1 in 5 U.S. adolescents have tried hookah in high school. Thus, in this study we focused on water pipes for 3 reasons: 1) they are the most widely adopted ATP, 2) their use is rapidly increasing, and 3) both active hookah smoking and secondhand smoke exposure are associated with serious adverse short and long-term health effects. Moreover, a truly substantial literature documents multiple profound problems among children and adults exposed to secondhand cigarette smoke in their homes, yet there are very few studies of air quality in homes where hookahs are smoked. Therefore, we studied whether air quality is detrimentally altered in homes where hookah water pipes are smoked.

Design/Methods: Air samples were collected before, during, and after hookah smoking in the homes of volunteer subjects. Measurements of fine particulate matter, black carbon, and carbon monoxide were collected in the room where the hookah water pipe was being smoked as well as in a remote bedroom.

Results: The airborne concentrations of particulate matter, black carbon, and carbon monoxide measure in hookah smoking rooms were as high as levels we have previously measured in hookah bars in New York City. Importantly, a closed doorway can reduce but not prevent the dispersion of gaseous and particulate pollutants from the room where hookah is being smoked into other areas of the residence.

Conclusion: These data demonstrate that secondhand smoke produced by household hookah smoking poses a significant danger to children and adults alike. Findings such as these have significant implications for further investigation of the acute and chronic health effects of diminutions of air quality in homes of hookah smokers as well as for public education campaigns about family dangers of home hookah smoking and second-hand smoke.

OP-226-20 Return on investment of tobacco control mass media campaigns in low- and middle-income countries

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Background and challenges to implementation: Although identified as a key component of the MPOWER package designed to 'Warn about the dangers of tobacco use,' hard-hitting, population level, tobacco control campaigns, delivered through mass media channels are dif-

difficult to institutionalise within many low –and middle-income country (LMIC) settings. This may be due to perceptions of the high cost of these campaigns in the resource limited settings. However, mass media campaigns are critical in building knowledge and personal risk perceptions about the dangers of tobacco use and supporting other aspects of MPOWER.

Target populations, geographic sites, and response: Despite these challenges, World Lung Foundation (WLF) has supported governments in 23 high tobacco burden LMICs to implement more than 125 tobacco control communication campaigns. An analysis was conducted to assess the potential return on investment of a national tobacco control mass media campaign conducted in Bangladesh over a 4 week period. The outcome evaluation utilised a national, multi-stage, representative sample of 10,875 participants (7300 tobacco users), aged 16-55 years, in urban/rural locations of Bangladesh.

Results and lessons learnt: Findings identified high campaign recall (69%) by smokers, with 44% of those who recalled the campaign making a quit attempt. Only 10% of smokers who were ‘campaign unaware’ made a similar attempt. The campaign resulted in an additional 34% (7.38 million) smokers, making a quit attempt. Based on the budget expenditure, estimates on the return on investment (ROI) identified that the ‘cost per cessation attempt’ was only 0.02 cents for every smoker who recalled the campaign. However, a further 83% of ‘campaign aware’ smokers stated they planned to quit in the next 12 months, equating to an additional 20% (4.34 million) smokers planning a quit attempt - with a total 11.72 million quit attempts, at an ROI of .03 cents. Lessons learnt indicate that powerful, graphic announcements may have greater impact with LMIC tobacco users. This fact, coupled with the recent uptake by tens of millions of new television viewers, has provided a window of opportunity for mass media tobacco control campaigns in LMIC settings.

Conclusions: Findings point to the need to urgently scale up mass media campaign activities to reduce the burden of tobacco related diseases in LMICs.

OP-227-20 Sick bedfellows: identifying and confronting allies of the global tobacco industry

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Background and challenges to implementation: In proposing and implementing tobacco control policies, it is essential to identify the network of supporting industries and services connected to the tobacco industry, including agricultural suppliers; manufacturers of cigarette-making machinery, paper, ink, flavoring agents, filters, and packaging; shipping companies; investment firms and banks; advertising agencies and public relations firms; lobbyists; local

wholesalers; and supermarket chains and other retail outlets. Many of these companies also are involved in business relationships with health care institutions.

Intervention or response: Through the collection of annual reports of tobacco companies since the 1950s, subscriptions to tobacco industry trade publications and business journals, and attendance at more than 20 annual shareholders’ meetings of tobacco companies, the authors have compiled extensive information on companies and institutions that maintain collaborative relationships with the tobacco industry. Father Michael Crosby of the Interfaith Center on Corporate Responsibility has led the effort to present dozens of shareholder resolutions on behalf of faith-based organizations, which have helped reveal and generate public opposition to previously hidden financial links between health-related companies and the tobacco industry.

Results and lessons learnt: Exposing and breaking the links between health-related companies (and institutions including schools of public health) is challenging but gratifying, and ultimately will weaken the tobacco industry and its influence in the business and health communities.

Conclusions and key recommendations: We present three case studies that broke ties by major health-related companies to the tobacco industry: Kodak (maker of mammography equipment and cigarette filters); 3M (maker of emphysema medications and also a major owner of cigarette billboards); and Kimberly-Clark (a leading supplier of hospital and surgical paper products and a top manufacturer of cigarette paper). We also cite examples of ongoing, hypocritical corporate alliances and individual tobacco ties (eg, board members of hospitals who serve on the boards of tobacco companies) that if left unexposed may hinder regulatory and legislative progress. For the most part these worrisome ties have not been scrutinized by the mass media, health organizations, or even tobacco control groups.

OP-228-20 Smoking in pregnancy: an integrated model, incorporating well-being, healthy eating, body image and self-esteem

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Background and challenges to implementation: Although on the decline, smoking in pregnancy still remains a major concern for Public Health with around 13.3% of women smoking in pregnancy in England in 2013. In some parts of the UK, such as NE Lincolnshire, smoking prevalence for pregnant women remains as high as 25%. Not only are the mother and her unborn child at risk of developing resultant health inequalities, but the cost of treating such health concerns also creates an economic and financial burden on the NHS.

Intervention or response: Often key factors which young smokers identify as holding them back from quitting smoking is low self-esteem related to a lack of belief in their own self-efficacy. Therefore, in 2012 Solution-

s4health were commissioned to provide an effective and innovative intervention for pregnant smokers in Wirral with the following objectives:

- Increase the number of pregnant smokers quitting smoking through pregnancy and two months post-partum.
- Increase the knowledge of pregnant women who smoke about healthy weight issues and raise awareness of the local weight management services.
- Increase self-esteem of pregnant women who smoke using a recognised measuring tool such as the Rosenberg self-esteem scale.
- Increase awareness and referrals to other appropriate lifestyle services such as sexual health and drugs and alcohol where a need is identified.

Results and lessons learnt: This 12-week integrated programme is very different to traditional stop smoking services and places a strong emphasis on raising self-esteem through not only smoking cessation but also through delivering a range of holistic therapies such as reflexology, cookery classes and exercise tasters. We have eliminated attendance boundaries through hiring a driver to bring women to and from groups should they not be able to find their own transport, offering creche places to other children's and home visits if they are unable or do not want to attend the groups. This has worked to make the groups more accessible and maintained course adherence rates. Incentive vouchers are also offered when the women reach 4, 8 and 12 weeks smoke-free. This has worked to maintain a high CO Verification rate of 87% in 2012/13 and 95% in 2013/14.

Conclusions and key recommendations: The success rate of this programme has shown to be very good and consistent over the past 2-3 years and is a repeatable model in other areas.

OP-229-20 E-cigarette use was associated with respiratory symptoms among Chinese adolescents in Hong Kong

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Background: Adverse effects of e-cigarette use were not clear. Some studies have found harmful effects on respiratory function (respiratory flow resistance and impedance) in adult smokers. We assessed the association between e-cigarette use and respiratory symptoms in adolescents.

Design/Methods: A school-based smoking survey was conducted on 45857 secondary 1-6 (US Grade 7-12) students (response rate 96%) from 75 randomly selected secondary schools in Hong Kong in 2012/13. A total of 45128 (98.4%) reported smoking status: never-smoking (83.6%), experimental smoking (8.3%), ex-smoking (4.2%) and current smoking (3.9%). E-cigarette use in the past 30 days, respiratory symptoms (cough or phlegm) in the past 12 months, socio-demographic characteristics (sex, age, perceived family affluence) and secondhand smoke exposure were recorded. Odds ratios (AORs) of respiratory symptoms due to e-cigarette use were calculated among all students and by smoking status adjusting for socio-demographic characteristics and school clustering effects.

Results: Respiratory symptoms were reported by 17.9% of never smokers, 27.2% ever smokers, 23.0% experimenters, 28.8% ex-smokers and 34.6% current smokers. Prevalence of e-cigarette use in never, experimental, ex- and current smokers was 83.6%, 8.3%, 4.2% and 3.9%, respectively. Overall, compared with no e-cigarette use, e-cigarette use was associated with an AOR (95% CI) of 1.28 (1.06-1.56) for respiratory symptoms adjusting for smoking status, secondhand smoke exposure and socio-demographic characteristics. The corresponding AORs (95% CI) in never, ever, experimental, ex- and current smokers were 2.06 (1.24-3.42), 1.39(1.14-1.70), 1.09 (0.66-1.80), 1.40 (1.02-1.91) and 1.15 (0.81-1.62) with non-significant interaction (p=0.47).

Conclusion: E-cigarettes use was associated with respiratory symptoms in never, ever and ex-smoking adolescents in Hong Kong. The findings suggest the need to monitor potential adverse health effects of e-cigarette use in adolescents and prospective studies are warranted to confirm the findings.

06. ILLICIT TRADE, ACCESS BY MINORS

OP-230-20 Youth working in cigarette retail sales: smoking behaviour and sociodemographic characteristics

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Background: FCTC's Article 16 refers to the prohibition of tobacco product sales by minors. Argentina has not ratified FCTC and the National Tobacco Control Law prohibits the sale of tobacco to minors but does not address sale by minors. We conducted a study to examine socio-demographic characteristics and smoking behavior of youth working in cigarette retail sales in the Province of Jujuy, Argentina.

Design/Methods: In 2004 we surveyed 3690 8th grade students from 27 randomly selected schools. For this report we used the 2005 follow-up wave that included school

drop outs. We conducted descriptive analyses examining the distribution of smoking prevalence, demographic and family characteristics and psychosocial risk factors, by involvement in cigarette sales. Chi-square tests and p values were calculated. In multivariate logistic regression models we evaluated the effect of working in cigarette sales on ever and on established smoking, controlling for demographic, family and psychosocial factors.

Results: The proportion of girls and boys involved in cigarette sales was similar (4.1% vs. 3.6%); 3.4% of youth aged 12 to 14 years and 4.7% of youth aged 15 to 17 years worked in cigarette sales ($p=0.047$). The percentage of youth not enrolled in school was double among those involved in cigarette sales (10% vs. 5%). The proportion of youth involved in cigarette sales was higher among low income families (10.2% vs. 6.6%). The prevalence of ever smoking was higher among youth who worked in cigarette sales (77.5% vs. 55.6%), as was the prevalence of established smoking (36.0% vs. 20.4%). In multivariate logistic regression models, working in cigarette sales was a risk factor for ever smoking (OR=2.2; 95% CI 1.3-3.6) and for established smoking (OR=2.2; 95% CI 1.3-3.6).

Conclusion: Advocacy efforts should focus on the implementation of legislation to address the involvement of minors in tobacco product sale. Prevention efforts should target youth exposed to this risk factor.

OP-231-20 Tobacco-free schools: tobacco-free Gennext

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Background: Schools are places where social behaviours are modelled and reinforced. Therefore, school-based strategies are a key element in adolescent tobacco control. In India, sec 6 a and b of COTPA (Cigarette and Other Tobacco Products Act) 2003, prohibits sale of tobacco products within 100 yards of any educational institute and sale to or by minors but the law is not implemented at all. The primary education system of the Mumbai Municipal Corporation is the largest urban primary education system in Asia. These government run public schools lack many facilities, but are the only option for poorer residents who cannot afford the more expensive private schools. In such circumstances creating Tobacco-Free policy for the school is never a priority. This study attempts to assess the Tobacco-Free School campaign in Municipal Schools led by Salaam Bombay foundation (SBF) to create Tobacco-Free Schools.

Intervention: A Tobacco-Free School Policy for municipal schools was drafted, which has 11 criteria (Table 1). To start with, 224 municipal schools were selected randomly. Principal of the school was sensitized and mobilized for adopting and implementing tobacco-free school policy. In a year there were 4 sessions conducted to in each school on ill-effects of tobacco and the possibilities of staying away from the menace. The students of grade 7,8 and 9th were involved in various anti-tobacco awareness activities like – plays, poster, rallies, songs and exhibitions. Students of

the school were also involved in sensitizing the relevant stakeholders and advocating for tobacco-free school. SBF facilitates each school to fulfil the 11 criteria to implement Tobacco-free school policy and creating a tobacco-free school for next generation.

Results: All 224 schools have adopted tobacco-free school policy and have initiated efforts of effective implementation of the same. Two schools have been able to fulfil all the 11 criteria and have attained the status of Tobacco-Free school. Other has attained most of the criteria (Table 1). Principals and Teachers are more aware and enthusiastic in implementing tobacco-free school policy for their school.

Conclusions: Creation of policy all alone by the government does not help until and unless facilitation is provided to implement it effectively.

OP-232-20 Restricting minor's access to tobacco products in compliance with FCTC Article 16: experience from two Indian states

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Background: Controlling access to tobacco is a recommended strategy, under Article 16 of WHO FCTC, for reducing tobacco use among youth. Global tobacco surveys, both youth and adult, point to the reducing age of initiation and reveal adolescents who try smoking go on to become daily smokers. Going beyond prohibition on sale of tobacco products to minors, the Indian tobacco control law prohibits sale of tobacco products within 100 yards of educational institutions. This paper presents an experience of community led intervention to ensure compliance with the prohibition under the law through project STEPS implemented in 6 districts each in the states of Gujarat and Andhra Pradesh.

Intervention: Non-Government Organisations working in the intervention units were engaged under project STEPS to mobilise self-help groups and sensitize the kiosks owners on the tobacco control law prohibiting minors' access to tobacco products. Each SHG group member was required to sensitize 5-10 kiosk owners and advocate for compliance with the tobacco control law. Information materials were developed in local language to sensitize kiosk owners and SHG members were trained to use these material. In addition, effective training of law enforcers was undertaken, district and community level action groups were formed and advocacy efforts were undertaken to sensitise district authorities who directed compliance with COTPA provisions by all schools and kiosks.

Results: In Andhra Pradesh, only one out of 45 schools visited in intervention units at baseline (2%) reported not having a kiosk selling tobacco products within 100 yards while at end line this number increased to 30 (67%). While in Gujarat, this number was seven out of 45 in intervention units at baseline (15%) which increased to 19 (42%) at the end. In Andhra Pradesh, 170 kiosks within 100 yards

of 60 schools were found selling tobacco products during the baseline which reduced to 45 at the end line. While this number reduced from 108 in 60 schools during baseline to 55 at the end line in Gujarat. Number of kiosks selling tobacco to minors reduced in the intervention units in both the states, while it increased in the control units in Gujarat.

Conclusions: A comprehensive approach including both bottom up and top down strategies with active support from community and civil society leads to greater compliance with the law, thereby saving the present and future generations from the hazards of tobacco.

OP-233-20 Illicit cigarette trade in Malaysia: findings from the ITC Malaysia Survey

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Background: This paper presents findings on illicit cigarettes in Malaysia conducted in 2009 and 2011, which used a more rigorous methodology than those applied in industry-funded studies. This paper reports on the prevalence of use of illicit cigarettes in Malaysia, distribution

by state, brand, sources of last purchase and reasons for choosing them.

Design/Methods: The study involved 1,713 and 1,648 adult male smokers who smoked factory-made cigarettes from the ITC Wave 4 (July November 2009) and Wave 5 (May 2011- April 2012), respectively. Respondents completed a telephone survey and requested to submit an empty pack of their current cigarette brand. Six hundred and eighty-five cigarette packs from Wave 4 and 1,041 cigarette packs from Wave 5 were received. Genuine cigarette packs were verified based on criteria stipulated in the Malaysian Tobacco Control Regulations of the Food Act 2008.

Results: 18.7% (Wave 4) and 23.7% (Wave 5) of cigarette packs received did not meet the criteria for genuine cigarette packs stipulated in the 2008 Act. A high proportion of these were from the states of Sabah and Sarawak situated on the Borneo island. The cigarette packs found to be illicit were mostly from smokers who were older, had secondary education, held non-professional jobs, were of low- and middle-income groups, and were non-Malays. Most common illicit cigarettes received were either Kretek or Non-White cigarettes, while illicit White cigarettes were very low. Illicit cigarettes were mostly purchased locally from sources such as convenience stores and street vendors. Price was the main reason smokers bought illicit cigarettes.

Conclusion: The estimated prevalence of illicit cigarettes in Malaysia is still low. This finding is consistent with the average percentage of illicit trade from the 18 European countries. Nevertheless, Malaysian government should take more effective steps to curb the illicit trade activities especially at convenient stores and street vendors in Sabah and Sarawak where cheaper cigarettes are easily obtainable.

07. CESSATION, HEALTH WARNINGS

OP-234-20 Electronic cigarettes are effective for smoking cessation: evidence from a systematic review and meta-analysis

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Background: An effective intervention for smoking ces-

sation is always challenging and a demanding need for tobacco control. Existing interventions have limited consumer appeal. E-cigarettes are currently being debated regarding their possible role in smoking cessation and as they are becoming increasingly popular, the research to date requires investigation. This systematic review aimed to investigate whether use of e-cigarettes is an effective smoking cessation method.

Design/Methods: A systematic review of articles (in English) with no limit on publication date was conducted by searching PubMed, Web of Knowledge and Scopus databases. Published studies irrespective of study design investigating the effectiveness of e-cigarettes for smoking cessation among current smokers were included. Studies were systematically reviewed, and meta-analyses were conducted using Mantel-Haenszel fixed-effect and random-effects models. The degree of heterogeneity among studies was shown by the I² statistic. Quality of the selected studies was also evaluated.

Results: Six studies, comprising of two randomised controlled trials, two cohort studies and two cross-sectional

studies included 7,551 participants. Meta-analyses included 1,242 participants who had complete data on smoking cessation. Nicotine filled e-cigarettes were more effective in cessation compared to those without nicotine (pooled Risk Ratio 2.29, 95%CI 1.05-4.97). Of the 1,242 smokers, 224 (18%) reported smoking cessation after using nicotine-enriched e-cigarettes for a minimum period of six months. Use of such e-cigarettes was positively associated with smoking cessation with a pooled Effect Size of 0.20 (95%CI 0.11-0.28). Use of e-cigarettes was also effective in reducing the number of cigarettes used.

Conclusion: Available literature suggests that the use of e-cigarettes may be an effective alternate smoking cessation method. More research is required to investigate this among both genders.

OP-235-20 Mass media campaigns to reduce smoking among young adults: a theory-driven and empirical approach for identifying promising campaign themes

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Background: Campaign developers face several important decisions when designing campaigns to reduce smoking, which includes selecting the campaign theme (i.e. what the campaign will be about). According to theories of behavioural prediction, behaviour change campaigns should try to change beliefs associated with behavioural intentions. Consistent with these ideas, Hornik and Woolf (1999) identified 3 criteria for deciding which belief/s to target. The belief should not be held by a substantial number of people; should be strongly associated with intentions; and should be able to be addressed by a campaign message. In this study we applied the first 2 criteria to systematically identify promising and unpromising themes for campaigns to reduce smoking among young adults.

Design/Methods: We used an online cross-sectional survey of 18-25 year olds in the United States (representative sample) to identify promising themes for campaigns aimed at: a) preventing initiation among never smokers; b) stopping progression to daily smoking among non-daily smokers; and c) encouraging cessation among current smokers. We measured beliefs related to 20 potential campaign themes (164 beliefs in total), and examined the association between beliefs and intentions and between beliefs and behaviors. For each campaign we ranked themes from most to least promising using the potential percentage to gain. Percentage to gain quantifies the strength of the association between the belief/s and the outcome, and the size of the population not already endorsing the belief/s.

Results: Consistently across the 3 campaigns, the most promising themes addressed the consequences of smoking for mood, health and social popularity. The least promising themes for the prevention, progression and cessation

campaigns respectively were about the health effects of specific harmful ingredients, social norms regarding not smoking, and addiction.

Conclusion: Mass media campaigns play a critical role in tobacco control programs around the world. Using a systematic and empirical approach, these findings provide campaign planners with insights into the themes most likely to lead to effective (and ineffective) campaigns, while also showing that it is possible to select a theme that could effectively change all 3 target behaviors (initiation, progression, and cessation). Replication of these findings outside the United States is required, and the way in which this method can be applied in other settings will be emphasised.

OP-236-20 Interest groups versus regulatory measures: case study on health warnings in Brazil

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Background: Tobacco companies have traditionally marketed brands of cigarettes as capable of satisfying a variety of consumer needs. In response, governments around the world have prohibited the promotion of tobacco products, for instance, by any means that are false, misleading, deceptive or likely to create an erroneous impression about the product's characteristics. Tobacco companies operate within a highly restrictive regulatory environment, in which the cigarette package is one of the few remaining avenues of communication for reaching new and existing customers. Since 1913 the tobacco industry has used the cigarette package to attract customers. To counteract this strategy Brazil has introduced health warnings in all cigarette packages in 1988.

Intervention: Our research focuses on identify and study the relationship between the adoption of a regulatory measure by the government, with strong impact over the population, and the reaction of interest groups.

The methodology used involves the study of documents related to the implementation and evaluation of health warnings on tobacco products sold in Brazil, as well as on the legislative framework that based the introduction of these warnings in the country. In parallel, we conducted a search on tobacco industry's internal documents, aiming to identify the reactions of this sector in the process of introduction and implementation of health warnings globally and specifically in Brazil.

Lessons learnt: This study found that several governmental actions were targeted by tobacco industry's interference. In some cases the influence was explicit and in other situations their presence was indirect and obscure.

The study shadow a new light on this area with useful and

innovative information that might be relevant to decision makers and public health managers when furthering tobacco control policies targeting health warnings measures.

Conclusion and key recommendations: The study concludes that there is evidence that the industry has interfered on the health warnings regulatory and implementation framework in Brazil acting as an lobby group, using strategies to change and dilute the measures and acted as a strong pressure group, and countries have to be prepared and grounded on Article 5.3 of the WHO FCTC, when adopting tobacco control measures..

OP-237-20 Tobacco control curricula in Thai nursing education: analysis of the Survey 2009-2013

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Background: Promoting roles of nurses in tobacco control has been extensively implemented in Thailand both in nursing schools and practice settings since the year 2009. The aim of this study was to investigate changes in teaching tobacco control among Thai nursing schools from 2009 to 2013.

Design/Methods: A questionnaire measuring curricula content and opinions of nursing school toward teaching tobacco control were sent to the dean/director of all public and private nursing institutions (n=81). The data from the survey collected in 2009 and 2013 was used. Analysis was conducted on comparable questionnaire-based data from the nursing schools responded in both surveys (n=56, 69%).

Results: Comparing 2009 to 2013, the number of nursing schools that had tobacco control teaching in their baccalaureate nursing programs increased from 91.1% in 2009 to 96.4% in 2013. Teaching hours of tobacco control content in the program also significantly increased from 3 hrs in 2009 to 6 hrs in 2013 (p<0.05). In addition, nursing schools that teach content related to cessation counseling increased from 38.7% in 2009 to 59.6% in 2013. Having tobacco control in nursing practicum in hospitals and communities also increased from 54.7% to 88.9%. Main teaching barriers reported are inadequate teaching hours, competency of nursing instructors and lack of awareness on tobacco control issues among students.

Conclusion: Schools of nursing in Thailand have increased integrating tobacco control in nursing curricula. Preparing nursing instructors in teaching tobacco control is also recommended as it could assure effective teaching of tobacco control for nurses. Nursing students should be followed up on their competent to deliver effective tobacco control after they graduate.

OP-238-20 World Tobacco Turkey 2013 was cancelled by successful intervention of Turkish NGO coalition

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Background of challenges: Tobacco industry declared the date and venue for the coming World Tobacco event in 2012. The venue chosen was Istanbul and the date was 29-31 May 2013, coinciding with World No Tobacco Day. The website announced that World Tobacco event would provide companies a unique opportunity to access the growing tobacco market of Turkey. Tobacco industry had decided to organize the event undermining Turkey's strict TAPS ban legislation.

Intervention: Turkish National Coalition on Tobacco or Health (SSUK), decided to take action to stop this convention. Legal advisors of the National Coalition wrote formal petitions to all concerned public authorities, including the Office of the Prime Minister, all relevant ministries, the Tobacco and Alcohol Markets Regulatory Authority (TAPDK), and the Union of Chambers and Commodity Exchanges of Turkey (TOBB) in Turkey. This was followed by a technical evaluation of TAPDK with the views of pro-health legal team.

While the event continued to be advertised both at domestic and international levels, public authorities remained undecided for some time with the claims of the industry that it did not contain tobacco advertisement and promotion, but just tobacco machinery. However, the legal team used wording from the brochure of World Tobacco Turkey which promised exhibitors the opportunity of launching new products, raising awareness of their brands, participating in publicity campaigns, taking advantage of sponsorships and other marketing opportunities.

The General Assembly of SSUK announced in March 2013 that they would organize a massive public protest in front of the venue of World Tobacco on WNTD by mobilizing the membership.

Results and lessons learnt:

These NGO interventions finally paid off when TAPDK informed the legal advisor of SSUK on 3 May 2013 that the event was cancelled for good. Protection of FCTC policies and national legislation can be done by strong evidence and persistence.

Conclusion: Turkish case shows that it is possible to tie in TAPS ban regulations with the content of tobacco trade shows and defeat industry attempts to circumvent tobacco control measures.

This major success of the NGO tobacco control community of Turkey can be taken in as an example to prevent all tobacco industry conventions that undermine tobacco control.

08. SMOKE-FREE ENVIRONMENTS

OP-239-20 'Death Clock' campaign to advocate for stronger tobacco control law enactment in Bangladesh

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Background: The amendment of FCTC compliant tobacco control law in Bangladesh got Cabinet approval in November 2012 and was ready to be tabled on the Parliamentary session started in January 2013 for final passage. But the Tobacco Industry was adopting aggressive tactics to delay the process. Intensified media campaigns had run to confront these challenges. The anti-tobacco organisations were also implementing various advocacy initiatives focusing on the urgency of amend the law. The present campaign was done aims at drawing greater attention of the policy-makers and creating stronger public support for the urgency of tobacco control law amendment.

Design/Methods: The campaign applied multi-prong approaches. Firstly, a digital clock titled 'Death Clock', on a prominent billboard has been placed at one of the busiest roads of Dhaka city used regularly by most of the important policy makers including the Prime Minister of Bangladesh government. By periodical updates, the board showcased the digits of tobacco-related deaths each day in Bangladesh. Secondly, the death clock has been inaugurated by an influential policy-maker (i.e. Information Minister) and mobilised substantial media coverage of the event which was a must for the campaigns success. Thirdly, the updated death figure was published every day over a month period on the last page of the most circulated newspaper (i.e Daily Prothom Alo) in the country. PROGGA website simultaneously is maintaining the death clock which is available on, www.progga.org/tdc. Finally, the tobacco control organisations including Anti-tobacco Media Alliance (ATMA) and BI partners organised different events like human chain in front of death clock during the campaign period to achieve continuous media attention in strengthening the law amendment process.

Results: Policy-maker's attention and stronger public supports for the amendment of tobacco control were created and finally the draft amendment tobacco control bill was placed in the parliament in early March 2013 (4th) and passed after completing necessary procedures.

Conclusions: Despite all the interferences, the 'Tobacco Death Clock' campaign was generated optimum media and policy maker's attention and that contributed significantly to pass the law amendment.

OP-240-20 Associations between schools environmental factors and secondary students' smoking-related knowledge, attitude and behaviours in Guangzhou of China

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Background: The prevalence of adolescent smoking has been increasing rapidly in China, and whether school environmental factors affect adolescent smoking remains unclear. This study aimed to explore the relationship of school environmental factors with smoking-related knowledge, attitude and behaviors among secondary students in Guangzhou of China.

Design/Methods: A cross-sectional study design was employed and 8153 students (52.7% of male) were sampled with cluster sampling method from 18 secondary schools in Huangpu District of Guangzhou, China. All sampled students were inquired with a self-administered structured questionnaire about smoking-related knowledge, attitude and behaviors, as well as school environmental factors. Smoking behaviors include experimental smokers (smoked more than once, but less than monthly or weekly, also not in last 30 days); current smokers (smoking during the last 30 days); regular smokers (smoking weekly or daily for 3 months). Multiple linear regression and multinomial logistic regression analysis was respectively performed for exploring the association between school environmental factors and smoking-related knowledge, attitude and behaviors with adjusting socio-demographic factors.

Results: The prevalence of smoking was 16.2% of experimental smokers, 4.6% of current smokers, 3.6% of regularly smokers. School environmental factors of often seeing someone smoking at campus, seeing teachers smoking, rules for banning students smoking, prohibiting students from smoking at campus were significantly associated with students' experimental smoking, current smoking, and regularly smoking, respectively ($P < 0.05$). Peers smoking and prohibiting teachers from smoking at campus had significant effect on students' experimental smoking (OR=3.21, 95%CI=1.99-5.20; OR=0.52, 95%CI=0.31-0.87, respectively) and current smoking (OR=2.11, 95%CI=1.04-4.29; OR=0.38, 95%CI=0.17-0.87, respectively), while smoking-free school only affected experimental smoking (OR=0.56, 95%CI=0.37-0.85). Setting up special smoking areas in school have no significant effect on students' smoking behavior ($P > 0.05$). The rules for banning students to smoke in schools were positively associated with the high score of attitudes toward against smoking, while having special smoking areas was positively related to the attitudes toward supporting smoking. The school environmental factors have no effect on the smoking-related knowledge.

Conclusion: School environmental factors were associated with Chinese secondary school students' smoking-related attitude and behaviors and whether setting up a special smoking area at campus would be further assessed in the future.

OP-241-20 Tobacco use and social determinants in 30 Sub-Saharan African countries: analyses of national level population-based surveys

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Background: Though Framework Control for Tobacco Control prioritises monitoring of tobacco use by population-based surveys, information about prevalence and patterns of tobacco use in Sub-Saharan Africa is limited. We aim to provide country-level prevalence estimates for smoking and smokeless tobacco use and assess their social determinants.

Design/Methods: We analysed population-based data from 30 Demographic Health Surveys (DHS) done between 2006 and 2013 involving men aged 15-49(64) years and women aged 15-49 years in 30 Sub-Saharan African countries. Weighted country-level prevalence rates were estimated for 'current smoking' (cigarettes, pipe, cigars etc.) and 'current use of smokeless tobacco (SLT) products' (chewing, snuff etc.) among men and women. From the pooled datasets for men and women, social determinants of smoking and SLT use were assessed using multivariate analyses by including dummy country variable as controls and including within-country sample weight of each country.

Results: Among men prevalence of smoking was high in Sierra Leone (37.7%), Lesotho (34.1%) and Madagascar (28.5%); low (<10%) in Ethiopia, Ghana, Nigeria and Sao Tome and Principe. Prevalence of SLT use among men was <10% in all countries except Madagascar (24.7% and Mozambique (10.9%). Men mainly smoked cigarettes a while snuff was also used by men in few countries. Among women prevalence rates were <5% in most countries except Burundi (9.9%), Sierra Leone (6.1%) and Namibia (5.9%) for smoking; Madagascar (19.6%) and Lesotho (9.1%) for SLT use. Cigarette smoking was low among women in most countries and they mainly used snuff and chewing tobacco. Older age (>40 years), was strongly associated [adjusted Odd Ratios (aOR), 4.65-9.33] with both smoking and SLT use among men and women. Smoking among both men and women was weakly associated (aOR, 1.79 & 1.77 respectively) with education but SLT use strongly associated (aOR, 2.39, 15.5 respectively) with education. Similarly, smoking among men and women was weakly associated (aOR, 1.55, 1.24 respectively) with wealth but SLT use was strongly associated (aOR, 3.36, 3.65 respectively) with wealth. Smoking and SLT use were also associated with marital status (being single) among both men and women while smoking and SLT use were associated with occupation (agriculturists and unskilled workers).

Conclusion: Prevalence among women was much lower than men but showed similar social patterns as men. Tobacco control strategies should target the poor, not (least) educated, agricultural and unskilled workers who are the most vulnerable social groups in Sub-Saharan Africa. DHS can provide reliable estimates for surveillance of tobacco use.

OP-243-20 Second-hand smoke exposure and health-related quality of life in never smokers: The Hong Kong Jockey Club Family project

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Background: Despite the mounted evidence on the adverse health effects of secondhand smoke (SHS), the evidence is limited on the relation between SHS exposure and Health Related Quality of Life (HRQoL).

Methods: SHS exposure was self-reported by a probability sample of adult never smokers aged 18 or above from the 2010, 2012 and 2013 waves of The Hong Kong Family and Health Information Trends Survey (FHInTs) of FAMILY Project (www.family.org.hk). HRQoL was measured using the validated Cantonese version of Short Form 12 Health Survey Questionnaire (SF-12v2). Two summary scores of Physical Component Summary (PCS12) and Mental Component Summary (MCS12) were calculated with higher scores indicating better perceived HRQoL. Using linear regression models adjusting for demographic variables and potential confounding factors, associations of SHS exposure with PCS12 and MCS12 were examined with subgroups analysis in males and females. The sample was weighted by sex and age from the census data in the year of each wave of the survey.

Results: In 3807 never smokers, 74.8% (95%CI: 73.3% to 76.2%) reported any SHS exposure. After adjustment for covariates, SHS exposure was associated with lower PCS12 (=-0.8, 95%CI: -1.3 to -0.1, p=0.011) and MCS12 (=-1.3, 95%CI: -2.1 to -0.6, p<0.001). In females, exposure to SHS was associated with lower PCS12 (=-1.0, 95%CI: -1.7 to -0.2, p=0.009) and MCS12 (=-1.5, 95%CI: -2.3 to -0.7, p<0.001). Negative but non-significant associations were observed in males (=-0.4, 95%CI: -1.4 to 0.6, p=0.408 for PCS12; =-1.1, 95%CI: -2.4 to 0.2, p=0.109 for MCS12). The p value for interaction (sex × SHS exposure) was 0.85 for PCS12 and 0.64 for MCS12.

Conclusion: SHS exposure was associated with poorer HRQoL in never smokers. The apparently stronger association in females than males was not significant. Prospective studies are needed to confirm the findings, which should have implication on intervention to reduce SHS.

09. STANDARDISED PACKAGING, TAXES

OP-244-20 Impacts of plain or standardised packaging among adult smokers: insights from the ITC-Australia survey

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Background: Australia introduced plain or standardised packaging for tobacco products from December 1, 2012. This was accompanied by changes in health warnings with warnings now covering 75% of the front of the pack (previously 30%), and as before 90% of the back and most of one side. This paper examines the impacts on smokers and recent quitters from before to after implementation of these initiatives.

Design/Methods: The ITC Australia survey is a rolling cohort, recruiting only adult smokers, but retaining quitters. Data is presented from waves of data collected between 2009 and 2014, with around 1500 respondents per wave (over 1000 smokers). Measures included support for standardised packaging, attitudes to their own cigarettes, social comparisons around brand smoked, reactions to health warnings, measures of smoking behaviour, and reports on recent quitting activity.

Results: Findings from the first post implementation survey, conducted from 3 to 6 months after full implementation, showed that support for standardised packaging increased markedly following implementation. Social comparisons declined, but overall beliefs and attitudes about one's own brand change little. Cognitive reactions and worry related to the health warnings increased, but not forgoing of cigarette. Post implementation, many more smokers reported the health warning was the first thing they saw when they pick up a pack. There was also increased avoidance of warnings, consistent with some, at least short term reactance to the stronger warnings. Smokers reacting with concern or more thoughts about quitting to the health warnings were more likely to be making quit attempts, but there was little other evidence of increased quitting associated with the introduction of the new packaging and warning regime. In this presentation, we also hope to present some follow-up data from a second post-implementation survey conducted 20-22 months after implementation to expand on the above results.

Conclusion: The combination of standardised packaging and stronger labels is clearly achieving some of its theorised benefits with adult smokers, but some possible, but less likely impacts, such as a strong impact on cessation, do not appear to have occurred. Standardised packaging

with stronger warnings seems to be making a modest but important contribution to tobacco control efforts.

OP-245-20 The need for scientific evidence in strengthening the FCTC

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Background and challenges to implementation: There is a marketing maxim: "If you can't measure it, you can't manage it." Monitoring is the most widely implemented component of MPOWER, including the Global Tobacco Surveillance System; WHO Global TC Reports; The ITC Project; the Institute for Health Metrics and Evaluation, and the FCTC reporting system. Yet the global tobacco epidemic persists, and the FCTC is not fully implemented, despite of centuries of knowledge, decades of research, action, progress in policy, public awareness, multiple World Health Assembly (WHA) resolutions, 15 World Conferences, regional, national and sub-national meetings, Regional Action Plans, the WHO FCTC and the UN High Level Meeting Summit on NCD.

Scientific data are still incomplete, especially economic research and policy evaluation. Low and middle income countries may have little local data, and inexperience in analysing research. WHO Global Research Priorities focus on infectious diseases, with fewer priority-setting activities in chronic diseases. Obstacles to research are universal, and include the tobacco industry. Universities accredit researchers' publications, but not time and effort spent on publicising findings, or utilising them for policy purposes. It is also difficult for researchers and universities to claim credit that one particular paper produced a particular policy result. But the biggest problem is translating science into policy.

Intervention or response: Governments don't instinctively reach for data when designing policy. Governments believe that scientific evidence is only one aspect, and they must listen to all opinion, including the tobacco industry. Few policy makers have the scientific background to evaluate the validity of evidence, so lack critical, analytic thinking. Many policy makers vote through legislation covering scientific areas that they don't understand, even the difference between 'hazard' and 'risk.' This is important because only governments can mandate legislation and taxation, and ratify UN treaties.

Results and lessons learnt: The need to bridge the existing gaps between research policy, and practice is addressed by 3 resolutions: The Mexico Action Statement on Health Research (2004); WHA resolution (2005) and Bamako Call to Action on Research for Health (2008).

Conclusions and key recommendations: Research on scientific evidence to strengthen the FCTC is required, and greater understanding in translating that research into policy.

OP-246-20 'Connecting the DOTS': tuberculosis and tobacco dependence treatment integration in Maharashtra, India

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Background: Strong association between smoking and tuberculosis (TB) infection, relapse, poor treatment outcomes, and mortality are recognized. In 2007, the WHO and The Union published a monograph emphasizing the significance of close coordination between Tobacco and TB Control Programs. A pilot was undertaken in Thane district, Maharashtra, India to assess the feasibility of providing tobacco cessation services through the established infrastructure and protocol of the Revised National Tuberculosis Control Program (RNTCP) in India.

Methods: In June 2013, the pilot was initiated in 10 TB DOTS centers in of Thane. A cohort of 316 TB patients was followed prospectively until May 2014, as they completed 6 months of treatment. Directly Observed Treatment-Short-course (DOTS) providers were oriented on tobacco control and cessation by experts trained at Mayo Clinic Nicotine Dependence Center, USA. In addition, on-the job capacity building and regular feedback sessions with providers have made it possible to seamlessly integrate the 5As model (advocated by the Union and WHO) into the DOTS program: Ask about tobacco use, Advice on quitting, Assess readiness to quit, and then refer to a trained tobacco treatment counselor for Assistance with counseling and Arranging follow ups.

Results: Of 316 patients (62% males, 38% females) registered for DOTS, 35% used tobacco in past 6 months (4% smoking and 83% smokeless, 13% dual). 70% patients completed tobacco dependence treatment of 6 months (as per protocol) at the DOTS centers. Motivational counseling was provided by the counselor to encourage quitting and maintain abstinence. Immediate reduction in tobacco use was observed in the first 2 follow ups (66%, 47%). And increasing trend in quitting was observed over first 4 follow ups (19% to 52%), which then tapered off to 47% on 6th follow up. Overall, 39% dropped out of the service (21% dropped out of RNTCP).

Conclusion: Significant number of TB patients use tobacco, and are unaware of its harmful effects. It is critical to capitalize on this 'teachable moment' spanning 6 months of regular visits to the DOTS centers. Our intervention shows that it is feasible to train DOTS providers to follow the 5As. A well-trained tobacco treatment counselor (on basic counseling and tobacco cessation techniques) could be shared across multiple DOTS centers to enhance effectiveness of the integration. Future work, at these sites, will be focused on assessing improvement in TB outcomes.

OP-247-20 Application of the Abridged SimSmoke Model to four Eastern Mediterranean countries

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Introduction: The World Health Organization (WHO) set a 2025 target of reducing smoking rates by 30% in every country. To reach these goals, the WHO established the MPOWER policy package to boost the implementation of the WHO Framework Convention on Tobacco Control (WHO FCTC), and to provide practical guidance on policies effective at reducing smoking rates. An Abridged *SimSmoke* was developed, to help countries gauge the effect of these policies and is applied to four Eastern Mediterranean countries.

Methods: The number of smokers in a country was calculated using its smoking prevalence and population. Policy effect sizes, based on previously validated *SimSmoke* models, were applied to the smoker populations to determine the reduction in the number of smokers resulting from policies. Based on findings that half of smokers die from smoking, we derived estimates of the number of smoking attributable deaths avoided by implementing effective policies.

Results: The model projects 5.2 million premature deaths in Egypt, 9.7 million in Pakistan, and 1 million in Tunisia. Within 40 years, the complete set of MPOWER policies can reduce smoking prevalence by 28.7% and avert nearly 1.5 million deaths in Egypt, reduce smoking prevalence by 52.4% and avert 240 thousand deaths in Lebanon, reduce smoking prevalence by 55.9% and avert 5.4 million deaths in Pakistan, and reduce smoking prevalence by 37.1% and avert 377,000 deaths in Tunisia.

Conclusions: The *Abridged SimSmoke* model used data from the WHO MPOWER/GTCR reports to show the number of current deaths that can be expected and how MPOWER policies can be used to reach WHO targets in three of the four Eastern Mediterranean countries studied.

OP-248-20 The incalculable threat of myriad trade agreements? The political utility of trade arguments to oppose plain packaging

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Background: This paper analyses how tobacco companies use alleged conflicts with multi- and bilateral trade and investment agreements to oppose plain packaging in Australia, the UK and New Zealand.

Design/Methods: We employ a structured thematic analysis of twelve submissions to public consultations on plain packaging, by the four largest international tobacco com-

panies: Phillip Morris International, British American Tobacco, Imperial Tobacco and Japan Tobacco International.

Results: To oppose plain packaging, tobacco companies consistently recycle alleged conflicts with multilateral trade agreements including Trade Related Aspects of Intellectual Property Rights and Technical Barriers to Trade, as well as alleged breaches of the Paris Convention. Increasingly across the consultations, submissions from tobacco companies centre on alleged conflict with provisions of multiple bilateral agreements, while the UK consultation was characterised by efforts to portray plain packaging as contravening obligations within the European Union. Using these claimed legal violations tobacco companies develop an impressive portfolio of damaging consequences including threat of litigation, financial compensations

and reputational damage. In these contexts, repeated references to Australia's experience of trade disputes filed by Phillip Morris, and by WTO member states, are acquiring an international strategic value for tobacco companies as a tool in seeking to delay the introduction of plain packaging in the UK and New Zealand.

Conclusion: The tobacco industry's depictions of plain packaging as breaching trade agreements often lack legal credibility, but can be politically useful in discouraging international uptake of this key policy measure. Alarmist public health accounts of the implications of trade agreements for tobacco control that echo industry claims could exacerbate this effect. This highlights the need for tobacco control research to examine the politics of trade alongside legal analyses.

10. GLOBALISATION OF TOBACCO INTERFERENCE

OP-249-20 Using litigation as a tool for enforcing smoke-free environments: a case of smoke-free hospitals in Bangladesh

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Background and challenges to implementation: The 'Smoking and Tobacco Products Usage (Control) Act, 2005' and the associated Rules require hospitals to be 100% smoke-free environments in Bangladesh. The Act and the Rules also require the hospital authorities to take necessary measures including sufficient display of appropriate vigilance notices in order to keep the premises smoke-free. However, compliance to those legal requirements have been very poor. The paper describes how a litigation contributed to greater enforcement of the smoke-free provisions of the law in large public hospitals.

Intervention or response: Four tobacco control organizations filed a writ petition to the High Court against three large public hospitals in Dhaka demanding enforcement of smoke-free provisions of the Bangladesh tobacco control law in the premises of those hospitals. The writ petition was based on a survey conducted by one of the organizations on six large public hospitals, all of which were found to have very low level of compliance to the law. The survey results were first shared through a press conference, following which a legal notice was sent to all six hospitals. While three hospitals responded with reasonable plan for ensuring compliance, the other three hospitals did not give any satisfactory response to the legal notice. Finally, the writ petition was filed to the High Court.

Results and lessons learnt: After a brief initial hearing, the High Court issued a rule demanding explanation of the non-compliance and ordering the hospital authorities to report back within four weeks on the measures taken by them to ensure compliance to the smoke-free provisions of the law. This court order has led to creating greater awareness among hospital authorities about the need for complying the law. The media coverage on the court order has contributed significantly in creating mass awareness about the smoke-free provisions of the Bangladesh law and the need for complying those. This is an example how the legal instruments can be used to enforce the tobacco control law and simultaneously to improve compliance through creating mass awareness about the law.

Conclusions and key recommendations: It is often difficult to achieve compliance to tobacco control law in countries like Bangladesh just through passing the law and rules. In absence of any established mechanism for automatic compliance to the law, litigation can be used as an important tool.

OP-250-20 Advocacy ensures effective control of onscreen smoking in Indian movies

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Background and challenges to implementation: Strong empirical evidence indicates that smoking in movies increases adolescent smoking initiation. In India movie heroes are role models for several million illiterate populations as movies leave indelible impression on their minds. Tobacco companies have been utilizing this space to lure youth towards smoking through depiction of onscreen smoking. The pervasiveness of the moving images is so high that it now reaches remotest of the village. The Ministry of Health and Family Welfare brought out GSR 786 mandating the movie makers that strong editorial justification explaining the necessity of such display and for

an anti-Tobacco Health Messages in the beginning and middle of the films, anti-Tobacco Health Warning scroll during period of such display and other restrictions. The movie makers and television channels ignored and violated the provisions.

Intervention/Response: Pasumai Thaayagam Foundation sent circular to film industry and requested them for implementing the Rule GSR 786 in new movies. The theatre association responded positively and forwarded their willingness to Central Board of Film Certification (CBFC) and producers, and filed Right to Information petitions before the CBFC and government enquiring the status of implementation of new Rule GSR 786.

Results and lessons learnt: Sustained advocacy created popular opinion and pressurized the Government to implement the new restrictions of smoking regulations in Tamil movies and thus setting precedent for other Indian movies. The state government tobacco control nodal officer directed Films & Television to adhere the new notification. Now the new Rules are being strictly followed in Tamil Movies. CBFC replied that new directions are issued to the producers for following the notification. The CBFC Chennai started insisting Applicants/Producers of the films to insert captions 'SMOKING CAUSES CANCER – SMOKING KILLS' at the beginning of the film and directed the Applicants/Producers of the films to scroll the above captions wherever smoking scenes are shown. If any film contains smoking scenes it is given 'UA' certificate for the film."

Conclusions and key recommendations: Onscreen smoking can be effectively controlled with proper advocacy strategies and the same will have far reaching results.

OP-251-20 Free trade agreements a challenge to FCTC Implementation: a case for tobacco exclusion

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Background: Although the WHO Framework Convention on Tobacco Control (FCTC) recognizes the harms caused by tobacco and requires countries (177) to reduce tobacco use, in the alternate trade platform tobacco is treated just like any normal product. Hence when governments proceed to implement stringent tobacco control measures the tobacco industry (TI) fights back by asserting its investor rights such as right to advertise, be protected, demanding a predictable regulatory environment and a level playing field. When it fails to stop a government, it launches challenges on the trade platform to intimidate with law suits which governments in middle and low income countries cannot afford. Tobacco should be treated differently in free trade and investment agreements to reflect its harmfulness and the 1 billion predicted deaths it will bring in the 21st Century.

Intervention: The Trans-Pacific Partnership (TPP) Agreement currently under negotiations between 12 countries

presents an opportunity to treat tobacco differently. Of the 29 chapters in the TPP, tobacco potentially affects about 10 chapters that has direct bearing on FCTC implementation particularly Articles 5.3, 9, 10, 11 and 13. Rather than defending each Article it would be more effective to simply carve-out tobacco and ensure nothing in the agreement applies to tobacco-control measures.

Results: In August 2013 Malaysia tabled a proposal to exclude tobacco in the TPP to protect its sovereign right to fully implement the FCTC rather than defending its public health measures or applying current safeguards when TI challenges arise. The proposal, a world first, received widespread support from civil society.

Conclusions: Excluding tobacco provides better protection than constantly defending tobacco control. Excluding tobacco precludes the TI's systematic intimidation of governments and avoids the delays in tobacco control that result in significant costs.

OP-252-20 Endangering domestic public health measures: implications of Vietnam's commitments before the WTO and in international trade agreements

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Background: Vietnam had a highly regulated tobacco industry through a state-owned enterprise. However, its accession to the WTO in 2007 and its involvement in international trade agreements, reveal a changing attitude towards tobacco control. This study was conducted to document Vietnam's commitments in the WTO and the Vietnam-US Bilateral Trade Agreement, and their impact on domestic tobacco control policies. It also aimed at exploring Vietnam's possible attitude on tobacco control in future pacts like the Trans-Pacific Partnership (TPP) agreement.

Designs/Methods: Analysis of Vietnam's WTO commitments and the Vietnam-US BTA, and the contents of its tobacco control regulations before and after its accession, was made. News reports were also studied to determine Vietnam's possible approach to tobacco in the TPP and in other future trade agreements.

Results: Vietnam's accession to the WTO dismantles its rule against the importation of cigars and cigarettes. In the Vietnam-US BTA, it committed to remove export restrictions for US tobacco investors. Its 2012 tobacco control law allowed foreign investors to penetrate the market through joint venture agreements, licenses to trade and distribute, and licenses to manufacture. Because of broad investment and investor protection clauses in recent agreements, Vietnam's domestic regulations are vulnerable to foreign investor attacks through international litigation for possibly violating provisions on national treatment, expropriation, and intellectual property. Vulnerable rules include those that establish minimum prices, impose capacity controls on establishment of new factories or the

expansion thereof, and regulate the manner of labelling and marking tobacco and tobacco products.

Conclusion: Aside from being a profitable industry, the tobacco industry is now less regulated because of Vietnam's commitments and its regulatory changes since then. Health measures are likely to suffer because of increasing foreign participation protected by trade agreement, and the risk of international litigation. Vietnam must take a cautious stance in the TPP if it wants to protect public health.

OP-253-20 Fighting tobacco industry on 85% pictorial warnings

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Background and challenges to implementation: Ministry of Health Thailand issued a regulation on 6th March, 2013 requiring all cigarette sold in Thailand to carry 85% pictorial warnings on both principle surfaces of cigarette packs and requiring each carton to contain 10 different warnings. The enforcement date for this regulation is 2nd October, 2013. Right after the 6th March, tobacco industry and their allies heavily lobbied other Ministries that this regulation violate Trade Mark issue and attacked Ministry of Health in the media. Three tobacco companies (JTI, PMI and BAT) filed a lawsuit against MOH requesting for Court injunction to delay the effective date (October 2, 2013) and to rule that the law is unconstitutional.

Intervention or response: Tobacco control network established a working group to counter the TI's litigation and to support MOH's legal team to fight in the court. International and national evidences were analyzed, quick research on public opinion was done, lawyers were engaged, civil society was informed and mobilized, media advocacy were organized, policy makers were alerted and informed and tobacco industry tactics was exposed in all media.

Results and lessons learnt: The court case took 12 months. The Supreme Administrative Court recently on 29th May, 2014 has ruled in support of the regulation that the Public Health Ministry has proceeded with proper procedures and introduced the regulation to protect people's health. However there will be a 90-day grace period for retailers to clear their existing stock of cigarettes. All cigarette manufacturers will have to print 85% pictorial health warnings by September 23. Currently, cigarette packages have pictorial warnings that cover about 55 percent of packets. After the grace period, companies that fail to abide by the new regulation will face a fine.

Conclusions and key recommendations: Strategic evidences, public voices/support as well as organized legal intervention are crucial to fight the threat by tobacco industry. Though legal system in each country is different, tobacco industry's tactics and counter arguments are definitely the same. WHO FCTC Articles 11 Guidelines is also an instrumental reference for this fight.

OP-254-20 The portrayal of tobacco in contemporary music videos: a qualitative analysis

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Background:

Adolescent exposure to tobacco imagery in the media increases the risk of subsequent tobacco use. The potential for exposure via social and other new media is vast but has not been studied extensively. Music video streaming sites such as *YouTube* is one example. Therefore we studied the portrayal of tobacco in contemporary music videos on *YouTube*.

Design/Methods:

Over a 12-week period in 2013/14 all UK Top 40 *YouTube* music videos were initially viewed for tobacco imagery and language (lyrical content) (n = 110). Of these 22% were found to have tobacco content. All identified tobacco related images and lyrics were then thematically analyzed to generate a set of core themes, which represented the different ways in which tobacco was being portrayed. The study was conducted in the UK.

Results: Our analysis demonstrates that smoking and is portrayed as being normal, acceptable and routine. Examples include Marlboro™ cigarette branding visible behind a shop counter in one video whilst referred to as being an integral part of a couples' relationship in another. Further, smoking was strongly portrayed as being an enjoyable and sociable experience with very few negative consequences. Examples include people smoking cigars whilst celebrating and drinking champagne in a club, having 'cigars on ice' and smoking whilst listening to music. Tobacco was also used as a prop to promote masculinity; some videos depicted men smoking whilst women were portrayed in subordinate roles.

Conclusion: Online music videos are an important channel to promote smoking to young people and potentially are a significant driver of adolescent tobacco use. The positive portrayal of tobacco in our videos raises concerns that young people will aim to emulate smoking behaviors that are endorsed by celebrity music artists either directly onscreen or through other content in their videos. Tobacco in music videos represents a health hazard that requires appropriate control. Future research should centre on identifying the drivers of this content and encourage less harmful videos to accompany popular music.

FRIDAY, 20 MARCH 2015, 12:45-13:45 POSTER DISCUSSION SESSIONS

22. PERSPECTIVES ON DEMAND FOR TOBACCO

PD-842-20 Youth working in tobacco farming: cigarette smoking behaviour and socio-demographic characteristics

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Background: We conducted a study to examine socio-demographic characteristics and smoking behavior of youth working in tobacco farms of the Province of Jujuy, Argentina.

Design/Methods: In 2004 we surveyed 3690 8th grade students from 27 randomly selected schools. For this report we used the 2005 follow-up wave. The sampling design was incorporated into all models by specifying geographic areas as strata and schools as clusters. We conducted descriptive analyses examining the distribution of smoking prevalence, demographic and family characteristics and psychosocial risk factors, by farm-work status. Chi-square tests and p values were calculated. In multivariate logistic regression models we evaluated the effect of working in tobacco farming on ever and on established smoking, controlling for demographic, family and psychosocial factors.

Results: 39.9% of youth from the tobacco growing districts and 5.5% of youth in other districts worked in tobacco farming. Of youth working in tobacco farming 40.7% were 12 to 14 years of age and 59.3% were 15 to 17; 48.9% were girls and 51.1% were boys; 26.6% of youth whose parents had primary education vs. 12.2% of youth whose parents had higher education levels worked in tobacco farming. The prevalence of ever smoking was higher among farm-working youth (69.3% vs. 55.9%) and the prevalence of established smoking was double, 21.8% vs. 11.6% respectively. In multivariate logistic regression models, youth who worked in tobacco farming had increased risk of ever smoking (OR=1.5; 95%CI 1.1-1.9) and established smoking (OR=1.6; 95% 1.1-4.8). Having friends who smoke was another risk factor for ever smoking. Perceived support and respect from parents were protective factors. Being a boy, being older, and having friends who smoke were other risk factors for current smoking. Perceived respect from parents and positive expectations

for the future were protective factors.

Conclusion: In Argentina, a middle income country, adult smoking rates are decreasing but rates remain high among youths. Our findings indicate that youth who work in tobacco farming are exposed to increased risk. Our findings are relevant for the development of policy and interventions that focus on resilient population groups.

PD-843-20 Tobacco use among cardiovascular disease patients in an urban population of Bangladesh

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Background: Cardiovascular diseases (CVD) are now the top most cause of deaths in Bangladesh. Smoking is an important risk factor for CVD and 43.7% adult smoke on regular basis in Bangladesh. Many of patients continue to use tobacco even after diagnosis of CVD. Present study was done to investigate the pattern of tobacco use among CVD patients in an urban population of Bangladesh.

Design/Methods: A cross sectional study was done in a middle class urban population of Dhaka city in 2012-2013. Household survey was done in the selected area to collect well standardized baseline information on demography, lifestyle, personal habits, health and diseases for establishment of a cohort of urban Bangladeshi population. Information on tobacco use, both smoking and smokeless form, of all adult residents aged 15 years or more was collected from household head by a structured questionnaire. Household members having history of ischemic heart disease (IHD), stroke, hypertension and diabetes were identified. All diagnosis was corroborated by presence of physician's record.

Results: In total information of 43,727 individuals was collected and data of 32024(73.2%) respondents aged 15 and above were analyzed for the present study. Among the respondents overall smoking and smokeless tobacco use were 15.6% (male 31.5%, female 0.2%), and 9.4% (male 6.7%, female 11.9%). Among the respondents of age group of 15-24 years, 25-34 years, 35-44 years, 45-54 years and 55 years or above smoking prevalence was 5.7%, 18.5, 20.7%, 22.2% and 14.1% respectively and smokeless tobacco use was 0.9%, 4.1%, 11.9%, 19.0%, 19.0% and 25.6% respectively. Among the respondents 16.6% were hypertensive, 9.7% were diabetic, 4.9% had IHD and 2.0% had history of stroke. Among male hypertensive patients 14.8% were smoker and 22.2% were smokeless tobacco user, while among male diabetic patients 7.2% were smoker and 16.1% were smokeless tobacco user. Among male IHD patients 4.9% and 8.2% were smoker and smokeless tobacco user respectively and among stroke patients 2.1% and 5% were smoker and smokeless tobacco user re-

spectively.

Conclusion: State the implications of the results and key recommendations. Present specific findings on how the research addressed the study, question and challenge. Highlight opportunities for future research as well as implications for further research or TB prevention and control programmes.

PD-844-20 The use of and beliefs about menthol cigarettes among Brazilian smokers: findings from the ITC Brazil Survey

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Background: Menthol and other flavorings are used to make tobacco products less harsh and more attractive, particularly to youth. Menthol cigarettes are also marketed as healthier to make them appealing to health-concerned smokers. In March 2012, Brazil banned all flavors in tobacco products, including menthol. This ban is not yet implemented due to industry legal challenges. The industry is also requesting the use of some additives continue until additional studies are conducted on the impact of menthol. Thus, research on perceptions of menthol cigarettes is important in informing regulatory action--in Brazil and in other countries.

Design/Methods: The International Tobacco Control (ITC) Brazil Survey is a longitudinal cohort survey of about 1,200 adult smokers and 600 non-smokers in three cities. The Wave 2 Survey (2012-13) included questions about the use and perceptions of flavored cigarettes. We identified menthol smokers in 2 ways: (1) self-identified: smokers who responded "menthol" to the question, "does your regular brand have a special flavor?" (2) Brand-coded: smokers whose regular brand was a brand known by the researchers to be a "menthol" brand. We examined the beliefs of menthol smokers using both methods.

Results: Self-identified prevalence of menthol cigarettes was 5.0%; brand-coding prevalence was 10.7%, suggesting that a number of smokers are not aware that their brand is mentholated. Self-identified menthol smokers were more likely to believe that menthol brands were "less harmful" (34%) vs. non-menthol smokers (13%) ($p=.012$); the same comparison was trending for the brand-coded method ($p=.08$). Menthol smokers defined using either method believed that menthol cigarettes were smoother than non-menthol cigarettes ($p=.002$ for self-identified; $p=.009$ for brand-coded).

Conclusion: These findings show that (1) menthol cigarette brands are popular among Brazilian smokers (menthol is the most popular flavoring), (2) adding menthol to cigarettes creates a smoother/lighter sensation, and (3) menthol brands are wrongly believed to be less harmful, a belief that is significantly higher among menthol smokers. These findings support Brazil's efforts to ban menthol and other flavorings. A flavoring ban would likely reduce misperceptions that flavored cigarettes are less harmful. This would have benefits for reducing youth uptake and eliminating a class of products that are wrongly believed to be less harmful.

PD-845-20 Tobacco epidemic among youth in China

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Background: Tobacco use is a serious public health problem in China. More than 50% of men are smokers. Each year, 1.36 million Chinese people lose their lives by tobacco use. To curbing tobacco epidemic, China government took many efforts on youth for tobacco control, such as introducing tobacco hazards in health education curriculums, creating smoke-free schools. To monitor youth tobacco use and track key tobacco control indicators, China Global Youth Tobacco Survey (GYTS) was conducted from 2013 to 2014.

Design/Methods: A multi-stage stratified cluster sampling design was implemented to ensure the survey is both national and provincial representative. A total of 155,117 eligible middle students (typically age 13-15) completed the questionnaire, including 80,357 boys and 74,760 girls. The overall response rate was 98.0%. The questionnaire consists of the following topics: tobacco use, cessation, secondhand smoke, access and availability to obtain tobacco products, pro- and anti-tobacco media and advertising, and knowledge and attitudes regarding tobacco. The survey is self-administered using paper questionnaire. SAS 9.3 was used for sample weighting and data analysis. Logistic regression was used to explore potential factors associated with smoking in youths.

Results: The percentage of middle school students who ever tried tobacco products is 19.9% (18.8%-20.9%). Among ever tobacco users, 82.3% reported they first tried smoking by 13 years old. The percentage of students reported they used tobacco products in the last 30 days is 6.9% (6.4%-7.5%), which represents 3.2 million current tobacco users. The prevalence for boys (11.2%) was higher than girls (2.2%), and the prevalence for student in rural area (7.8%) was higher than in urban area (4.8%). Most of tobacco user smoked cigarette (94.2%). The rate of smokeless products use is 1.0%. Factors associated with smoking includes having close smoking friends, smoking parents; noticed teacher smoking in school; noticed tobacco advertising, promotion and sponsorship; pocket

money; and misconceptions such as smoking makes people attractive, smoking makes people feel more comfortable in social gatherings and cessation is not difficult.

Conclusion: Chinese youth tried tobacco products at an early age. Boys are much more likely than girls for tobacco use in China. However, girl smoking should be concerned because the smoking rate of girls has been very close to female adults.

PD-846-20 Smoking prevalence and intention to quit in Greece: results from the Hellas Health IV survey (2011)

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Background: The prevalence of smoking in Greece is one of the highest globally. The objective of the present study was to explore the possible effects of demographic and socioeconomic determinants in the epidemiology of smoking prevalence.

Design/Methods: The national household survey "Hellas Health IV" was conducted from October 4th to October 23rd 2011. A sample of 1,008 adults (18 to 87 years) was interviewed. Respondents were selected by means of a three stage, proportional to size sampling design. The sample was representative of Greek population in terms of age and residency.

Results: Smoking prevalence is estimated to 38.1% in 2011. Women and age group >55 years have lower odds for being current smokers (45% and 51% lower respectively) and highly educated Greeks are 1.74 times more likely to smoke. Socioeconomic status, family status and place of residence do not affect smoking prevalence in Greece. Heavy smoking consumption is not associated with any socioeconomic and demographic variables. Moreover, socioeconomic and demographic variables do not affect daily cigarette consumption or heavy smoking consumption. 42.4% of smokers intend to quit smoking in Greece in 2011 and 24.9% of smokers have reported a quit attempt during the past year. Intention to quit is not associated with any socioeconomic and demographic variables. However, quit attempts were more likely for smokers of high socioeconomic status ($p=0.018$). Socioeconomic and demographic variables do not affect intention to quit smoking in Greece.

Conclusion: Smoking prevalence, in Greece still remains high. However, the current financial situation in Greece along with the weakening of the Greek population's purchasing power has drawn a major impact for greater in-

attention to quit smoking in Greece. Despite the financial crisis, no socioeconomic differences in smoking prevalence and intention to quit were reported in Greece. However, quit attempts were more frequent among people who were well off, therefore greater assistance to quit for lower SES smokers might be needed.

PD-847-20 Tobacco use among middle school students in Mizoram: assessment of baseline survey data

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Background: Mizoram state in Northeast India has the highest prevalence rate of tobacco-related cancers like lung, oesophagus, stomach etc. Research suggests that tobacco use prevention is the single most effective intervention against all the common Non-Communicable Diseases. It is therefore imperative to find out tobacco use pattern among children to inform policies and interventions that are effective and sensitive to cultural differences.

Design/Methods: A cross-sectional survey was conducted among 960 students in 14 schools in Aizawl, Mizoram. Questionnaires were used to gather data related to tobacco use from 481 sixth graders and 479 eighth graders. Schools were selected to best represent the type of schools in Aizawl and to geographically cover the town as widely as possible.

Results: 56.3% (271 of 481) of sixth-graders and 76.4% (366 of 479) of eighth-graders had ever used tobacco. Among current-users, cigarettes were the most common product use (21.2% (n=102) of sixth-graders and 27.3% (n=131) of eighth-graders). Use of smokeless tobacco was greater among eighth-graders (12.5% (102 of 481) of sixth-graders and 28.2% (135 of 479) of eighth graders. Significant finding was related to age of initiation – data is indicative of a decrease in the age of initiation. 10 years is the most common age of initiation of all kinds of tobacco products for sixth-graders and 12 years for eighth graders. Psychosocial risk factors were greater for eighth-graders. Increase in tobacco use within each grade by age was greater in eighth grade than in sixth grade. Students in government schools and males were more likely to use tobacco than those in private schools and females.

Conclusion: Regulations aimed at protecting children from tobacco use need to be strengthened considering the high number of ever users among students. Chapter on tobacco control, health effects etc. need to be included in school curriculum for all classes and should be part of

extra-curricular and co-curricular. School based tobacco cessation services have to be explored for students who may already be addicted.

PD-848-20 Simultaneous use of other tobacco products and its effect on daily cigarette consumption and nicotine addiction assessment: evidence from Bangladesh

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Introduction: Simultaneous use of other tobacco products has been cited as the major reason for gender reversed finding in cigarette per day (CPD) estimation in Global Adult Tobacco Survey (GATS) - India. It has been hypothesized that simultaneous use of multiple tobacco products interacts with each other and reduces need for nicotine from a given tobacco product. Therefore in multiple tobacco use settings, estimation of daily cigarette consumption (i.e. CPD) can give misleading information regarding intensity of cigarette smoking and nicotine addiction severity as measured by Heaviness of Smoking Index and Fagerstrom's Cigarette Dependence Test respectively. In Bangladesh simultaneous use of multiple tobacco products is common and hence this study is aimed at verifying the effect of simultaneous use of other tobacco products on cigarette per day (CPD) estimation in GATS-Bangladesh.

Method: GATS-Bangladesh data on daily cigarette consumption was analyzed using SPSS (17.0) software. The GATS information on CPD for manufactured cigarette at item B06a does not differentiate between 'only cigarettes smoker' and 'cigarette plus other tobacco product user'. The CPD for manufactured cigarette was estimated considering with and without simultaneous use of any other tobacco (smoking or smokeless) products. The mean CPD thus estimated for these subgroups were compared using independent 't' test.

Results: Mean CPD use among Bangladeshi manufactured cigarette smoker was 8.60 ± 6.34 (cigarette only user – 9.37 ± 6.46 ; cigarette plus other tobacco user – 7.38 ± 5.94). For male smoker mean CPD was 8.62 ± 6.35 (cigarette only user – 9.39 ± 6.46 ; cigarette plus other tobacco user – 7.41 ± 5.94). Due to inadequate sample size ($n < 10$) mean CPD among female couldn't interpreted. The mean CPD use among cigarette only user was significantly ($p < 0.001$) higher than cigarette users who had used other tobacco products simultaneously.

Conclusion: This study reconfirms finding that simultaneous use of other tobacco products along with cigarette reduces cigarette smoked per day rendering this smoking intensity indicator less reliable in multiple tobacco use settings. The mixing effect results in Simpson's Paradox. Therefore consideration of simultaneous use of other tobacco products while estimating CPD to measure smoking intensity or severity of addiction is warranted.

PD-849-20 Willingness-to-pay for tobacco use and disuse

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Background: Contingent valuation methods have been applied for cessation treatment to measure smokers' willingness to pay for such treatment. However, another line of studies have measured smokers' maximum willingness to pay to continue to smoke. These two aspects appear to be contradictory, since smokers are willing to pay for tobacco use as well as disuse.

Design/Methods: We reviewed the literature with the two different study areas, particularly using contingent valuation methods. Theoretical frameworks, assumptions, data, and study aims and methods were compared. We developed a unified conceptual framework to incorporate the two different lines of studies, mainly based on the economic theory of addiction.

Results: Existing studies of willingness-to-pay mainly focused on cessation treatment. A number of studies have been conducted on the willingness-to-pay for tobacco consumption, but without a consistent theoretical framework. Many of the latter category aimed at obtaining the price that would motivate smokers to quit, without clarifying the concept as willingness-to-pay for tobacco use. Apparent contradiction of smokers willing to pay for use as well as disuse, or cessation, arises from the nature of tobacco addiction, which creates disutility of quitting. Cessation treatment reduces this disutility, so that the net utility of cessation is greater than continued tobacco use. Willingness-to-pay for smoking is greater than zero, if the sum of the utility of smoking and the negative disutility of quitting is greater than the smokers' appreciation of net benefit of quitting, including future health benefits.

Conclusion: The apparent contradiction of willingness to pay for both use and disuse of tobacco can be resolved by a unified conceptual framework based on economic theory of tobacco addiction. Contingent valuation studies with regard to smoking may be improved by measuring willingness-to-pay for both use and disuse concurrently, to obtain a more comprehensive picture of smoking behaviour.

PD-850-20 Trend of usage of other tobacco products by Malaysian adult smokers: findings from the ITC Malaysia

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Background: About one-quarter of Malaysian deaths annually are attributed to smoking-related diseases. In 2011, approximately 23.1% (4.75 million) of Malaysian adults aged 15 years and older were current smokers (Tobacco Adult Survey). Manufactured cigarettes are the highest used, followed by Kreteks and hand-rolled cigarettes. However, there are few studies on the use of other tobacco products in Malaysia. This paper examines the trend of use of other tobacco products among Malaysian adult smokers from 2005 to 2012.

Design/Methods: Data were collected from five consecutive waves of the ITC Malaysia Survey from 2005 to 2012 as part of a longitudinal cohort study using a stratified multi stage cluster sampling design. 2,006 adult smokers were recruited at Wave 1 (Jan to Mar 2005), 1,651 adult smokers at Wave 2 (Aug 2006 to Jun 2007), 1,975 at Wave 3 (Feb to Sept 2008), 2,049 at Wave 4 (July to Sept 2008) and 2,007 at Wave 5 (May 2011 to Feb 2012). Respondents were asked about other tobacco products they have used in the past month such as cigars, cigarillos, bidis, pipes, chewing tobacco, snuffs and shisha.

Results: The use of other tobacco products is relatively low in Malaysia. In the baseline survey (Wave 1), only 11.0% said they used other tobacco products in the past month. This percentage increased marginally in Wave 5 to 15.3%. Overall, less than 5% of all respondents used cigars, cigarillos, bidis, pipes, chewing tobacco and snuffs throughout the study's five waves. However, there is a reported upward trend on the use of shisha since Wave 1, from 0.7% to 10.1% by Wave 5.

Conclusion: Although the use of other tobacco products is reportedly small, this issue must not be taken lightly. The government should take every necessary action to deter it from worsening. An increased trend in the use of shisha might be an indicator that smokers affected by the impact of tobacco taxes and price that came into effect during the Wave 5 survey have switched to other tobacco products.

PD-851-20 Smokeless tobacco use among adolescent students of Dharan Municipality, Eastern Nepal: a questionnaire survey

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Background: Tobacco is the most potent risk factor for non-communicable diseases worldwide. The oral use of smokeless tobacco is widely prevalent in Nepal and the trend has been increasing. Adolescents are vulnerable to the oral use of smokeless tobacco and are likely to face serious health effects with long term exposure over many years. This study aimed at estimating the prevalence of current smokeless tobacco use and associated factors among adolescent students of Dharan Municipality in Eastern Nepal.

Design/Methods: A cross sectional study was conducted using pre tested self-administered questionnaire adapted from Global Youth Tobacco Survey to assess current smokeless tobacco use among the representative sample of 1312 adolescent students in middle (14-15 years) and late adolescence (16-19 years) selected by stratified random sampling from July 2011 to June 2012. Chi square test and binary logistic regression analysis were performed with level of significance set at 5%.

Results: Prevalence of current smokeless tobacco use was 6% (95%CI 4.7 to 7.2). Majority of them preferred Gutkha (38%) followed by Paan Masala (25%), Khaini (21.5%), Surti (7.6%) and Zarda (7.6%). Nearly half of the users (49.4%) preferred to consume smokeless tobacco in public places and nearly four fifth (81%) purchased tobacco directly from the shops. Mean age at initiation was 13.56 years [Standard deviation (SD) = 2.23]. Current smokeless tobacco use was associated with male gender [Adjusted Odds Ratio (AOR)=7.09; 95% CI 3.14 to 16.02], foreign employment of father (AOR=2.55; 95% CI 1.12 to 5.77), joint type of family (AOR=1.85; 95% CI 1.08 to 3.14) and ever use of alcohol (AOR 7.09; 95% CI 4.06 to 12.38) after multivariate analysis.

Conclusion: Male gender, foreign employment of father, residing in joint family and ever use of alcohol were significantly associated with current smokeless tobacco use. Tobacco focused interventions should target these specific groups in Dharan Municipality and also attempt to strictly ban the sale of tobacco to minors.

23. CESSATION - PREDICTORS AND POLICIES

PD-852-20 Unassisted smoking cessation in Argentina

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Background: Most ex-smokers have quit without assistance (unassisted cessation) however the use of drugs to help quit smoking is one of the interventions widely promoted by the pharmaceutical industry. The aim of this study was to describe motivations, facilitators and barriers involved in the medically unassisted smoking cessation.

Design/Methods: A qualitative study was conducted. Semi-structured interviews were carried out to a convenient sample of 30 men and women ages 18 and older who had quit without help, in Buenos Aires during the 2011-2012 period. Population: convenient sample determined by "snowball technique". Analysis: was based on the grounded theory.

Results: Interest in one's health was one of the most important reasons to quit. Smoke free places were mentioned as one of the leading facilitators; while a public place where smoking is allowed was considered the main barrier. Perceptions regarding the tobacco dependence included: "tobacco is a company" and "dependence is like slavery", and become important barriers when trying to quit.

Conclusion: The most significant reason for quitting was improving health condition. Although there is currently a broad knowledge about the effects of smoking on health, perceptions about tobacco still include "something that gives you pleasure", this allow discuss new tobacco preventive actions. Since unassisted cessation is the most successful method used by ex-smokers in Argentina, health authorities should emphasize its effectiveness in population-based communication.

Strategies used	Motivations to quit
"Cold turkey"	Improving health
"Will power"	Pregnancy/children
Leisure activities	Feeling free of tobacco dependence
Consumption of chewing gums, candies, cereals, fruits	Smoking years/Age
Quitting smoking with another person at the same time	
Facilitators in the process	Obstacles to quit
Thinking about benefits	Considering the cigarette as a friend
Smoke-free places	Smoke-allowed public places
Support and recognition of family / friends	Withdrawal symptoms
Physical activity	Stress
Breathing exercises	

PD-854-20 Neural correlates of depression in smokers: a systematic review of functional imaging studies

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Background: Smoking and depression are two of the most important current medical conditions. Notwithstanding the impact of both disorders, comorbidity between them is highly prevalent and it is a complicating factor for their treatment. Although epidemiological studies clearly indicate their high comorbidity, there is uncertainty about the psychopathological mechanisms underlying this association. In clinical studies, smokers with higher rates of depressive symptoms had more difficult to quit. Moreover, the cause of the onset and increase of smoking in depressed patients remains not well explained. It is unlikely that only one mechanism explain this strong association between smoking behaviors depressive symptoms. This review sought to summarize neuroimaging studies to better understand the neural correlates of depressive symptoms in cigarette smokers.

Design/Methods: Search in PubMed, Web of Science and PsycINFO database using the keywords "depressive OR depression" AND "tobacco OR nicotine OR smoke* OR cigarette" AND "neuroimage OR magnetic resonance OR smri OR structural magnetic resonance OR fmri OR functional magnetic resonance OR pet OR positron emission tomography".

Results: 19 studies were included in the review. In current smokers, depression is related to increased dopamine and decreased MAO-A, which can each account for greater severity in nicotine addiction and depressive symptoms. During withdrawal, depressive symptoms would be related to increased MAO-A, and fMRI studies of cue reactivity showed that there is a negative correlation between level of depression and reactivity to negative stimuli during abstinence.

Conclusion: These findings support a neural basis for the association between smoking behaviour and depressive symptoms that depends on the phase of smoking (abstinence or active/chronic use). These findings may facilitate futures studies in developing novel treatments for depression in cigarette smokers.

Table 1: Main findings from a systematic review on neural correlates between smoking and depression; the search went up to June 13rd, 2014 in Pubmed, PsycINFO and Web of Science

Reference	Country	Number of participants, (n)	Mean age in years, (n)	Main sample characteristics	Study type and methodology	Main findings
Fowler et al., 1996 ¹	USA	31 participants	- nonsmokers: 34.4 ± 9.6, (15) - smokers: 38.4 ± 10.6, (16)	- nonsmokers: 8 men and 7 women - smokers: 10 men and 6 women - years smoking: 20±11	- positron emission tomography (PET) - radiotracer: [¹¹ C] clorgyline	1. Smoking is associated with reduction in brain MAO-A in all brain regions examined (cingulate gyrus, basal ganglia, occipital cortex, thalamus, frontal cortex, parietal cortex, cerebellum and temporal cortex).
Esterlis et al., 2009 ²	USA	30 participants	- nonsmokers: 38.1±12.8, (15) - smokers: 38.6 ± 9.8, (15) - abstinent smokers: 44.3±8.5, (4)	- nonsmokers: 8 men and 7 women - smokers: 8 men and 7 women - abstinent smokers: 3men and 1women	- single photon emission computed tomography (SPECT) - radiotracer: [¹²³ I]iomazenil - 4 smokers (3men, 1woman) signed an additional consent to abstain from smoking for 5 weeks and participate in a second SPECT scan - assessments: STAI (Spielberger's State-Trait Anxiety Index) and CES-D (Center for Epidemiology Scale for Depressive Symptoms)	1. There were no statistically significant differences in GABA-BZR availability between smokers and nonsmokers or between active and abstinent smokers. 2. Cortical GABA-BZR availability negatively correlated with anxiety and depressive symptoms in nonsmokers 3. In smokers, cortical GABA-BZR availability positively correlated with anxiety and depressive symptoms in all brain regions examined (frontal cortex, parietal cortex, temporal cortex and anterior cingulate).
Bacher et al., 2011 ³	Canada	52 participants	- nonsmokers: 32.23±8.32, (24) - smokers: 36.00±6.69, (24)	- nonsmokers: 20 men and 4women - smokers: 21 men and 3women	- positron emission tomography (PET) - radiotracer: [¹¹ C] harmine - assessments: Fagerstron Test for Nicotine Dependence (heavy smoking: ≥25 cigarettes per day) and HAM-D (17-Item Hamilton Rating Scale for Depression)	1. Increase in prefrontal and anterior cingulate cortex for MAO-A during withdrawal from heavy cigarette smoking. 2. The change towards depression was mainly found in the withdrawal from heavy smoking.
Busto et al., 2009 ⁴	Canada	38 participants	- nonsmokers : 27.5 ±4.0, (11) - depressed nonsmokers:	-nonsmokers: 3 men and 8 women - depressed	- positron emission tomography (PET) - radiotracer: [¹¹ C] raclopride - assessments: Fagerstron	1. Depressed smokers had a lower [¹¹ C-raclopride] binding compared with both control nonsmokers and depressed nonsmokers in striatum. 2. After oral administration of d-amphetamine, depressed smokers and depressed nonsmokers showed significant elevations of positive mood.

PD-855-20 Prevalence of tobacco use, attitudes and cessation among health professionals of Mangalore City, India

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Background: Tobacco use is one of the leading preventable causes of premature death, disease and disability around the world. Medical and dental professionals can play an important role in preventing its harmful health effects by promoting tobacco cessation both as advisers and behavioural models for the citizens. Significant barriers to anti-tobacco counselling by health professionals has been found to be as a result of self-use of tobacco, insufficient knowledge and skills in counselling patients about quitting tobacco use and lack of time and incentives. This study was undertaken with the objectives to determine the prevalence of tobacco use, attitudes and cessation among health professionals in Mangalore City.

Design/Methods: A cross sectional descriptive questionnaire based study was conducted among 684 health professionals with a minimum qualification of BDS or MBBS which included the postgraduate students and the staff of different health institutions of Mangalore City, Karnataka; selected by stratified random sampling. The questionnaire was based on Global Health Professional Students Survey, 2008, (GHPSS) questionnaire given by Centre for Disease Control (CDC), Atlanta.

Results: Lifetime prevalence of cigarette smoking was found to be 37.95% while the prevalence of current smok-

ers was 31.2%. Other tobacco use including bidis, cigars and gutkha was reported by 16% of subjects. Ninety two percent agreed that patient's chances of quitting smoking increased if a health professional advises him or her to quit. About eighty four percent of the study subjects thought that health professionals should get specific training on cessation techniques. Though about 24% of health professionals who are current smokers received help or advice regarding cessation only 14% subjects attempted to quit in the past year.

Conclusion: Cigarette was the major tobacco product consumed by health professionals. The prevalence of use of tobacco among health professionals was high and there was a strong male predominance. The findings indicate a critical need for raising healthcare providers' knowledge, skills and preparedness regarding tobacco control and cessation. Health professional schools and organizations should work to overcome the existing gaps in professional training regarding tobacco control and also extend behavioural and therapeutic help for the current users.

PD-856-20 Tobacco cessation in India: evidences from a large scale study

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Background: Tobacco use is a global pandemic. As per the latest nationally representative Global Adult Tobacco Survey (GATS), India had 275 million current tobacco users

in the year 2009-2010 (over 35 per cent of adults): majority of them used smokeless tobacco (164 million) and 42 million used both forms of tobacco. Tobacco dependence is a chronic relapsing condition, requires repeated interventions and multiple attempts to quit. Strategies for assisting smoking cessation include behavioural counselling and pharmacotherapy. Larger proportion of persons with higher education, especially those using smokeless tobacco, are making quit attempts compared to those with lower education. The present study tries socio-economic differential in tobacco cessation and factors associated with it.

Designs/Methods: Secondary data from Global Adult Tobacco Survey (GATS) was used for analysis. Bivariate and Multivariate analysis was conducted to understand the differential in intention to quit and factors associated with it.

Results: Majority from younger age group, especially those using smokeless tobacco, are making quit attempts compared to those in higher age group. Half of the smokers (53%) who visited health care providers in the last 12 months were asked if they smoked tobacco but only 46 percent of them were advised to quit. Only one-third of users of smokeless tobacco products (34%) who visited health care providers in the last 12 months were asked if they used smokeless tobacco and only 27 percent were advised to quit. Nearly half of current smokers (47%) and smokeless tobacco users (46%) want to quit their tobacco use. Our multivariate analysis show age of respondents, mass media exposure and education are the most significant factors positively affect the intention to quit tobacco. Smokeless tobacco users were associated with an odds ratio (OR) of 2.55 (CI 1.15-3.95) to quit compared to smokers.

Conclusion: Assistance to quit tobacco use needs to reach those with lower education, and those in higher age groups with special emphasis on smokeless tobacco users. Health care providers need to be sensitized and trained for playing a proactive role for behavioural change of tobacco users. Cessation facilities need to be widely available and adequately publicized.

PD-857-20 Utilisation of a telephone interactive voice-response tobacco cessation support service in the Islamic Republic of Iran

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Telephone smoking cessation counselling is a very cost-effective means of reaching dependent smokers in a population. We investigated the frequency of contacts and the types of topics that people accessed after a national telephone helpline was set up in the Islamic Republic of Iran at the beginning of 2011. From a total of 23 979 calls received over a 24-month period, 26.5% of callers hung up without selecting any menus. The most frequently ac-

cessed menu was addresses of smoking cessation support services (23.9%), followed by methods of smoking cessation (14.0%), self-help materials for quitting smoking (11.8%) and nicotine dependence assessment (10.4%). The average number of contacts decreased dramatically after the first month of the service but there was a significant increase in the 2 months preceding the feast of Ramadan. Religious messages provide a good opportunity to engage individuals in smoking cessation and may be useful in the planning of media campaigns.

PD-858-20 The second study on WHO MPOWER tobacco control scores in the eastern Mediterranean countries based on the 2013 report: improvements during two years

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Introduction: Following MPOWER's 2011 report guidelines, a study was conducted that showed Tobacco control planning in the Eastern Mediterranean Region overall to be at a medium level, with Iran, Egypt and Jordan respectively receiving the highest scores (29, 28 and 26).. In the current study, the same analysis was re-done with the same methods using the 2013 report to determine any possible changes.

Methods: This is a cross-sectional study that was conducted through gathering of information published by the World Health Organization (WHO) in their 2013 report. We again used the checklist from the original study for this purpose. According to the report, five part variables were allocated scores of 0 - 4 and four part variables were given scores of 0 - 3. The maximum score was set at 37. Data entry was done separately by two different people and then compared and confirmed by a third. Scores were then added and rankings were allocated.

Results: Among the 22 countries in the Eastern Mediterranean Region, based on the achieved scores (out of a maximum of 37), Iran, Kuwait, Egypt, Lebanon, Gaza and Jordan were the highest-ranking with scores of 31, 28, 28, 26, 25 and 25, respectively. 14 countries (63%) scored more than 50%, a small improvement from the report 2 years ago. Iran achieved a 2-point increase in score and still stands in first place. Three countries received the same score as last time. Unfortunately five countries have seen their scores fall, of which the UAE, with a 7-point decline, had had the sharpest decline. 14 countries received improved scores, with the largest rise belonging to Lebanon with 9 points. The highest overall improvement was attributed to the cigarette packet health warning label, with total scores increasing from 35 to 45; and the sharpest decline was observed in the tobacco consumption category, with a 5 point decrease from 44 to 39.

Conclusion: It appears there has been a slight improvement overall in tobacco control planning, although the desired levels have yet to be reached and some countries

in the region have fared worse. Also there appears to be no improvement in decreasing the prevalence of tobacco consumption.

PD-859-20 The New Zealand guidelines for helping people to stop smoking: a new breed of guidelines for the busy health practitioner

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Background: Health care workers are uniquely placed to motivate and support people to stop smoking. The New Zealand Smoking Cessation Guidelines (first published in 1999 and revised in 2002 and 2007) have shaped how health care workers have delivered stop-smoking advice for over a decade. These Guidelines have followed the traditional guidelines structure, containing information that is beyond the needs of busy frontline health care workers and lacking simple instruction on how to offer support to people who smoke. It is becoming increasingly important to identify each subject's key messages, and to develop guidance/tools that support health care workers to deliver them.

Intervention/response: A new international effectiveness and affordability review was used to formulate the key recommendations for the new guidelines. The Ministry of Health then clarified the Guidelines' core audience, and sought feedback from key stakeholders on the information required to enable health care workers to systematically screen for tobacco use and make an offer of evidence-based stop-smoking support in keeping with the 'ABC' approach.

Results: In May 2014, The New Zealand Guidelines for Helping People to Stop Smoking were published. These Guidelines are only six pages and have been divided into three parts. Three supplementary documents were also developed for people who want further information: (a) the Background and Recommendations of the New Zealand Guidelines for Helping People to Stop Smoking (b) the Guide to Prescribing Nicotine Replacement Therapy and (c) The ABC Pathway: Key messages for frontline health care workers.

Conclusions: The publication of The New Zealand Guidelines for Helping People to Stop Smoking are the first in the world to use evidence summarised in, effectiveness and affordability review, that was designed specifically for this purpose. These guidelines represent an important shift in how guidance is presented to busy frontline health-care professionals working in a sector where competing priorities are abundant.

PD-860-20 Therapy of nicotine dependence: compliance and efficiency

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Background: Most smokers would like to quit smoking but not all smokers can succeed in quitting smoking with

willpower only. They are needed in nicotine dependence therapy. Pharmacotherapy for tobacco dependence is available, but is not widely used in Russia (nicotine replacement therapy or varenicline and cytosine). Moreover studies have found (Shiffman S. et al., 2008; Chan S.S. et al., 2011) that smokers often reduce the dosage of medication and the duration of time that treatment is used. Objective of the research – study the relationship between dosing compliance and treatment outcome.

Design/Methods: 138 regular smokers (motivated to quit) received nicotine replacement therapy (nicotine patch), behavioural support was provided. There are 62 male and 76 female (aged from 27 to 56 year). 50 smokers (1 group) received nicotine replacement therapy and face-to-face counselling with behaviour support, 88 smokers (2 group) – nicotine replacement therapy and telephone counselling (the day before the appointed quit day, the quit day, 3, 7, 14, 30 days). The control group consisted of 60 smokers which received only counselling (without therapy). Effectiveness was assessed at 6 months after the quitting.

Results: The complete course of treatment received 42% (1 group) and 40.9% (2 group). The reasons for discontinuation of treatment were: smokers continued to smoke the same number of cigarettes per day; reduce the number of cigarettes but can't quit smoking; successful smoking cessation. Side effects profiles for nicotine replacement therapy were marked in 8% of cases, but only 2 smokers discontinued treatment for side effects. 6-month abstinence period noted in 50% (1 group); 69% (2 group) in case of complete course of treatment in comparison with 24% in 3 group with behavioural interventions (without therapy) and 25% in case 1-6 weeks treatment by nicotine patch. Factors likely affect treatment compliance and persistence were sex, age, no side effects and the availability of support for smoking cessation.

Conclusion: Discontinuation of treatment negatively impact on treatment outcome nicotine dependence. Factors likely affect treatment compliance and persistence were male sex, age more 40 years, no side effects and the availability of support for smoking cessation. Telephone counseling increases the number of successful smoking cessation.

PD-861-20 Randomised controlled trial of the web-based tobacco tactics with telephone support versus 1-800-QUIT-NOW Telephone Line among operating engineers

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Background: Novel interventions tailored to blue collar workers are needed to reduce the disparities in smoking rates among occupational groups. Objective: To evaluate the efficacy and usage of the web-based Tobacco Tactics targeting Operating Engineers (heavy equipment operators) compared to the 1-800-QUIT-NOW telephone line.

Design/Methods: This is a randomized controlled trial on Operating Engineers attending one of 25 safety training sessions from 2010 through 2012. One hundred forty five smokers were randomized to either the Tobacco Tactics website with nurse phone counseling and access to nicotine replacement therapy (NRT) or to the 1-800-QUIT-NOW telephone line which provided a personal coach that provided counseling and an equal number of phone calls and NRT. The Tobacco Tactics website contains graphics tailored to Operating Engineers, tailored cessation feedback, and follow-up nurse counseling offered by multi-media options including phone and/or email, and/or e-community. The primary outcome was self-reported 7-day abstinence at 30-days and 6-months post-intervention. The outcomes were compared using 2 tests, t-tests, mixed models, generalized mixed models, and logistic regression models.

Results: The average age was 42 years and most were male (79.3%) and White (86.2%). With an intent-to-treat analysis, the Tobacco Tactics website group showed significantly higher self-reported quit rates (26.9%) than the 1-800-QUIT-NOW group (7.7%) at 30-day follow-up ($p < .05$), but this difference was no longer significant at 6-month follow-up. There were significantly more positive changes in harm reduction measures (quit attempts, number of cigarettes smoked per day, and nicotine dependence) at both 30-day and 6-month follow-up in the Tobacco Tactics group compared to the 1-800-QUIT-NOW group ($p < .05$). Compared to participants in the 1-800-QUIT-NOW group, significantly more of those in the Tobacco Tactics website group participated in the intervention, received phone calls and NRT, and found the intervention helpful ($p < .05$).

Conclusion: The Tobacco Tactics website showed higher efficacy and reach than the 1-800-QUIT-NOW intervention. Possible reasons for these findings include the website was developed and tailored for Operating Engineers and was available anytime and accessed as frequently as desired. Longer counseling sessions may be needed to improve 6-month cessation rates.

PD-862-20 Process of cessation among 692 million current tobacco smokers: an analysis of Global Adult Tobacco Survey data, 2009-2013

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Background: Tobacco use is a leading cause of preventable death globally. Cessation is a critical component to reducing the burden of tobacco use. However, providing the right interventions at the right time is important to increase success in cessation. We applied the stages of change theory to characterize smokers at population level into specific stages to support intervention strategies. Using this theory, cessation is considered a continuous process in which smokers go through different stages, "Precontemplation, Contemplation and Preparation stages". We also examine trends in these stages for Thailand and Turkey.

Country	GATS Country Sample	Current Tobacco Smokers	Sample Size For Stages	Precontemplation	Contemplation	Preparation
				Percent 95% CI	Percent 95% CI	Percent 95% CI
Argentina 2012	6,645	22.1 (19.3, 25.3)	1,648	75.4 (68.4, 81.2)	16.2 (12.0, 21.6)	8.4 (3.8, 17.8)
Bangladesh 2009	9,629	23.0 (21.9, 24.2)	2,217	61.6 (57.8, 65.3)	26.3 (23.5, 29.3)	12.1 (10.1, 14.3)
China 2010	13,354	28.1 (26.7, 29.7)	4,010	83.9 (80.3, 87.0)	14.0 (11.2, 17.4)	2.1 (1.4, 3.1)
Egypt 2009	20,946	19.4 (18.8, 20.1)	4,150	72.9 (70.7, 75.0)	21.0 (19.1, 22.9)	6.2 (5.1, 7.4)
Greece 2013	4,359	38.2 (35.7, 40.8)	1,664	86.2 (82.8, 89.0)	13.2 (10.5, 16.4)	0.7 (0.3, 1.7)
India 2010	69,296	14.0 (13.4, 14.6)	11,488	74.5 (72.7, 76.3)	18.6 (17.1, 20.1)	6.9 (6.0, 7.9)
Indonesia 2011	8,994	34.8 (33.2, 36.4)	2,853	89.5 (86.7, 91.8)	7.1 (5.4, 9.3)	3.3 (2.4, 4.6)
Malaysia 2011	4,250	23.1 (21.2, 25.2)	978	85.5 (81.3, 88.8)	9.3 (6.6, 13.0)	5.2 (3.5, 7.6)
Mexico 2009	13,627	15.9 (14.8, 17.1)	1,817	64.9 (61.8, 67.9)	24.1 (21.4, 27.0)	11.0 (9.1, 13.2)
Nigeria 2012	9,765	3.9 (3.3, 4.5)	424	63.8 (56.9, 70.2)	23.3 (17.8, 30.0)	12.9 (8.9, 18.2)
Panama 2013	16,962	6.1 (4.9, 7.5)	962	79.6 (73.2, 84.9)	12.1 (7.4, 19.0)	8.3 (5.8, 11.8)
Philippines 2009	9,705	28.2 (27.0, 29.5)	2,769	79.5 (77.3, 81.5)	12.3 (10.7, 14.1)	8.2 (7.0, 9.7)
Poland 2010	7,840	30.3 (29.0, 31.7)	2,416	68.5 (65.9, 70.9)	24.2 (22.0, 26.5)	7.3 (6.1, 8.7)
Qatar 2013	8,711	12.1 (11.1, 13.1)	1,073	61.4 (56.8, 65.9)	31.2 (27.2, 35.5)	7.4 (5.7, 9.6)
Romania 2011	5,629	26.7 (25.0, 28.4)	1,053	76.5 (73.7, 79.2)	18.4 (16.0, 21.1)	5.1 (4.0, 6.4)
Russia 2009	11,406	39.1 (37.8, 40.5)	4,798	85.6 (83.7, 87.4)	11.1 (10.1, 13.6)	2.6 (2.1, 3.4)
Thailand (2009)	20,566	22.7 (22.8, 24.7)	4,901	76.3 (73.8, 78.1)	17.6 (15.8, 19.6)	6.3 (5.3, 7.5)
Thailand (2011)	20,606	24.0 (22.8, 25.1)	4,290	85.4 (83.4, 87.2)	12.0 (10.3, 13.9)	2.6 (2.0, 3.5)
Turkey (2008)	9,030	31.2 (30.0, 32.6)	2,701	72.2 (69.8, 74.6)	21.2 (19.3, 23.2)	6.5 (5.5, 7.8)
Turkey (2012)	9,851	27.1 (25.8, 28.3)	2,412	64.6 (61.8, 67.3)	26.9 (24.6, 29.4)	8.5 (7.2, 10.0)
Ukraine 2010	8,173	28.9 (27.7, 30.1)	2,392	74.1 (71.7, 76.4)	20.7 (18.6, 22.9)	5.3 (4.1, 6.7)
Uruguay 2009	5,581	25.0 (23.3, 26.6)	1,394	66.5 (63.1, 69.7)	25.1 (22.2, 28.3)	8.4 (6.5, 10.7)
Viet Nam 2010	9,925	23.8 (22.7, 24.9)	2,258	70.8 (68.1, 73.3)	21.6 (19.4, 24.0)	7.6 (6.4, 9.0)
Average		23.9	64,668*	74.7%	18.6%	6.6%

Notes * represent total number of smokers in the total sample

Design/Methods: We use Global Adult Tobacco Survey (GATS) data on 64,668 smokers from 21 countries conducted between 2009 and 2013 (Argentina, Bangladesh, China, Egypt, Greece, India, Indonesia, Malaysia, Mexico, Nigeria, Panama 2013, Philippines, Poland, Qatar, Romania, Russian Federation, Thailand, Turkey, Ukraine, Uruguay, and Vietnam). GATS is a nationally representative household survey on tobacco use and other tobacco

control indicators using a standard protocol. Three questions based on current intentions and prior short-lived attempts to quit are used to develop an algorithm to categorize smokers into the stages. We use SPSS® version 18.0 for complex sample analysis to provide estimates with 95% confidence intervals for smoking rates and stages of cessation for each country. Further analysis is provided for trends for Thailand (2008 and 2011) and Turkey (2008 and 2013).

Results: On average, 74.7% of smokers fell into the pre-contemplation stage ranging 61.4% to 89.5% while on average 18.6% fell in the contemplation stage ranging from 7.1% to 31.2%. On average 6.9% were in preparation stage with a range of 2.6% to 12.9%. Trends analysis showed an increase in pre-contemplators in Thailand from 76.1% to 85.4% while contemplators and those in preparation stage declined from 17.6% to 12.0% and 6.3% to 2.6% respectively.

Results for Turkey showed a decline in pre-contemplators from 72.2% to 64.6% and increase in contemplators from 21.2% to 26.9% but no change at preparation stage.

Conclusion : Results show that the majority of smokers in the surveyed countries are at pre-contemplation stage, thus highlighting the need for strategies that specifically target this population in addition to those at other cessation stages.

PD-863-20 Quitline collaboration to improve tobacco treatment evolving knowledge exchange in the North America Quitline Consortium

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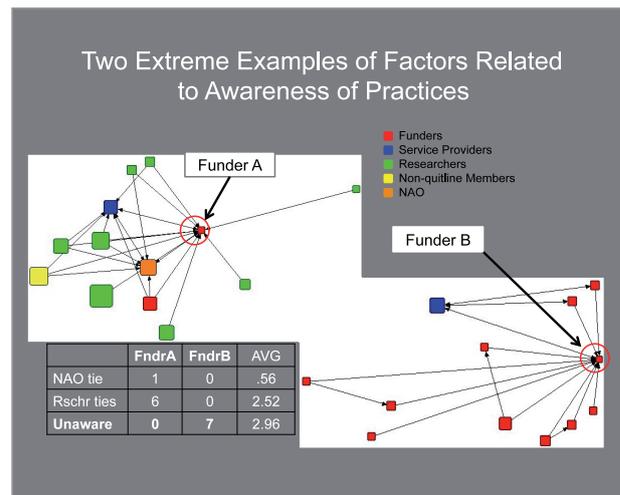
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Background and challenges to implementation: This study is designed to better understand the network and communications mechanisms by which stakeholders in the North American Quitline Consortium (NAQC), share new knowledge, make decisions about how and when to implement new knowledge, and adopt practices that they believe will improve quitline outcomes.

Intervention or response: Data on network relationships were collected from the 63 quitlines in North America in the first two of three years of data collection. We previously reported on the basic structure of the quitline network from year one (Leischow et al, AJP, in press), and we here report on changes in quitline network structure and function changes from our first to the second survey.

Results and lessons learnt: There appears to be a significant shifts in the network between 2009 and 2011. We found that the quitline network could be characterized by 3 groups: two multi-state U.S.-based service providers and

Canadian quitlines with a fairly dense central core consisting primarily of Service Providers and THE NAQC central organization. The single service provider group appears to be a hub/spoke structure while the group containing all other organizations appears to be forming a more densely connected sub-group. Funders appear to be playing more of an information broker role in this new structure or at least this role may be becoming more discernable in the maps. In addition, we found that those funders who were more linked to researchers were more likely to have quitlines that implement evidence-based practices.



Conclusions and key recommendations: Understanding how networks work can help to strengthen the ability of the network to help more smokers quit. We found that a core hub that is designed to foster collaboration between quitlines is an important resource for improving practice, and this has relevance as networks are established to implement FCTC Articles. A core organization is needed to assure that those network are effective. Our results showing that linkages with researchers are associated with use of evidence-based practices also has relevance to implementation of FCTC Articles.

PD-864-20 Predictors of intention to quit at participation and six-month abstinence in the participants of Hong Kong Quit-to-Win Contest (2009-2013)

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Background: Quit and Win Contests were organized in many countries to attract a large number of smokers, who mostly had not sought professional cessation support, to quit with the grand monetary prize as an incentive. The present study aims to explore the influential factors of being ready to quit (want to quit within 7 days) and absti-

nence in these participants.

Design/Methods: The 4 rounds of Quit-to-Win Contests (2009, 2010, 2012 and 2013) recruited 4,093 adult daily smokers to participate in the randomized controlled trials of interventions (telephone counseling, on-site face-to-face counseling, short mobile phone messages or cash incentives for abstinence). All participants were followed up at 6 months after participation. The data were analyzed with hierarchical logistic regression modeling, in which the dependent variables were being ready to quit within 7 days at participation and self-reported abstinence in the past 7 days at 6-month follow-up.

Results: The proportion of being ready to quit within 7 days was higher in older participants (Referent: Aged 18-29 years. OR for 30-39 = 1.35, 95%CI 1.07-1.71; OR for 40-49 = 1.68, 95%CI 1.29-2.17; OR for 50-59 = 1.79, 95%CI 1.35-2.39; OR for 60 or over = 1.95, 95%CI 1.43-2.66), and having previous quit attempts within 1 month (Referent: No quit attempt. OR = 2.32, 95%CI 1.71-3.13) or 6 months (OR = 1.62, 95%CI 1.26-2.08). Higher ciga-

rette consumption at baseline was negatively associated with being ready to quit (Referent: 10 cigarettes or below. OR for 11-20 = 0.82, 95%CI 0.71-0.95; OR for 21-30 = 0.93, 95%CI 0.71-1.22; OR for more than 30 = 0.61, 95%CI 0.46-0.86). Previous quit attempts within 1 month (Referent: No quit attempt. OR = 1.65, 95%CI 1.36-2.76), target to quit at baseline (Referent: Target to reduce smoking. OR = 1.65, 95%CI 1.22-2.46), having supporters (Referent: No supporter. OR for having 2 supporter = 1.54, 95%CI 1.07-2.22; OR for having 3 supporter = 1.65, 95%CI 1.07-2.53) and perceived higher confidence to quit (OR = 1.14 per score, 95%CI 1.09-2.19) at baseline predicted abstinence. Being ready to quit at baseline, receiving interventions, using nicotine replacement therapy, and counseling within 6 months did not increase abstinence.

Conclusion: In addition to the incentives and interventions, Quit and Win Contest should be developed to increase the motivation of quitting, especially in younger participants, facilitate familial and peer support, and encourage more quit attempts.

24. POINT-OF-SALE: IMPACT, MARKETING AND COUNTER TACTICS

PD-865-20 Impact of point-of-sale tobacco display bans in Thailand: findings from the International Tobacco Control (ITC) Southeast Asia Survey

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Background: Increasing evidence shows that widespread presence of cigarette displays at the point-of-sale (POS) increases the likelihood that youth will initiate smoking, and stimulate impulse purchasing and use among current smokers. There is a small but strong body of evidence showing that banning POS tobacco displays can have positive effects. This paper aims to examine the impact of the POS display ban that was introduced in September 2005 in Thailand, and relates these findings to the international literature. The ban on displays followed a pre-existing ban on advertising, including at POS. Because we have no pre-ban data therefore compare it with Malaysia which did not impose bans.

Design/Methods: The data came from the first five waves of the International Tobacco Control Southeast Asia Survey, a prospective cohort survey conducted among adult smokers between 2005 and 2011 in Thailand and Malay-

sia. Between 1550 and 2163 current smokers were interviewed in each country at each survey wave.

Results: At the first post-ban survey wave (in 2006) over 90% of smokers in Thailand were aware of the display ban policy and supported it, and about three-quarters of smokers thought the ban was effective. Noticing cigarette displays in stores was only asked from Wave 2 (2006), and was lowest (17%) in 2006 in Thailand shortly after the ban came in, but increased at later survey waves ($p < 0.01$); but the levels were consistently lower than those in Malaysia (where over 83% noticed displays across the waves). In both countries younger smokers were more likely than older ones to notice displays. For noticing tobacco advertising at POS, smokers in Thailand consistently reported lower levels (less than 10%, either in stores or around street vendors) than those reported in Malaysia (at least 27% in stores and over 16% around street vendors). Overall, in both countries smokers in rural areas were more likely to notice advertising at POS than their urban counterparts.

Conclusion: The ban on POS cigarette displays has reduced exposure at POS. The higher level of noticing POS displays than advertising suggests it is generally more salient to smokers. Findings are consistent with those from western countries. It is not clear whether the trend to greater noticing from a low point immediately after the ban reflects problems with sustaining implementation or is due to increased sensitivity of ban violations or of times when cupboards are opened to display their contents.

PD-866-20 Current scenario of tobacco advertising, promotion and sponsorship in Bangladesh

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Background: Direct or indirect advertisements of tobacco products have been banned in Bangladesh. Although, direct advertisement has been stopped, but indirect advertisement of tobacco products is running still now at Point of sale (POS). The aim of this study is to investigate the different ways of tobacco advertisement, promotion and sponsorship (TAPS) activities conducted by tobacco industries.

Methods: A cross sectional survey was conducted in selected urban and rural areas of the nine districts Bangladesh during the months of January to March 2013. Both quantitative and qualitative methods were applied to identify and collect information on the ongoing TAPS from the selected urban, semi urban and rural areas of the districts. Key Informants Investigation/Interview (KII) and FGD were done among the shop owner or salesperson or tobacco companies staff/representatives regarding the tobacco advertisement ways in the locality.

Results: Interviews were conducted among 1686 respondents from 9 districts (Urban: 1159, Rural: 527). About 38% of the cigarette box or the showcases at point of sale were supplied by the tobacco companies. Almost all shops (99.4%) having POS for tobacco were visited by the sales representatives from various tobacco companies in the last one month for promoting their brands. A very high proportion of sales person at POS (68.8%) had proposition of gift from tobacco companies. Tobacco industries mostly offered free cigarettes as gift (72.5%) and 33% of POS also had cash money offer. While for smokeless tobacco there were very few gift offerings to sales person. 27.9% retailers received shop decoration material for promoting tobacco sale and 60% of the surveyed shops had visible flyer decorating the area, 48.5% had poster displayed, 77.2% had visible decorative items made of cigarette packets, 32.3% had large dummy cigarette packets. 7.4% of the retailers reported that tobacco companies had provided scholarship to the poor students. Activities in the name of corporate social responsibilities (CSR) were done in the area especially high tobacco cultivation areas.

Conclusion: Bangladesh needs to strengthen enforcing mechanism of recently amended tobacco control act for addressing ban on indirect advertisements.

PD-867-20 A pilot project to convince shopkeepers to remove tobacco ads

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Background: A comprehensive tobacco control law passed in Bangladesh in 2005 was immediately successful at end-

ing tobacco billboards and newspaper ads. However, years later, many shops still displayed signboards with the name and/or logo of a cigarette brand. Effective law implementation is vital for tobacco control but difficult to achieve; creative responses are needed. **Response:** For years following law passage, tobacco control advocates have worked in partnership with government to organize mobile courts that can fine offenders and remove illegal advertising on the spot. However, such courts require time and expense to organize. It is not feasible for them to reach every single violator. As a result, Work for a Better Bangladesh (WBB) Trust and member organizations of the Bangladesh Anti-Tobacco Alliance carried out a small model campaign. First we conducted a survey of existing advertising. Then we created materials to show how such ads violate the law, including images of mobile campaigns, which use bulldozers and other means to remove ads. Finally, we visited the offending shops to show them the information and warn them that they could be fined and their ads forcibly removed.

Results and lessons learned: The campaign succeeded in convincing fifteen shopkeepers to remove their ads of their own initiative. The success of the initiative means that we can replicate the model more widely.

Conclusions: Where gaps in tobacco control law implementation exist, we need creative solutions. Producing information and evidence and personally visiting shopkeepers proved successful at removing illegal ads. For other campaigns, media can have a far more widespread reach at minimal cost. It is not enough to ensure law passage; we also must work towards successful implementation and share our lessons across regions and countries.

PD-868-20 Activating task forces for TAPS ban in grassroots

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Background and challenges to implementation: Tobacco alone kills 57000 people in Bangladesh a year as found out by the WHO in 2004. This death toll is accelerated with the increasing advertising of tobacco products and industry tactics targeting young generation in the country. To confront these industry issues, government and civil society organizations have been working to control tobacco by implementing tobacco control law 2005 that prohibits TAPS in the country. However due to lack of coordination between government and CSOs in this issue, tobacco industries considered this field open to promote their killer products.

Intervention or response: The government, under the tobacco control regulations, 2006 gazette a task force committee in three tiers, national level, district level and sub-district level. However those task forces were rarely activated due to a large number of other committees led

by the task force chairs. As I have been working in SERAC-Bangladesh, the leading tobacco control youth organization, I took initiatives to activate these committees from grassroots starting with Ishwarganj sub-district in Mymensingh and later Trisal and Gauripur sub-districts of the same district. The initiatives included opinion meetings, advocacy meetings, youth consultations, letter campaigns, and media mobilization. I also advocated igniting the district task force in Mymensingh in 2011.

Results and lessons learnt: With my stringent trials and continuous efforts for tobacco control, my advocacy was successful motivating sub-district task forces in Ishwarganj, Trisal and Gauripur in Mymensingh district and later it resulted in activating the district task force in Mymensingh of which I am a member too. The activated task forces took numerous initiatives to ban TAPS such as legal actions against industries for violating the law, seizure of a large number of tobacco products and advertisement posters, outlet advertisements, and fined smokers at public places. These efforts resulted in a regulated environment for tobacco advertisements in those areas and presently all kinds of tobacco industry sponsoring is prohibited including any tactical CSR activities



Conclusions and key recommendations: This is a clear evidence of successful youth advocacy that worked in grassroots to tackle large industries tactics and it can be replicated by other youth advocates to mobilize such local actors for TAPS ban in other areas.

PD-869-20 Changes in noticing of tobacco advertising in Brazil 2009 to 2012-13: longitudinal findings from the ITC Brazil Survey

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Background: Because of the enormous efforts of tobacco companies to market their products, a comprehensive ban on tobacco advertising, promotion and sponsorship (TAPS) is called for under Article 13 of the Framework Convention on Tobacco Control (FCTC). As a consequence, tobacco companies have turned to the use of packaging design features such as colours, pack shape, and descriptors to promote their products to target audiences.

Brazil has prohibited most forms of advertising since 2000 and, in December 2011, all points of sale (POS) advertising was banned, but for the exhibition of the cigarette pack itself. In this study, we focused on the extent to which cigarette promotion is still noticed in Brazil.

Design/Methods: The International Tobacco Control Policy Evaluation Survey (ITC) Brazil Survey is a longitudinal cohort survey conducted in Brazil with 1,200 adult smokers and 600 adult non-smokers living in three cities: Rio de Janeiro, Sao Paulo, and Porto Alegre. Both the Wave 1 (in 2009) and the Wave 21 (2012-2013) surveys included measures of several tobacco control topics and FCTC policy domains, including TAPS.

Results: Evidence from the ITC Brazil Survey showed that between 2009 and 2012-2013 there was an absolute decrease in the perceived advertising of tobacco products among smokers and non-smokers (-25% and -13%, respectively). Despite this reduction, in 2012-2013, almost a quarter of smokers and non-smokers still reported "often"/or "very often" noticing things that promote smoking. It is worth mentioning that smokers and non-smokers are extremely supportive of stronger regulations for tobacco products (more than 80% agree) and believe that the government should do more to tackle the harm caused by smoking (approximately 90% agree). Moreover, nearly half of smokers (48.8%) reported being supportive of plain packaging of tobacco products.

Conclusion: The results of the ITC Brazil Surveys suggest that, although the Brazilian government has enacted a strong legislative framework for restricting TAPS, stronger efforts are required to move forward to greatly reduce the advertising of tobacco products that still exists. Considering that the tobacco packaging itself (e.g., cigarette packs) represent a key channel for advertising, stronger laws are required to both restrict the exhibition of cigarettes in POS and to stimulate the adoption of plain packaging.

PD-870-20 Effective and triumphant implementation of Section 5 of COTPA-2003: complete ban on TAPS

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Background: The tobacco epidemic is a serious threat to the health of the global population. In India, more than 90% oral cancers are related to tobacco use. The Global Youth Tobacco Survey-2009, reveals that nearly 15% of youth in India use tobacco and they are influenced by the different kinds of tobacco advertisements. As per Global Adult Tobacco Survey 2010, 66.2% of man and 40.1% of female are using tobacco in either smoking or smokeless form in the state. The Cigarette and Other Tobacco Products Act 2003 (COTPA 2003) are designed essentially to protect people from the hazards of tobacco use. Section 5 of COTPA enforces ban on direct or indirect advertisement, promotion and sponsorship of tobacco products.

To comply with the Indian Tobacco Control Law, this intervention aimed to successful enforcement of TAPS ban.

Intervention: Intervention as a part of the project included capacity building; multi-sectoral advocacy; institutionalizing enforcement mechanisms; violations reporting by NGOs/youth and wider media engagement to create an enabling environment for strengthening policies which prevent Point of Sale (PoS) advertisements. Subsequently different kind of violations has been observed in the urban area of Patna district especially at PoS and various enforcement modalities has been applied to remove the tobacco advertisements.



Results: Post Intervention: State wide instruction, multi-prong interventions and advocacy for TAPS ban by the Government of Bihar. The Govt. has taken the lead on TAPS enforcement resulted into that the shops, market areas and streets of Patna district has become 100% PoS advertisement free.

Conclusions: Effective implementation and joint effort of Multi-sectoral approach resulted into removal of PoS advertisements in the street of Patna district. Capacity building, Government-NGO partnership and engagement with youth/media are recommended for a sustainable model for preventing PoS and thereby reduce tobacco use amongst youth.

PD-871-20 Assessing point-of-sale violations in Delhi for strategic advocacy on TAPS ban

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Background and challenges to implementation: The Point of Sale (PoS) Rules were stayed by Bombay High Court in 2005-6 and the Government of India did not make any particular efforts to get the stay vacated. In Jan and later, July 2013, in the matter of HFM Trust v/s Union of India and Ors., the Supreme Court vacated the stay on PoS Rules and directed the Government of India to rigorously implement the Rules. The Health Ministry issued necessary directives to the State Governments to ensure steps are taken to curb PoS violations. One year after the stay was vacated, VHAI decided to conduct a survey in January 2014 to assess PoS compliance in the city of Delhi.

Intervention or response: Study objectives were to understand the actual status of PoS Rules; analyze reasons for failure to compliance, if any; methods and strategies of PoS advertising and whether minors have easy access to

products. The sample size was 50 shops chosen from each city zone, totalling 250 shops/outlets and the methodology involved Observations and Questionnaire.

Results and lessons learnt:

- Gross violation of PoS Rules - 96.4% shops displayed PoS tobacco advertisements in varied forms.
- Implementation of PoS Rules were found to be weak and ineffective.
- All major brands of smoking and smokeless tobacco were being advertised at points of sale.
- 60.8% shops did not have the top front board as specified.
- 50.4% boards had health warning but alongside other promotional messages, brand designs (only 36 shops had a warning board as per specifications)
- 94.4% shops had tobacco product display, visible and accessible to minors

Conclusions and key recommendations: Urgent steps are required for effective implementation of PoS Rules across India as the industry despite a court order is using points of sale to advertise tobacco products through incentives and there is a need to capacitate and strengthen enforcement mechanism and to streamline a system of regular raids with penalties. There should be strict checks to ban sale to minors. A multi-stakeholder approach is needed to get more organizations and institutions to join this drive.

PD-872-20 New forms of TAPS ban violation and incomplete enforcement of signage in public places in Kerala

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Background: As part of Cigarette and Other Tobacco Products Act (COTPA) Kerala is keen on complete ban of TAPS during last 3 years. This study assessed the nature of violation of TAPS ban and enforcement of signage in public places.

Design/Methods: Two cross sectional surveys, one on advertisement boards at point of sale of tobacco products in January 2014 and another on no smoking signage in schools and eateries in June 2014, were conducted in all districts of Kerala by multidisciplinary teams with pre-tested questionnaire. Study sites were selected by stratified random sampling method. Out of 32566 reported tobacco selling shops, 16256 schools and 62365 eateries, 19600 (60.2%) shops, 10800 (66.4%) schools and 22100 (33.8%) eateries were randomly selected. Size, design and presence of brand name were included in the study on advertisement boards. Presence of no smoking signage, no tobacco sale boards, presence of tobacco selling shops within the non-permissible limits, smokers at the time of visit were studied in relation to schools. Presence of no smoking signage and smokers at the time of visit were studied in relation to eateries. Statistical analysis was done with excel and SPSS.

Results: More than 95% of selected shops (19455), schools (10680) and eateries (21335) were studied. Among the schools 43.6% were public and others were private. Advertisement boards were detected in 48.8% shops and 65.4% boards could be removed on the spot. All boards were larger and specially designed violating the legal specifications and restrictions. Brand names were present in all boards. Even after removing the boards either design and colours were retained as the symbol or replaced with boards having trade mark of Tobacco Company prominently. No smoking signage was absent in 26.2% public and 31.4% private schools but no significant difference could be identified. No tobacco sale board was absent in 39.2% public and 29.5% private schools. Tobacco selling shops were present in less than 5% school premises and active smoking was totally absent. No smoking signage was absent in 30.4% eateries and smokers were detected in 1.7% eateries. No significant difference between schools and eateries.

Conclusion: Capacity building to detect new forms of TAPS ban violation is needed.

PD-873-20 Current status of online tobacco advertising and promotion in Korea

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Background: The development of internet has made comprehensive banning on tobacco advertising and promotion more difficult, because cyber space, so called internet, has no boarder between countries. What the more serious problem is that impact of internet advertising and promotion can be strong particularly on minors. Therefore, this research explores current status of tobacco products sales on internet and suggests a future direction to tackle with the matter.

Design/Methods: To look into the details, we picked up some key words such as "cigarette international buying service", "cigarette buying service", "tobacco buying service" and searched these key words via popular search engines; NAVER and GOOGLE. Searching was carried out for 15 days (from April 1 to April 15, 2014), and only Korean web sites were accepted as the result. These web sites were analysed using a check-list report form which was created by the researchers and validated by two experts in the field.

Results: Operating status : Total 24 web sites selling tobacco products on internet were found in Korea. 23 web sites of them(95.8%) offers only tobacco products, while 1 web sites(4.2%) is integrated shopping mall. There are only 8 web sites registered as a tobacco products sales before 2010, but the number has been tripled in 4 years. Almost web sites are operated as a private business(77%) rather than a corporation or firm. Legal violation : In accordance with the Tobacco Business Act, retailers shall not sell tobacco products in any way of postal or electronic commerce. However, we found that 4% of 24 web sites has no

notification at all on this issue. Furthermore, sales of tobacco products to minors is strictly prohibited in according to the Juvenile Protection Act, but 57% of 24 web sites also has no notification on no sales to underage person.

Conclusion: Online sales of tobacco products is directly related with advertising and promotion activities as defined in the FCTC. This matter includes not only tobacco product advertising and promotion but also sales to minors, tax evasion and illegal trade. Thus, Korean government should establish a surveillance system and strengthen the relevant legal basis. And also, we would like to suggest that complete prohibition of online sales of tobacco products is the most effective way to prevent tobacco advertising and promotion on internet.

PD-874-20 The impact of legislative measures banning tobacco advertising, promotion and sponsorship: findings from the ITC Mauritius Survey

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Background and challenges to implementation: Mauritius banned tobacco advertising, promotion, and sponsorship (TAPS) since 1999. The legislation was strengthened in 2008 to include a ban on free distribution of tobacco products, the display of tobacco products at point of sale (except at airport duty free shops) and the use of misleading terms on cigarette packs. This study evaluated the impact of the legislation on smokers' awareness of TAPS strategies.

Intervention or response: Three waves of the International Tobacco Control (ITC) Mauritius Surveys (2009-2011) were conducted face-to-face by trained interviewers using a sample consisting of a nationally representative cohort of adult Mauritian smokers and non-smokers. Smokers were asked whether they had noticed TAPS in various venues or on items.

Results and lessons learnt: The findings show that restrictions on TAPS have been effective in limiting smokers' exposure to the marketing of tobacco products via advertising campaigns, industry sponsored events, and brand stretching. Smokers who noticed advertising that encouraged smoking were only 11% at Wave 1 (2009), 9% at Wave 2 (2010) and 4% at Wave 3 (2011). Tobacco industry sponsorship of music or sports events was noticed by only 1% of smokers at Wave 1 and 0.2% at Wave 2. Percentage of smokers who noticed promotion of tobacco through the display of a cigarette brand name or logo on clothing or other non-tobacco products was 3% at Wave 1 and 1% at Wave 2. However, cigarette smoking continues to be highly visible in the entertainment media. The percentage of smokers and non-smokers who reported having seen people smoking in the entertainment media in the past six months were respectively 56% and 52% at Wave 1 (2009),

45% and 38% at Wave 2 (2010) and 44% smokers and 39% at Wave 3 (2011).

Conclusions and key recommendations: Mauritius has demonstrated a high level of compliance to Article 13 of the WHO FCTC and has the potential to be a success story and model in the African region in this regard. However, the ITC Mauritius Survey highlights the need to further strengthen the tobacco regulations to reduce the prevalence of tobacco product placement across different forms of entertainment media and ban the display of tobacco products in duty free shops at the airports. More effective communication strategies should be developed to inform the youth about the tactics of the tobacco industry of using popular artists and models to promote tobacco products.

PD-875-20 Shadow reporting on compliance to tobacco advertisement bans at points-of-sale in Turkey

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Background: Points of sale (PoS) are tobacco industry's last stronghold for actual communication with the youth and other target groups. The WHO Framework Convention on Tobacco Control recommends a total ban on display and visibility of tobacco products at PoS. Turkey has adopted legislation that only bans PoS displays that are visible from outside of the establishment. The aim of this study is to investigate the compliance to this partial ban.

Design/Methods: Shadow reporting techniques developed by the Framework Convention Alliance were utilized to survey compliance in 7 cities during winter 2013.

Results: Out of 58 retailers surveyed, tobacco displays of 56% were visible from outside the shops, 28% were located in more than one area, 20% were accessible by customers, 22% featured advertising, 13% displayed packs by hiding pictorial warnings, and price tags at 60% did not comply with legislation. Only 1.5% of shops had fronts of display units covered. Noncompliance increased in comparison to a 2011 study which found visibility of products from outside as 44%.

Conclusion: Partial bans cause ambiguity in implementation and are difficult to enforce. Given lack of official data, shadow reporting is a beneficial independent assessment method and advocacy tool. A complete ban is an essential tobacco control policy as it obliterates tobacco industry's ability to use PoS as advertisement and promotion venues and has a direct bearing on increasing the effectiveness of demand side policies.

PD-876-20 Assessing the implementation of WHO-FCTC, article 13, on tobacco advertising, promotion and sponsorship in Uganda, 2012-2013

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Background and challenges to implementation: Uganda signed and ratified the WHO FCTC in 2004 and 2007 respectively. Article 13 of the WHO FCTC commits parties to a comprehensive ban on all forms of 'Tobacco Advertising, Promotion and Sponsorship' (TAPS) as one way of reducing the consumption of tobacco products. Tobacco Atlas 2012 listed Uganda as a country 'with complete absence of tobacco advertising bans'. The WHO tobacco control report card 2009 indicates that the country doesn't have a national ban on direct advertising. There is no operational legal framework explicitly banning TAPS. The FCTC ban on TAPS is yet to be domesticated in Ugandan Law. Currently there is a tobacco control bill in the enactment process which was presented for public hearing in July 24, 2012. Despite the existence of some tobacco related laws and smoke free regulations, enforcement has remained a challenge for agencies mandated to bear them. The objective of this survey was to assess the level of compliance and implementation of WHO FCTC art.13 in Uganda

Intervention or response: Walking tour observations were conducted in 3 major cities selected from central, north and western regions of Uganda respectively. A total of 30 strategic streets was sampled, and 10 from each city. Pictorial evidence of outdoor advertising was compiled and assessed for TAPS. 3 focus group discussions involving tobacco control stakeholders, desk research and literature review on art.13 with regard to Uganda's compliance was conducted. Journal publications (PubMed, Tobacco Control), Press articles, reports such as Global Youth Tobacco Survey (GYTS2007) and WHO reports were also reviewed.

Results and lessons learnt: Some gains are noted. Tobacco advertising is less explicit advertising than before. However, Tobacco Industry continues to advertise, promote and sponsor activities aimed at increasing tobacco products demand. Ignorance of the existing laws among the general public and statutory bodies is exhibited. "No Smoking" signs are not displayed in most entertainment places. 15.6% of 13-15year olds have smoked cigarettes (GYTS2007). Smoking rates among boys is significantly higher (19.2%) than among girls (11.2%)

Conclusions and key recommendations: Continued TAPS is a violation of FCTC art.13, undermines compliance and is a contravention of the country ministerial directive of 1995. Passing a comprehensive tobacco control law increases compliance with art.13.

PD-877-20 Point-of-sale tobacco advertising and promotion: a study in five Russian citiesRD Kennedy,¹ A Grant,¹ M Spire,¹ O Knorre,² J Cohen¹¹Institute for Global Tobacco Control, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States of America, ²International Programs, Campaign for Tobacco-Free Kids, Moscow, Russian Federation. e-mail: rdkennedy@jhu.edu

Background: The tobacco industry uses point-of-sale (POS) advertising and promotion to increase consumption of their products among current users, to attract new consumers, and to encourage former customers to resume tobacco use. The FTC requires member parties to ban all forms of tobacco advertising, promotion and sponsorship (TAPS). This study assessed the state of POS advertising and promotion in a variety of retail settings across Russia.

Design/Methods: Data were collected from April-May of 2014 in 5 populous cities in different regions of Russia using a customized checklist. Each city was mapped to identify neighbourhoods based on socio-economic status (SES); observations were done equally in high, medium and low SES neighbourhoods. Researchers began observations at randomly selected chain supermarkets located within a 3 kilometer radius of a neighbourhood hub (transit station, shopping mall, or major intersection), and then followed a walking protocol to collect observational data in tobacco retail settings including independent markets/convenience stores, and kiosks. Observed items included tobacco pack displays (visible from the street, in the cashier zone, on a power wall, in a light box), brand advertising (signs, shelf liners), and promotions including discounts, gifts free and product distribution.

Results: Observations were made in 786 retail locations in Moscow (n=167), St. Petersburg (n=161), Kazan (n=137), Ekaterinburg (n=159), and Novosibirsk (n=162). Cigarette products or packs were visible or on display in the cashier zone of most POS (93%, n=732). Approximately a third of venues surveyed displayed cigarette products or packs visible in the kiosk or storefront window (29%, n=225) or in a power wall (35%, n=275), or displayed a pack using a light box (32%, n=252). More than half of venues displayed signs/posters/banners/shelf liners or backgrounds that stimulated a specific tobacco brand (53%, n=415). Promotional discounts such as sales, coupons and vouchers were observed in approximately 1% of venues (n=11); promotional gifts (free, or with the purchase of a product) were observed in 4% of venues (n=28); and the distribution of free tobacco products by a tobacco company representative was observed in 3% of venues (n=25).

Conclusion: The tobacco industry uses POS advertising and promotion in Russia, in particular product displays near cashier zones. Policies to reduce these industry activities will be important to protect public health.

PD-1373-20 Initiating behavioral risk factor surveillance system (BRFSS) in Bangladesh: validation of cell phone interview through face to face interviewK Islam,¹ M Rahman¹¹ Institute of Epidemiology Disease Control & Research (IEDCR), Department of Epidemiology, Dhaka, Bangladesh

Background: Bangladesh while experiencing an epidemiological transition from communicable to non-communicable diseases is actually bearing the burden of both. Population of the country being victim of unplanned urbanization and climate change are adopting unhealthy lifestyle thereby exposing themselves increasingly to modifiable behavioral risk factors including tobacco use. The present study was conducted with the objectives to introduce Behavioral Risk Factors Surveillance System (BRFSS) in Bangladesh using cell phone and to validate the process.

Design/Methods: Using cell phone we interviewed 3378 adults, calling randomly selected phone numbers out of 12,000 numbers provided by an operator. To validate the data collected by cell phone interview (CPI) we conducted a face to face interview (FTFI) on a subset (401) of respondents using same questionnaire. Study was conducted from February to June 2012.

Results: Study findings revealed that results (in %) for some indicators from CPI and FTFI didn't differ much like smoker (32.9 & 34.4 respectively), chewing tobacco user (6.9 & 6.5 respectively), diabetes (4.9 & 5.7 respectively), high blood pressure (8.6 & 8 respectively), though for some indicators findings are lying apart like heart disease (3.4 & 4.7 respectively), physical activity (41.9 & 65.6 respectively).

Considering FTFI as gold standard, we checked sensitivity (%) and specificity (%) of CPI and found that with some indicators it is high (>80%), like current smoker (92.6 & 95.1 respectively), current chewing tobacco user (83.3 & 100 respectively), diabetes (82.6 & 97.9 respectively), however with some indicators these are low e.g. high blood pressure (75 & 96.5 respectively), heart disease (42.1 & 98.2 respectively), physical activity (54 & 76.8 respectively).

Conclusion: Using cell phone for collecting data is convenient, less time consuming with acceptable sensitivity and specificity in Bangladeshi population, though caution should be observed with indicators of low sensitivity and specificity. Using dedicated software and replacing caller's number with institute's ID for authentication is important. Taking care of different strata of society and involving all cell phone operators is required for generalization of findings. Generated data will be invaluable to plan appropriate high impact, cost effective interventions for prevention and control of NCDs.

25. SMOKE-FREE ENVIRONMENTS AND SECOND-HAND SMOKE: CHANGING THE NORM

PD-878-20 Monitoring approval of new legislation banning smoking in children's playgrounds and public transport stops in South Australia

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Background: On 31 May 2012, South Australian Government amended the Tobacco Products Regulation Act 2007 to include smoking bans in prescribed (outdoor) public transport areas (bus stops, tram stops, railway stations, taxi ranks and airports) and within 10 metres of children's outdoor playground equipment. The aim of this study was to track public approval for smoke-free public transport areas and children's playgrounds prior to and following the new legislation.

Design/Methods: Approval of the new smoke-free regulations were investigated across three cross-sectional telephone surveys; with samples representative of the population aged 18 years and over. Interviews occurred pre-legislation in March-April 2011 (wave 1; n=2002) and April-June (wave 2; n=2005), as well as approximately 18 months post-legislation in October-December 2013 (wave 3; n=2013).

Results: The approval rate for smoke-free children's playgrounds increased from 94.8% in wave 2 to 97.8% in wave 3. The approval rate for smoke-free public transport stops was just under 80% in waves 1 and 2 pre-legislation, but significantly increased to 93.5% post-legislation (wave 3). Furthermore, approval by smokers significantly increased from 50.9% (wave 1; pre-legislation) to 83.4% (wave 3; post-legislation). 'Never' smokers had a 5.4 times increased odds of approving smoke-free transport stops than smokers ($p < 0.001$).

Conclusion: Smoke-free outdoor public transport areas and children's playgrounds have strong community support. Moreover, support increased following the introduction of the legislation banning smoking in these areas, for smokers as well as non-smokers. Tracking public attitudes towards new smoke-free outdoor policies is useful for policy makers deliberating on implementing further regulations.

PD-879-20 Smoke-free environments

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Background: Current estimate shows 43.3% people of above 15 years are using tobacco in any form in Bangladesh. Among adults, 58% male and 28.7% female use tobacco products (GATS Bangladesh Report, 2009). Among the youth 5.8% are using tobacco products. There are 57,000 tobacco related mortalities and 382,000 disabilities occurred in Bangladesh every year (WHO) **Object:** NATAB is working in 2010 to establish smoke free environments in public places and transports and tried to remove all advertisement from the tobacco sale point to cut a) the frequency of tobacco smoking of the smokers, b) to protect the people from second hand smoking and c) to protect the young people in using tobacco harms.

Methods: NATAB field officers taking representative(s) from NATAB district level committee (nine districts) developed awareness on harm of tobacco use in human health, economies and environments among the Community leaders, Local Government people, Local Transport owner's and worker's Associations, NGO representatives, journalists, lawyers, religious leaders and social workers. Sincere intervention of parties, the public places and public transports of the NATAB project area became smoke free up to 85% compliance level. 85% non-smokers are protected from second-hand smoking and also frequency of tobacco smoking of the user is automatically cut down in smoke free area. NATAB visited about 25000 tobacco selling points, discussed on **Smoking & Using of tobacco products (Control) (Amendment) Act 2005 with the proprietor of those selling points** in NATAB Project area. During the visit about 80% shop keepers act accordingly, it is a good sign to stop attraction of young people towards tobacco.

Results: There was evidence of good compliance with smoke-free policies, thus reduces frequency of tobacco use and reduces exposure to environmental tobacco smoke. * As total ban in tobacco advertisement in selling points, the tobacco company cannot advertise their products of continuous changing the lucrative design of the packets of tobacco products which could attract and stimulate non-smokers and specially children.

Conclusion: NATAB through their different intervention public awareness about harms due to tobacco use rises remarkably.

PD-880-20 Second-hand smoke among women with breast cancer who never smoked

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Background: As mentioned in 8th Article of the Framework Convention on Tobacco Control science has evidenced unequivocally that exposure to tobacco smoke causes death, disease and disability. The aim of this work was to study aspects related to second-hand smoke at home among women who never smoked.

Design/Methods: Evaluation of second-hand smoke at home was based on data from a survey among women with breast cancer treated at the National Cancer Institute of Brazil between June 2013 and January 2014. We analysed current smoking status, exposure to second-hand smoke at home in life course, relationship with the smoker and exposure duration.

Results: The mean age of respondents was 55 years, with no statistically significant differences between ever-smokers and never-smokers. Considering the 407 respondents, 11% were current smokers and 24% were former smokers. Among the 264 never smokers, 60% reported second-hand smoke exposure at home. When asked about the relationship with those who smoked inside home in her presence 58% reported husbands, 27% father, 21% mother, 15% brothers and sisters and 10% sons. On average, women were exposed to second-hand smoke at home for 23 years (CI95%: 21 years - 25 years).

Conclusion: Measures providing for protection from exposure to tobacco smoke in public places have been taken in Brazil, but there is still a large proportion of the population that is exposed at home by family members. Regardless the progress in legislation, we still need to take steps to protect non-smokers at home.

PD-881-20 Second-hand smoke exposure and related knowledge, attitude among adults in urban China

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Background: To examine the levels of second hand smoke (SHS) exposure among urban Chinese adults, their knowledge on harms of SHS and support for smoke-free policy.

Design/Methods: Data from the Global Adult Tobacco Survey (GATS) and the International Tobacco Control Policy Evaluation China Survey (ITC China Survey) was analysed, SAS was used to calculate rate and 95% CI(Confidence Interval).

Results: In the two surveys, less than 40% of respondents reported that their workplaces had a complete smoking ban. Percentages of participants who reported having noticed smoking at various public places were used to reflect SHS exposure. Restaurants were the venue with the greatest overall exposure (83.4%~95.6%), followed by respondent's workplace (53.3%~84.0%). Exposure was low in health facilities, schools and public transport venues. In GATS survey, about 60.6% smokers and 68.5% non-smokers believed that SHS causes lung cancer, but only about one-third participants believed that SHS causes heart diseases in adults. The participants of the ITC China survey reported a comparatively higher level of awareness of the harms of SHS, but only 58.2% smokers believed that SHS causes heart diseases in adults. Overall, the ITC China survey data show that participants' support for a comprehensive smoke-free policy in schools, taxis, health facilities and government buildings were high (over 70%). However, the proportions of participants supporting comprehensive smoking-free policy at workplaces (50.9%~60.9%) was relatively low.

Conclusion: The proportion of indoor workplaces with complete smoking ban is low in urban areas and level of SHS exposure is high, people's awareness of harms of SHS and support for comprehensive smoke-free workplace need to improve.

PD-882-20 Second-hand smoke exposure among the youth in China: findings from the GYTS China

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Background: Plenty of evidences indicate exposure to second-hand smoke (SHS) can cause many health consequences for children, such as middle ear disease, respiratory symptoms, and impaired lung function. In recent years, China government took lots of efforts focus on smoke-free environment, such as smoke-free health facilities, smoke-free school, and smoke-free workplaces. In 2013, the national youth tobacco epidemic surveillance was conducted in China for the first time. This study aims to evaluate the exposure to SHS among the youth in China, especially the exposure in the main place for the student activities--school.

Design/Methods: Data for this study are from the Global Youth Tobacco Survey in China (GYTS China) carried out in 2013. GYTS China is a cross-sectional survey focused on junior middle school students. GYTS China uses a global standardized methodology that includes a multi-stage stratified cluster sampling design and a standard global core questionnaire with some questions that meet the needs of China on tobacco use and key tobacco control indicators. GYTS China was a both nationally and provincially representative survey. The survey covered 346 counties/districts in 31 provinces in China. A total of 1,020 schools participated in the survey, and 155,117

eligible middle school students completed the survey, of which 80,357 were boys and 74,760 were girls.

Results: During the past 7 days, 72.9% of students who reported there were people smoking at home, indoor public places, outdoor public places, or public transportations. Among the above four places, the proportion in outdoor public places was the highest at 58.3%, followed by 57.2% in indoor public places, 44.4% at home, and 37.9% in public transportations. During the past 30 days, 54.5% of students who saw someone smoking indoors or outdoors at school. 13.3% of students who saw teachers smoking indoors or outdoors at school almost every day. Among the 31 provinces, the above proportion in Beijing, Tianjin, Shanghai were lower (3.5%, 5.5 and 5.5%, respectively), and Yunnan, Xizang, Hunan were higher (24.0%, 23.0% and 21.6%, respectively). 11.1% of students who saw teachers smoking indoors at school almost every day, and 10.1% outdoors at school.

Conclusion: There was a high-degree of SHS exposure among the youth in China. The phenomenon that people including teachers smoking at school existed, and there was much difference among 31 provinces in the exposure to SHS at school.

PD-883-20 Smokefree districts of J&K and UP

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Background: Budgam, Srinagar, Jammu, Reasi: four major districts of State Jammu and Kashmir population 38.46 lacs & District Shahjahanpur of Uttar Pradesh State, population 25.5 lacs- area 4575 Sq Kms. Topography extends to both mountains & plain areas (a famous tourist places of J&K). Smoking prevalence was high despite since years of COTPA-2003 enactment. Thereafter, Voluntary Health Association of India (VHA) in collaboration with The Union-South East Asia carried strong advocacy and effective enforcement with support from Govt. of J&K; Districts earned the Smoke Free status.

Objectives:

- To analyse process of making all above districts Smoke Free.
- To assess compliance level of smoke free law in the public places.

Design/Methods: The process for making smoke free was assessed by the researchers by reviewing official documents of District Statistical & Evaluation Unit and Drug & Food Control Organization, observing compliance of smoke free laws, sensitization workshops, WNTD celebrations 2011, 2012, 2013 and 2014 & interacting key stakeholders.

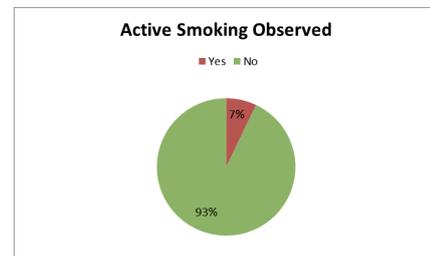
Results: The technical support, capacity building of international standard, provision of funds and compliance study by the VHA & Union- South East Asia & strong advocacy movement through political consensus & technical trainings to law enforcers by VHAI generated massive

awareness among the general public and policy makers. The State & District Administration showed a strong commitment. Series of sensitization workshops were organized at each level & Distt monitoring committees were notified, Block level enforcement squads were formed with proper monitoring & reporting systems (monthly basis) at place hence Chalaning process was made easy. Police started reporting about the enforcement of Tobacco Control Act on monthly basis in their routine Crime Review Reports and publish also on official website of Police Department.

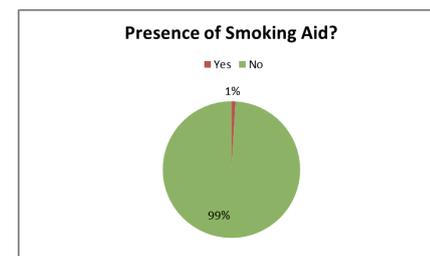
Conclusion: Meeting the smoke free criteria is just the beginning of institutionalization of a successful model of tobacco control in a particular jurisdiction. Increasing the level of compliance, sustaining the effort in long run and replicating the model in different settings are the guiding principles of smoke free drive. It is important for a State to get committed for such an initiative for which it holds it responsible. The State also supports the collaborative approach towards meeting this goal. The Smoke Free Initiative can be made easy with commitment from various stakeholders both Govt & private.

Results from District Jammu of Jammu and Kashmir State

1. The visible/active smoking during the enumeration period has been noticed in 41 (7%) samples while as in 547 places (93%) places no visible smoking was noticed, although this is a good sign of improvement but complete eradication of the menaces is required and 100% of results in public places is to be ensured.



1. Similarly, in 6 (1%) sample cases visited was found to have smoking Aids visible, while 582 (99%) places no such aids have been noticed.



PD-884-20 Second-hand smoke exposure and self-reported perceived stress in non-smoking Korean: the 5th Korean national health and nutrition examination survey

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Background: For exposed non-smokers, second-hand smoke exposure may aggravate stress. The aim of this study is to examine association between second-hand smoke (SHS) exposure and self-reported perceived stress in non-smoking Korean.

Design/Methods: Of 2010 and 2011 5th Korean National Health and Nutrition Examination Survey (KNHANES V), a representative sample of 17476 Koreans, after excluding current smokers or those with depression or non-respondents to questionnaires, 8130 participants were finally included for analysis. By gender, associations of self-reported perceived stress and SHS exposure were examined by multiple logistic regression analysis, adjusting for age, educational attainment, socioeconomic status, marital status, and alcohol intake.

Results: Over 1 hour per day of SHS exposure at the workplace was associated with more severe self-reported perceived stress in men (adjusted odd ratio = 1.63, 95% confidence interval 1.04 - 2.54). Whereas, the association between SHS exposure and self-reported perceived stress was insignificant in women (adjusted odd ratio = 1.40, 95% confidence interval 0.93 - 2.12).

Conclusion: Second-hand smoke exposure could induce or aggravate stress for the exposed non-smoking workers at workplace. Making workplace smoke free could promote mental health of male employees.

PD-885-20 Smoke-free environments in Panama from the perspective of GATS 2013

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Background and challenges to implementation: Panama has made huge efforts in the fight against tobacco use since the ratification of the Law 13 of 2008 in which multiple strategies, among which include Smoke-free environments. With the implementation of the Global Adult Tobacco Survey (GATS) in 2013, Panama acquires new tools in this fight.

Intervention or response: A questionnaire was prepared based on questions designed to validate compliance with the laws on the protection of secondhand smoke and smoke-free environments preservation. The survey via an electronic device through which a sample of 16,962 individuals was obtained was performed. Subsequently the data were analyzed using SPSS statistical software which data tables are modeled.

Results and lessons learnt: The number of people who reported being exposed to cigarette smoke at home corresponded to 4.4%, instead of 5.6% at work and at restaurants and 12.4%. For schools we have 1.3% and 3.3% to universities. Regarding knowledge of the laws prohibiting smoking in public places 87.5% of the population knows their rights.

Conclusions and key recommendations: Within these 5 years have made great strides in preserving smoke-free environments for Panamanians, applying penalties for offenders and providing guidance to the public about their right to breathe smoke-free air. To get to the end game is far to go but with GATS reach a broader perspective.

PD-886-20 Smoke-free hospital in Thailand: intermediate path of development to 100% Smokefree environment

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Background and challenges to implementation: Since the passing of the Non-Smokers; Health Protection Act B.E. 1992, and notification of the Ministry of Public Health (No> 19) B.E. 2010, 100% smoke free hospital in Thailand has been actively enforced. All hospital staffs are prohibited from smoking in hospital areas, both indoors and outdoors. Hospital staff who were smokers have been encouraged to reduce or quit smoking altogether. However, some staffs are still smokers. Objective: To help hospital staff who smoke gain motivation to quit using objective measures of exposure to tobacco smoke pollution in Thai hospitals.

Intervention or response: Prospective descriptive design was applied. Convenient sampling was used to recruit 52 smokers who were full time staff in Thai hospitals including 8 from each hospital of Ministry of Public Health, or Ministry of Education.

Intervention: Using a questionnaire we collected demographic and smoking harms and impact of second hand smoke to others. Each participant applied an air pump with a fine filter or charcoal tube while smoking as usual for 8 hours. All filters and charcoal tubes were analyzed for Volatile Organic Compounds and weighted for less than PM10 dust volume by high accuracy measures and for PAH and BETEX based on ACGIH standard.

Results and lessons learnt: Majority of voluntary smokers were male (90.4%) with average age of 39 years old (SD 10.09). Most of them were high school educational background (71.8%). They were moderate addiction to nicotine (half a pack per day or more than that), and 46.15% showed urine cotinine between 31- 200 ng/ml. Most of them (67.3%) understand regarding cigarette harmfulness at low level and low motivation to quit smoking at the beginning of the test (100%). 100% of samples were still smoke during office hour in hospital and at their home. All samples showed a small amount of cigarette smoking dust (Less than PM10). All samples showed less

than 0.002 ug. PAH / sample and volatile organic compounds includes (Benzene, Toluene, Ethyl benzene and Xylene, known as environmental carcinogens). These results were presented to each smoker, raised their motivation to reduce or quit smoking among hospital staffs. All participants (100%) changed their smoking behavior and start the quitting process.

Conclusions and key recommendations: Assessing tobacco smoke situation around smokers is an effective motivational strategy to quit smoking among hospital staff in Thailand.

PD-887-20 Smoking situation among primary school children in Thailand

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Background and challenges to implementation: Cigarette smoking is the largest cause of preventable death in the world. The negative effects of smoking on human health are well established by research worldwide. However, the high rates of tobacco use is continued. Evidence also indicates that people who choose to smoke in their lifetime usually begins at an early age. Therefore, children's and adolescents' cigarette smoking is a very serious issue and a major public health problem. According to the 2012 Thai Statistical's report, the prevalent of tobacco use among people is approximately 11.5 million, 1.7 million are children and youth especially male. Furthermore, most of them try their first cigarette at an age range of 11-15 and the youngest age is 5-year-olds. The younger the age of uptake of smoking, the greater the addiction is likely to be because early uptake is associated with subsequent heavier smoking, high levels of dependency, a lower change of quitting and higher mortality.

Intervention or response: The objectives of this study was to review the smoking situations of primary school children in Thailand by using secondary data analysis from 2005-2014.

Results and lessons learnt: Describe the results and impact of the project. Explain the potential application or benefit to other programmes. Describe what worked and what did not work and the evidence that led to this determination.

Conclusions and key recommendations: The researchers found that anti-smoking campaigns should be established before the age of 12 which does affect decreasing smoking rates. So school-based interventions to prevent the uptake of smoking among children is importance. The smoking intervention programs can be implemented in school together with frequent appropriate meeting with parents in an attempt to prevent young people from smoking in the future, to draw their attention by encourage them on physical activity or exercise or sports. However, all pro-

grams could be succeeded, it is necessary to have well-cooperation among children, parents, schools and communities.

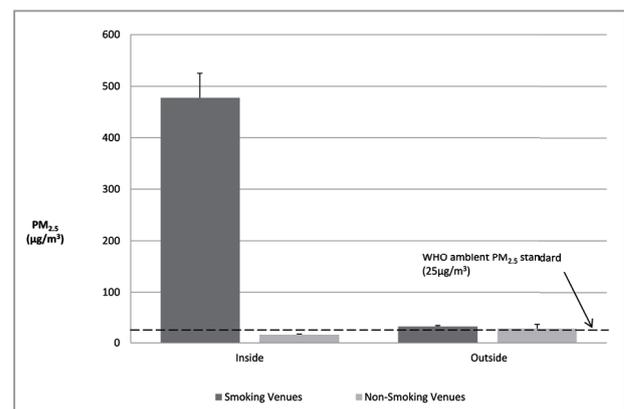
PD-888-20 Second-hand smoke emission levels in waterpipe cafes in Doha, Qatar

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Background: Exposure to the emissions of tobacco waterpipe is associated with increased health risks among its users as well as those exposed to its secondhand smoke. Waterpipe use is an emerging concern to the tobacco control community, particularly among countries of the Eastern Mediterranean Region. In 2002, Qatar adopted legislation that prohibited cigarette smoking inside public venues, but exempted tobacco waterpipe smoking. To inform the development and enforcement of effective policy, the impact of cigarette and waterpipe use on indoor air quality was monitored in waterpipe cafes in Doha, Qatar.

Design/Methods: Particulate matter (PM_{2.5}) levels were measured inside and outside of a sample of 40 waterpipe cafes and 16 smoke-free venues in Doha, Qatar between July and October of 2012. In addition, the number of waterpipes being smoked and the number of cigarette smokers were counted within each venue. Non-paired and paired sample t-tests were used to assess differences in mean PM_{2.5} measurements between venue type (waterpipe vs smoke-free) and environment (indoor vs outdoor).



Results: The mean PM_{2.5} level inside waterpipe venues (476 µg/m³) was significantly higher than the mean PM_{2.5} level inside smoke-free venues (17 µg/m³; p<0.001), and significantly higher than the mean PM_{2.5} level found immediately outside waterpipe venues (35 µg/m³; p<0.001). In smoke-free venues, the outside mean PM_{2.5} level (30 µg/m³) did not differ significantly from the mean PM_{2.5} inside levels inside these venues (p=0.121).

Conclusion: Elevated levels of particulate pollution were found in waterpipe cafes in Doha, Qatar, potentially endangering employees and patrons. To protect the public

from the dangers of SHS, and to change social norms around tobacco use, smoke-free policies that apply to all forms of combusted tobacco products, including water-pipe, are needed.

PD-889-20 Smoke-free play parks and beaches: changing the cultural norm

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Children learn from the environment through the process of observational learning. Research and evidence show that parental and peer smoking are significant contributors to children initiating smoking. Studies show children are twice as likely to start smoking before the age of thirteen if one of their parents smokes. Smoke-free Play Parks and designated children's areas on beaches offer an opportunity to introducing outdoor Smoke-free environments where families can enjoy fresh air and reduce the exposure of negative role models to their children. Smoke-free South West is working with partners to introduce voluntary smoking bans in play parks.

Baseline research:

1. Explored broader attitudes towards smoking, particularly around children
2. Gauged reactions to introducing a voluntary smoking ban in play parks
3. Tested the best way to communicate such a ban Undertaken in four different localities in the South West in areas of social deprivation this used both quick 'intercept' and in-depth interviews to gain both a broad perspective from a wider audience and a deeper understanding. The target audience was parents or carers of young children who regularly attended the parks and beaches.

Results showed most parents were concerned about the health of their children in terms of second-hand smoke and 'copycat' behaviour. On the question of voluntary versus regulatory it was strongly felt that the voluntary ban would be favourable particularly among smokers. Overall, most seemed willing to refrain from smoking in play parks, and a positive and courteous approach was considered most effective. One year after implementation, there has been a significant shift in behaviour with less people smoking in the play park and as a result, people feel that it is a better place for their children to play.

PD-890-20 Smoking family, paternal smoking at home and saliva cotinine levels of young children in Hong Kong

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Background: Prevalence of smoking in Hong Kong (all 10.7%, male 19.1%, female 3.1%) is among the lowest in the world. Home is a main source of children's second-hand smoke (SHS) exposure in densely populated Hong Kong. We investigated paternal smoking places at home and distance from children with children's cotinine levels.

Design/Methods: 773 children (response rate 66.0%, mean age 6.2±5.6, 51.6% boys) were recruited in 4 Maternal and Children Health Centers in Hong Kong. Information on SHS exposure at and outside home, paternal smoking behaviours, socio-demographic characteristics was reported by mothers. Saliva from 445 children (57.6%) were collected using 2 units of Sorbette® which were placed under the tongue or the cavity next to the gum for at least 30 seconds. Cotinine levels was analysed using enzyme linked immunosorbent assay (ELISA) by the National University of Singapore. Family smoking was categorised as 3 types: non-smoking families (n=247), smoking families without reported SHS exposure at home (n=114), smoking families with SHS exposure at home (n=84). Paternal smoking places at home (bedroom/living room, wash room, kitchen) and distance from children (within or away from 10 meters) were also reported. Geometric mean of cotinine by types of family smoking and paternal smoking behaviours were compared using ANOVA and -coefficient derived from generalized linear model adjusting for outside home SHS exposure.

Results: Compared with non-smoking families (0.98 ng/ml), cotinine levels were significantly higher in smoking families without SHS exposure (1.08ng/ml) and with SHS exposure (1.25ng/ml) (ANOVA <0.001). The corresponding -coefficients (95% CI) were 0.13 (0.02-0.66) and 0.34 (0.19-0.61). Among smoking families with SHS exposure at home, 26.8% fathers smoked within 10 meters from children and the cotinine level (1.43 ng/ml) was significantly higher than parental smoking beyond 10 meters (1.16ng/ml) with -coefficient of 0.48 (0.27-0.84). Similar cotinine levels were observed for paternal smoking in different places at home: bedroom/living room (1.61 ng/ml), wash room (1.39 ng/ml) and kitchen (1.25 ng/ml) (all p >0.05).

Conclusion: Children living in smoking families with or without reported SHS exposure at home had significantly higher levels of cotinine. Smoking in wash room or kitchen was not effective in reducing cotinine levels of children. Smoking parents should quit smoking to protect their children.

26. CIVIL SOCIETY LINKS, IMPACTS AND OPPORTUNITIES

PD-891-20 Smoking prevalence in a rural community of Bangladesh

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Background: Smoking is a global public health issue. It causes lot of premature death and health problems also possess economic burden among poor people in any developing countries. Despite of anti-smoking campaign prevalence of smoking is increasing in developing countries. The aim of this study was to determine the prevalence of smoking and factors associated with smoking among a rural population of Bangladesh. State study objectives, study question or a description of the challenge addressed by the research.

Design/Methods: A Cross-sectional study was done to collect data from February to April 2011 using a semi-structured standardized validated questionnaire from a rural community of Bangladesh. Sample was determined purposively and size was 500 respondents.

Results: The study's current smoking prevalence was 39.4%. Mean age of respondents was 34.63 years and current smokers mean age was 35.7SD±9.23 years. The prevalence of current smoking amongst male (89.3%) was significantly higher in comparison with the female (10.7%). Current smoking habit had been gradually decreased with the level of education. The prevalence of current smoking was significantly ($p=0.000$) highest among the day labour (30.5%) and two-third of the smokers was initiated to smoking within the age group of 10 to 20 years. About half of the smokers were spent more than 15 Taka daily for smoking whereas 36.4% of the current smokers were smoked 5 to 15 sticks per day. Both ever (42%) and current (45.2%) smoking prevalence was highest amongst the population those who were belong to the monthly family income below 5000 Taka (60 USD).

Conclusion: Study's rural smoking prevalence was 39.4%. Ever and current smoking prevalence was significantly higher among male than female. Smoking prevalence was highest among the illiterate and reduced with increased level of education and socio-economic status. To reduce the smoking prevalence amongst the risk group, policy-maker should be implementing massive anti-smoking program.

PD-892-20 Local government initiatives to keep public places as smoke-free

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Background and challenges: AID as a developing organization funded by The Union has been implementing

a tobacco control project since 2009 aiming at reducing tobacco use and second hand smoking in public places and transports. But the main challenges of the project are to aware general people and to involve Local Government Institution and Civil Society Organisation in this movement.

Intervention or response: The project consists of the following activities - Rising Public Awareness through 56 Cultural events, 237 WNTD observation and Campaigns through IEC materials. Involvement of Local Government and Local Authorities through 95 Quarterly and half-yearly meeting and 201 Sensitizing or Capacity Building workshops Activation of Task force Committee through 830 Quarterly Taskforce meetings and 443 Mobile Court operations Student's involvement in anti-tobacco movement by the formation of anti-tobacco student volunteer organization (SUBASH) and 08 Smoke free Campus Campaigning

Results and lessons learnt: Major achievements of the project i.e. declaring 2016 public places and 4217 transports smoke free, Tobacco free Guideline adoption by Khulna City Corporation, 36 Municipalities are to be adopted soon and Smoke free declaration of 14 educational institutions. Budget allocation for tobacco control activities by the two Municipalities is a significant achievement. Learning from the project

- Public involvement is important.
- A little initiative can bring changes in the society.
- Both LGI and government administration should be accountable for implementing the Law.

Conclusion. Smoking or tobacco consumption is the result of negligence and lack of awareness. AID is trying to raise awareness among people through various activities.

PD-893-20 Impact of capacity building training for the executive magistrates on tobacco control law enforcement in Bangladesh

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Background and challenges to implementation: In recent years Mobile court has become popular in enforcing tobacco control law in Bangladesh. In fact it is the only useful tool which is being used for enforcement of tobacco control law in Bangladesh. According to the government circular, executive magistrates conduct mobile courts on different laws. It punishes the law violator on the spot. It is also welcoming by the civil society as it can earn significant media coverage. Sensitize the executive magistrates to conduct mobile court exclusively on tobacco control law was really challenging. Executive magistrates worked under Ministry of Public Administration and apparently tobacco control law was not any priority to them. National

Tobacco Control Cell (NTCC) came forward to train few executive magistrates on the tobacco control law exclusively. Although it was challenging to ensure magistrates participation from all over the country, but it became possible for active support from the Ministry of Public Administration.

Activities undertaken and response: National Tobacco Control Cell conducted capacity building training for the executive magistrates. Magistrates have been nominated from all the districts over the country. In March 2014 NTCC has trained 52 executive magistrates from 64 districts of the country. A day long training module includes Global Tobacco Epidemic, Tobacco industries tactics and violations of the law. It has been observed that lack of knowledge and information gap regarding this public health act is one of the main reasons of minimal implementation of the law.

Results: Results depicted from the quarterly report of implementation of the law in the district level shows a very significant change in enforcement of the law through mobile court. In 1st quarter (Jan-Mar) of 2014 the executive magistrates conducted 103 mobile courts and fined 165,000BDT while in 2nd(Apr-Jun)quarter the number of mobile court increase to 401 and total fine collected 446,300BDT. Sensitization of the magistrates through training has made the huge difference.

Conclusion: The more the executive magistrates sensitized to the tobacco control law, they are more interested to enforce the law. The trained magistrates are more likely to conduct mobile court on tobacco control law than before.

PD-894-20 Political process of the new tobacco control law in Chile: alliances and the role of the civil society as key factors for success

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Background and challenges to implementation: In Chile 40.6% of the population over 15 years is smoker and one out of three adult women was tobacco dependent. The country has the highest smoking rate in the world for girls between 13 and 15 years old (39.8%). On March 1st, 2013, Law 20.660 entered into force requiring smoke-free environments in every enclosed public space, especially bars, restaurants, discotheques, pubs, and casinos. The law also specified smoke-free stadiums and sport venues, more warning labels on cigarettes packages, a ban on advertising at points of sale, and restrictions on indirect advertising

Intervention or response: The political situation was adverse at the beginning of the legislative discussion with much interference by the tobacco industry (TI) at the government and parliament. The strategy was continuously delay the discussion of the law, allowing the TI and its allies to lobby parliamentarians. Major mistake was committed on the first ballot at the Chambers of Deputies, and the media was mostly against the law. Opposing arguments were based on personal freedoms and the sup-

posedly lesser health damage causes as compared to other substances such as air pollution and alcohol. Other reasons to oppose the law concerned the money that the hospitality and entertainment industries spent in 2006 to create separate spaces for smokers and non-smokers and the excessive regulation “in the name of health”. In contrast, those who supported new regulations emphasizes the high rates of tobacco consumption among Chileans; the need to protect children as well as workers from second-hand smoke (SHS); the evidence that other restricted laws in Chile, such as the “zero tolerance” alcohol law, positive influenced the population’s health; the need to be fully complied FCTC and to stop the lobbying and interference of TI.

Results and lessons learnt: The civil society was disjointed and unorganized until a new organization was born: “Chile Libre de Tabaco” (ChLT), which played a strategic role in uniting medical and scientific societies, academic institutions, health associations, NGO’s, and volunteers to enable the approval of the new law. Its role was recognized by many congressmen and media as a “positive lobby”.

Conclusions and key recommendations: An implicit political alliance between parliamentarians of all political parties, the Ministry of Health and ChLT was a key factor for the success of the law despite the large lobby of the TI.

PD-895-20 The rejection of World Tobacco Asia in Indonesia 2012: student movement on tobacco control

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Background and challenges to implementation: World Tobacco Asia (WTA) is Tobacco industry conference which aim to optimize tobacco market in in Asia, specifically Indonesia. WTA was held 2 times in Indonesia: 2010, 2012 and it planned again on 2014. Indonesia was welcome to be host, due to no smoking regulation in contrast to neighboring ASEAN countries. This paper aim to describe Indonesian people power movement on WTA’s rejection



Intervention or response: Since 2010, to reject WTA in Indonesia, Indonesian Tobacco Control Network invited civil society to reject WTA. One of the progressive movement came from student. In 2010, student is part of WTA rejection. In 2012, student, which initiated by Indonesian student movement on tobacco control became bigger and ask more student to join WTA's rejection movement. Student use social media (Facebook, twitter and tumblr) to inform more people about this issue. Moreover they conduct meeting with student body in many university, building strategy to ban second WTA in Indonesia.

Results and lessons learnt: When 2nd WTA held in Indonesia on September 2012, there were demonstration conduct by the student alliance. The biggest demonstration was held in Jakarta. More than 300 students join this demonstration. Speak their minds to reject WTA.

Conclusions and key recommendations: WTA organizer was shocked by the big demonstration. Student conduct lobby with the organizer, ask them not to hold WTA again in Indonesia. In 2014 WTA organizer planned again to hold WTA again in Indonesia. The student remain the organizer about their last promise in 2012. In medio 2014, the WTA's official website announce that WTA move to other country.

PD-896-20 Health experts' opinions on tobacco control activities in Iran

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Background Iranian representative officially signed the Framework Convention on Tobacco Control on June 16, 2003 in New York and it was ratified by the parliament and House of Representatives on November 6, 2005. Finally, it came into force on February 4, 2006. We aimed to evaluate health experts' opinion about tobacco control activities in Iran. **Material and method** This was a qualitative case study. We used a series of open-ended questionnaire assessing important information regarding Iranian National Tobacco Control law and FCTC implementation. The study population comprised of Health experts. Using this method provided questionnaires content validity. The first round's questionnaire has been pre-tested in a pilot study. The final structure and lay out of questionnaires consist of three main parts. The first part was designed in multiple choice forms with seven questions. Participants were able to rank answers from five (the most important) to one (the least important). The second part was four questions mainly on National Tobacco Control Program (NTCP) and the final part was about FCTC. Data collection was carried out between May 2010 and May 2011. In analysis process each interview was considered as a separate case and then compared to other cases to ascertain variations in answers.

Results All 40 members (100%) of the panel have completed the entire process. Among the participants there

was consensus on tobacco control program in Iran. They believed prevention programs are important priorities in this regard, Tobacco Company as a governmental organization is believed to be the main barrier for tobacco control activities in Iran, and ban tobacco selling to the minors and control smuggling are important factors for decreasing the supply of tobacco products. It is essential to implement comprehensive tobacco control law in Iran. **Conclusion** It is essential to implement comprehensive tobacco control law in Iran that includes all of priorities mentioned above, and considering chronological aspect of law implementation priority should be given to important parts of the law.

PD-897-20 Role of civil society and medical professionals in tobacco control

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Background and challenges to implementation: Jordan population is 6,594,074 million where 50% male smoking, 11% females, 13.6 % youth. 36,7% medical professionals with 22% shisha. The policies, socio-cultural, norms factors are: accessibility, affordability, availability to tobacco products. Existing tobacco companies in Jordan are: UTOB union tobacco, BAT, JTI challenged by Lack of political support of the implementation of the law, as tobacco control is not perceived by politicians as public health priority, lack of champion's model, especially among health professionals, resources for tobacco control are nonexistent, as well as the tobacco industry wields sizeable political and economic power.



Intervention or response: Many leading institutes such as King Hussein Cancer Center, Jordan Tobacco Control Alliance have launched many public campaigns engaging civil society, health professionals and World Health Organization and other leading stakeholders in the fight against tobacco, including involving 10 major universities and more than 200 schools in awareness campaigns in 5 cities, 3 major hospitals in 3 cities. Training sessions were conducted, workshops, media advocacy, establishments of quitting clinics at the MOH.

Results and lessons learnt: After conducting many public campaigns and training programs and workshops around Jordan - not to forget the governmental participation in many WHO surveys and reports - the evaluation showed raise in the awareness among the impact of tobacco and its harm among the public, but not enough to encourage smokers to quit (cigarettes and argeelah). Even post evaluation among health professionals who participated in smoking cessation training showed small change in their behaviour while treating patients and assisting them to quit.

Conclusions and key recommendations: Tobacco consumption behaviour among general public is culturally accepted, leading to the increasing the resistance to quit and comply with the law, having also the alarming high percentage of tobacco consumptions among medical professionals. What is needed is to gain political support for the implementation of FCTC treaty especially article (8) by engaging civil society as well as medical professionals providing quitting services. This will create an influential base to pressure the public and decision makers to perse the implementations of the law and will lead to the decrease of tobacco usage among the public.

PD-898-20 Independent link between attitude and perception of adolescents towards smoking and home smoking restriction in Malaysia

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Background: Report of a smoke-free home among smokers has been identified as an important measure reflecting progress in tobacco control in the protection of susceptible populations to SHS. In Malaysia, tobacco control in the form of comprehensive Smoke-Free Legislation (SFL) was initiated by the state of Melaka since July, 2011. To further promote its initiation, there is a need to study the impact of comprehensive SFL toward home smoking restriction in relation to other partial SFL states. (62%) (n=275) states were similar. Implementation of home smoking restriction was significantly higher in comprehensive SFL state (68%) (n=301) compared to partial SFL state (59%) (n=259). From the hierarchical logistic regression among 550 adolescents who lived in smoking households, comprehensive SFL significantly contributed to the reporting of home smoking restriction (Adjusted OR (AOR) 1.70; 95%CI 1.15-2.53). Attitude (discussed with family members about detrimental health effects of smoking; AOR 2.49; 95%CI 1.68-3.69) and perception (belief that smoking is detrimental to health; AOR 1.9; 95%CI 1.12-3.35) were the strongest factors contributing to the reporting of home smoking restriction.

Conclusion: Home smoking restriction was linked to comprehensive SFL. Attitude and perception towards smoking as a negative habit was the strongest independently linked factors contributing to the implementation of home smoking restriction. In addition to wider implementation of comprehensive SFL, effort should be emphasized in encouraging the changing of attitude and belief of adolescents to gravitate negatively towards smoking with the aim to increase the initiation of home smoking restriction which will ultimately help Malaysia to succeed in tobacco control.

PD-899-20 The support for smokefree policy and the influence of tolerance to smoking on it: experience of a developing country

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Background: This study was conducted to determine the support in making Penang UNESCO World Heritage Site (GTWHS) smoke free and to determine the influence of tolerance towards smoking on this support.

Design/Methods: A cross sectional study was conducted in Penang UNESCO World Heritage Site which commenced from the middle of December 2012 and ended in April 2013. A multistage sampling process was done to select a random sample of respondents to represent the population of GTWHS based on the probability proportionate to population size sampling framework. Data was collected using face to face interview by trained interviewers. Attitude towards smoking was assessed using tolerance as a proxy.

Results: A total of 3268 members of the community participated. A big majority of the respondents supported (n=2969; 90.9%) the initiative. Support was lowest among the owners and residents/tenants, higher age groups, the Chinese, men respondents who had poor knowledge of the places gazetted as smoke free and respondents with poor knowledge of the health effects on smokers and the health effects on passive smokers. The odds (both adjusted and unadjusted) of not-supporting the initiative was high among those tolerant to smoking in public areas. Tolerance towards smoking was associated with 80.3% risk of non-support in the respondents who were tolerant to smoking and with a 57.2% risk in the population.

Conclusion: Health promotion and education concerning the harm of tobacco smoke in Malaysia which has mainly targeted smokers must change. Health education concerning the risks of second hand smoke must also be given to non-smokers and efforts should be made to de-normalise smoking in public.

PD-900-20 MPOWER Youth Summit: using social media**C Garcia**¹¹Campaigns, FCTC Alliance, Philippines (FCAP), Quezon City, Philippines. Fax: (+632)4414383. e-mail: kaloi.garcia@gmail.com

Background and challenges to implementation: The youth is the most targeted sector of the Tobacco Industry. At their young age, they are the most susceptible to tobacco advertising, promotions and sponsorship. It is therefore necessary for tobacco control advocates to challenge these TI measures. The MPOWER strategy as developed by the World Health Organization (WHO) is an effective counter-measure but the challenge is for it to be known and liked by the youth. Hence, Social Media platforms, primarily Facebook and Twitter, should be used to entice the youth in knowing the MPOWER strategy.

Intervention or response: The 1st Youth MPOWER Summit Using Social Media held in Iloilo City is the first in the Philippines, incorporating the MPOWER Training of the WHO and the Social Media Training of the World Lung Foundation. This Training was attended by 42 student leaders from 21 public and private High Schools in Iloilo City. Student leaders posted pictures and messages learned from the MPOWER Workshop using Facebook and Twitter platforms. One of the highlights was the contest on creating a Facebook page for the petition to pass the Graphic Health Warning (GHW) bill pending in the Philippine Senate and Congress. 21 new Facebook pages were created to campaign for the putting of GHW on cigarette packs and to advocate for a stop in using tobacco. The winning Facebook page gathered 491 likes after 4 days of training. In the end, the participants were divided into groups and were asked to create a 3-minute anti-smoking video putting all the lessons they have learned for sharing to their fellow students.

Results and lessons learnt: It was gathered that the students will listen more and will ask for advice and guidance among their fellow students, rather than from adults. Given the high prevalence of Social Media use among the youth, these channels should be maximized by equipping student leaders with the necessary knowledge and skills in promoting tobacco control. The Facebook pages, Twitter posts and petition lodged in Change.org website greatly helped in popularizing the GHW campaign. Their Congressman eventually filed a bill mandating 50% GHW in Cigarette Packs, which was approved by both Houses of Congress and awaiting signature of the President.

Conclusions and key recommendations: This kind of Youth Summit should be cascaded to as many student leaders as possible all over the country, to install consciousness and popularize tobacco control among the youth, online and offline.

PD-901-20 The impact of televised tobacco control advertising content on campaign recall: evidence from the International Tobacco Control (ITC) Uganda Survey**N Walakira**,¹ **N Nalwonga Amina**²¹Advocacy, Tobacco Control Center, Kampala, Uganda,²Advocacy, Tobacco Control Center, Kampala, Uganda. Fax: (+256)414356984. e-mail: rnyanzi52@yahoo.com

Background: Although there is some evidence to support an association between exposure to televised tobacco control campaigns and recall among youth, little research has been conducted among adults. In addition, no previous work has directly compared the impact of different types of emotive campaign content. The present study examined the impact of increased exposure to tobacco control advertising with different types of emotive content on rates and durations of self-reported recall.

Methods: Data on recall of televised campaigns from 1,968 adult smokers residing in England through four waves of the International Tobacco Control (ITC) Uganda Survey from 2010 to 2013 were merged with estimates of per capita exposure to government-run televised tobacco control advertising (measured in GRPs, or Gross Rating Points), which were categorised as either “positive” or “negative” according to their emotional content.

Results: Increased overall campaign exposure was found to significantly increase probability of recall. For every additional 1,000 GRPs of per capita exposure to negative emotive campaigns in the six months prior to survey, there was a 41% increase in likelihood of recall (OR = 1.41, 95% CI: 1.24–1.61), while positive campaigns had no significant effect. Increased exposure to negative campaigns in both the 1–3 months and 4–6 month periods before survey was positively associated with recall.

Conclusions: Increased per capita exposure to negative emotive campaigns had a greater effect on campaign recall than positive campaigns, and was positively associated with increased recall even when the exposure had occurred more than three months previously.

PD-902-20 Producer responsibility and product stewardship for tobacco control: an environmental approach**T Novotny**,^{1,2} **C Curtis**,¹ **S Collins**,^{1,3} **P Stigler**,^{1,2} **S Cunningham**³¹Policy, Cigarette Butt Pollution Project, San Marcos,California, United States of America, ²Graduate School

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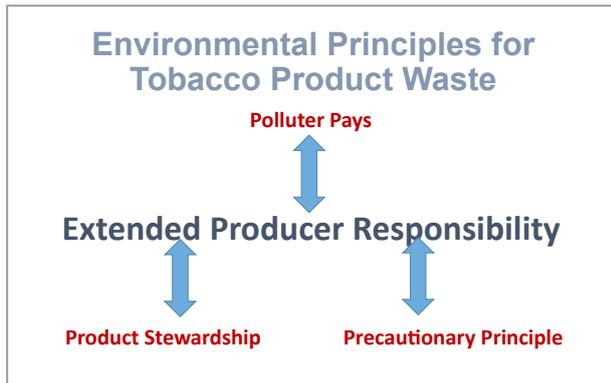
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Background and challenges to implementation: Tobacco Product Waste (TPW) is a toxic environmental hazard and the most ubiquitous waste item collected on environmental cleanups throughout the world. The tobacco industry has avoided any responsibility for cleanup, prevention, mitigation, or reduction of TPW.



Intervention or response: The Cigarette Butt Pollution Project (CBPP) has joined with a variety of tobacco control and environmental groups to raise the level of public attention to the TPW issue by using environmental principles such as the Precautionary Principle, the Polluter Pays Principle, Extended Producer Responsibility, and Product Stewardship to stimulate advocacy, conduct new implementation research, and formulate novel policies to ben-

efit both environmental and tobacco control efforts. Using paid media, social media, cleanup campaigns, toxicologic research, economic modelling, and policy advocacy, new environmental approaches to TPW that will benefit global tobacco control efforts have been developed. Most prominent among these is recent proposed legislation to ban the sale of filtered cigarettes, prohibit smoking in outdoor public spaces, and engage hazardous waste laws to enact further controls on TPW disposal.

Results and lessons learnt: Environmental principles applied to TPW are able to stimulate new alliances between environmental groups and tobacco control practitioners. Existing environmental legislation can be used to influence tobacco use and littering behaviour among smokers.

Conclusions and key recommendations: The environmental approach to TPW may prove to be an innovative channel for global tobacco control efforts aimed at shifting responsibility for TPW cleanup, take-back, recycling, product changes, and financing back to the tobacco industry and to other businesses that profit from tobacco use.

27. REDUCING DEMAND BY TARGETING RISK GROUPS

PD-903-20 Adolescence and psycho-social trench in the XXI century

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Background and challenges to implementation: In the context of a growing use of psychoactive substances among adolescents in the Province of Buenos Aires, Faculty of Medical Sciences of UNLP, held extension projects aimed at prevention and health promotion. We started with a prevalence of 71% of alcohol consumption (75% of them on weekends), 29.3% smoked, 20% marijuana use, and 51% exposed to tobacco smoke at home. The aim of the work was to empower teens of personal resources and protective factors against the marketing of tobacco, marijuana and alcohol.

Intervention or response: The intervention was aimed at adolescents 15 to 18 years. 7 middle schools were selected from La Plata, and in each, 2 4th year courses. Self-administered questionnaire on health-related behaviours and risk factors, adapted from the Global School Health Survey (GSHS), was applied in order to have a baseline to guide the actions. The project of one year, was aimed at modifying cognitive, attitudinal and behavioural indi-

vidual and group intermediate factors of the school community. To this end, 9 multidisciplinary workshops for students and 2 for teachers were conducted. They covered topics as critical thinking and media myths, peer pressure, binge drinking, and empowerment against risk situations. Audiovisual material, psychodrama techniques, virtual interactive spaces was used. Evaluation questionnaires at the beginning and end of each workshop were applied.

Results and lessons learnt: 495 students participated with 90% of active participation, development of teamwork and peer communication actions aimed at the family and community. Adolescents experienced gradual changes in the defensive position on the issues to be addressed and empowered reflective speeches to peer pressure and media. The project demonstrated the students' development of critical attitudes to trading strategies and advertising, internalization of no aggressive models of communication with peers and adults, and demystifying social myths related substance use.

Conclusions and key recommendations: The methodology applies to strengthen the development and empowerment of healthy behaviors among adolescents in natural, unforced and constructive manner.

Interventions: aimed at adolescents should be placed in an empathic way, providing a cognitive and emotional support to the psycho-physical changes that the adolescent is transiting, facilitating adjustment and transformation of context.

PD-904-20 An innovative and strong tool for increase awareness on health hazards of tobacco and law among poor illiterates

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Background and challenges to implementation: According to Global Adult Tobacco Survey (GATS), tobacco consumption is higher among poor (55.6%) and illiterates (62.9%). Most of the poor and illiterates have no facility of mass-media (television, newspapers etc.). It is difficult to create awareness among them by formal mass-media campaign.

Intervention or response: Gampot is combination of couple of different folk performances; including Gamvira song and Pot song. It also includes displaying digital banners on tobacco hazards and tobacco control law. Firstly, Gamvira attracts audiences, and then performer provides key messages to audiences. SEIAM and its executive director (ED) is inventor of this Gampot in Bangladesh. Gampot conveys full messages what we wish to provide audiences for reducing tobacco consumption as well as tobacco control law. In Gamvira, a grand-son and grand-father performed through conversation in rhythmic way. Grand-son was caught by grand-father while he was smoking. The grand father told him the health hazards of smoking by singing. Often, performers (grand-father and grand-son) talked with audiences. While Pot song is explaining pictures through music and speaking. It helps audiences to understand health hazards of smoking, second-hand smoking and tobacco use with pictorial warnings, definition of public places and transports, punishment of law etc.

Results and lessons learnt: While performing Gampot, audience's awareness is increased much more. Survey done among the audiences of Gampot shows that about 98% of audience suggested Gampot for much more awareness on tobacco hazards at market, local bazar or public gatherings. Experts and GO-NGOs also suggest to perform Gampot for creating awareness on tobacco control law.

Conclusions and key recommendations: Gampot can perform auditorium or any open public places including streets, rural markets, festival areas etc. Gampot is not cost-effective performances. It needs some of digital banner with pictorial messages of tobacco hazards and tobacco control law and couple of performers. It needs 5 days for preparation of script and rehearsal before performance for first time. No need extra dress-up, make-up or audio-visual settings. Gampot also can move one to another place simply. Any organization, anywhere in world can develop a group of Gampot.

PD-905-20 Knowledge of harms of tobacco use among Zambian smokers and smokeless users: findings from the ITC Zambia Survey

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Background: Research from high-income countries shows that knowledge of the health effects of tobacco use is a key predictor of quitting among smokers. However, there is almost no research on the level of knowledge in sub-Saharan African countries. This study reports the findings of the first-ever study of knowledge of the health harms of cigarettes in Zambia, where cigarette packs currently have a single text-only warning and public education campaigns about the harms of tobacco use are rare.

Design/Methods: Data were analysed from the 2012 International Tobacco Control (ITC) Zambia Survey, a nationally-representative sample of 1483 tobacco users aged 15+ years. Smokers and smokeless users were asked for their knowledge/belief that tobacco use caused several specific diseases; the sources and impact of anti-tobacco messages; whether they noticed the health warning on cigarette packs; and whether the government should do more to tackle the harms of tobacco use.

Results: Knowledge of the harms of tobacco use was very low in Zambia compared to other ITC countries. Less than half (47%) of Zambian male smokers were aware that smoking causes stroke--the second lowest percentage among male smokers in 19 ITC countries. Awareness among male smokers (79%) that smoking causes lung cancer was the lowest of 17 ITC countries. Smokeless tobacco users were less aware of the harms of smokeless tobacco than smokers. For example, 31% of smokeless users (vs. 53% of smokers) were aware that smokeless tobacco causes mouth cancer. The most frequently-cited sources of anti-tobacco information were radio (26%) and warnings on tobacco packs (21%). Although anti-tobacco messages are not common in Zambia, 72% of tobacco users reported that such messages made tobacco less socially acceptable and 44% said that it made them more likely to quit. Only 24% of smokers noticed the health warning on cigarette packs, 62% of smokers wanted more information on cigarette packs, and 82% of tobacco users wanted the government to do more about harm from tobacco use.

Conclusion: Tobacco users in Zambia have low awareness of the harms of tobacco use and rarely notice health warning on packs. Yet they support and urge the government to do more to tackle the harm done by tobacco use. These findings point to the need in Zambia for stronger anti-smoking campaigns (FCTC Article 12), especially on radio, and for pictorial health warnings--needs that exist in sub-Saharan Africa.

PD-906-20 An analysis of earned media coverage of tobacco control in print media of Bhopal division of Madhya Pradesh

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Background: Media has always played an important role in generating awareness and forcing policy makers to take decisions in favor of public. Earned media coverage for tobacco control is very helpful in implementation of the MPOWER and FCTC at grassroot level. In order to institutionalize and implement Indian Tobacco Control Act it is very important that the information related to the tobacco control to be disseminated among media especially print media. Media advocacy plays an important role not only in generating awareness but also in forcing administrative authorities to perform their duties.

Design/Methods: Media has always played an important role in generating awareness and forcing policy makers to take decisions in favor of public. Earned media coverage for tobacco control is very helpful in implementation of the MPOWER and FCTC at grass root level. In order to institutionalize and implement Indian Tobacco Control Act it is very important that the information related to the tobacco control to be disseminated among media especially print media. Media advocacy plays an important role not only in generating awareness but also in forcing administrative authorities to perform their duties.

Results: A total of 200 news releases were published in 1.5 years in 5 districts of Bhopal division. 29 newspapers have covered the news, government public relation department has also covered the news. The total space occupied by the news releases was 30, 894 sq cm. 71 news published regarding Implementation of Indian Tobacco Control act, 23 news regarding tax, 54 on World No Tobacco Day, 20 on Enforcement of sect 4 of Indian Tobacco Control Act, 13 on section 6 of Indian Tobacco Control act, 5 on shisha/hookah ban, 7 on release of IEC material on tobacco by Chief Minister. A total of 119 news releases published in regional edition newspapers of state capital headquarters. 81 news published in other district and block level editions of newspapers of 4 districts of Bhopal division. Approximately 30, 000 words were written about various issues of tobacco control.

Conclusion: The results of the study shows that direct advocacy when combined with media advocacy can bring sustainable changes in the field of tobacco control at all levels.

PD-907-20 Awareness of and willingness to try e-cigarettes among adolescent college students of Mangalore city

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Background: E-Cigarettes (Electronic cigarettes) are battery-powered devices that deliver vaporized nicotine without the tobacco combustion of regular cigarettes. Tobacco control advocates and researchers are concerned that e-cigarettes could act as “gateway” devices, getting novice users, particularly the young people, addicted to nicotine and encouraging future tobacco use. The adolescent college students are a group that is at risk for smoking initiation and may use e-cigarettes as an experimentation to start smoking. These products are gaining popularity in many countries but little is known about their use among young people in India. Hence the present study evaluated the awareness of and practices towards e-cigarettes among adolescent college students.

Methods: A descriptive cross sectional study was conducted on 314 adolescent college going students of Mangalore city using cluster sampling. Information was elicited on their socio-demographic characteristics, knowledge of e-cigarettes, attitudes and practices related to that. Statistical analysis was done using SPSS version 19 and results were compared using percentages test and chi square test.

Results: The mean age of study population was 16.3 years with 58% males. Only two male participants (less than 1%) had previously tried e-cigarettes. Among those who had not tried e-cigarettes, most (64%) had heard of them. Awareness was higher among male adolescents than female students ($p < 0.05$). 24% of the participants were willing to try either a plain or flavored e-cigarette. Those students who have smoked cigarettes before were more willing to try any e-cigarette than nonsmokers (OR 10.25, 95% CI).

Conclusions: In the present study, it was found that most adolescent males were aware of e-cigarettes, and a substantial minority was willing to try them. Given that even experimentation with e-cigarettes could lead to nicotine dependence and subsequent use of other tobacco products, regulatory and behavioral interventions are needed to prevent ‘gateway’ use by adolescent college students. Education about e-cigarettes could help providers deliver comprehensive preventive services to adolescents at risk of tobacco use.

PD-908-20 Are smokers prone to TB?: an assessment of knowledge levels among different groups in India

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Background: India is one of the most populous countries with high TB burden and high HIV burden. Combined with other risk factors for TB including malnutrition due to poverty, migration, large slum dwellings, tobacco smoking and alcohol abuse pose a huge threat to TB control in India. Nearly 17 % of smokers of the world live in India. Tobacco smoking is an important risk factor for TB. The present study attempts to assess the knowledge levels of different groups on the tobacco use and TB.

Design/Methods: A cross sectional community based survey was conducted on Knowledge, Attitude and Practice (KAP) study of Tuberculosis in 30 districts of India in India during the months of November 2012 – April 2013. The total number of respondents covered during the survey was 6527. A semi structured questionnaire was designed to collect information on KAP from the general population, TB patients, Opinion leaders and NGO/CBO representatives.

Results: On an average more than 50% of the population gave an opinion that smokers are prone to TB. The awareness about the association between smoking and TB among the general population, TB patients, Opinion leaders, NGO/CBO representatives are 49%, 56%, 56% and 70% respectively. The knowledge levels by different category of population in the 4 zones are given below:

Knowledge levels on: Are smokers prone to TB?

Category	North (%)	East (%)	West (%)	South (%)	Total (%)
General Population	46	43	42	69	49
TB Patients	62	57	63	38	56
Opinion Leaders	57	52	49	69	56
NGO/CBO representatives	50	58	20	80	70

Conclusion: There is an acute need to increase the knowledge among the general population on the risk factors for TB and the association between smoking and TB. The varying knowledge levels in the different zones poses a demand for designing suitable region wise strategies for creating awareness about the risk of exposure to TB.

PD-909-20 Kick the Stick: the need of Edutainment education to prevent tobacco use among young people of rural Gujarat, India

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Background: Smoking prevalence among rural young people greatly exceeds the prevalence in the urban population of India young people, yet limited research has explored the social context in which young people use tobacco. The present study conducted with objectives to identify social determinants of smoking and existing gaps in control programs.

Design/Methods: 9 focus groups were conducted in 2010 with Siddi young people aged 15–24 years residing in rural areas (n = 82) of Junagadh district of Gujarat to examine attitudes and experiences surrounding smoking and quitting. The focus group discussion guide was developed with a set of questions about initiation, type and socio-cultural context of smoking; knowledge of health effects of tobacco, attitudes toward tobacco use and effects of tobacco control campaigns. A content analysis was conducted through 12 in-depth interviews, 9 focus groups (8 and 10 participants in each group) and 8 narratives.

Results: Advertising, family and peer influence play a central role in smoking initiation among Siddi young people. The following 3 themes emerged from the analysis as risk factors: personal factors, social factors and misperceptions about tobacco use. The primary reasons for smoking initiation and maintenance were identified as stress, social influence and boredom. Motivators for quitting were identified as pregnancy and/or children, dancing performance (males only), cost issues and, to a lesser extent, health reasons. The barriers to quitting were identified as social influence, perception of quitting as an impossible event and no access to cessation support. However, it appears that social influences, stress and no motivation were particularly salient contributors to tobacco use initiation and maintenance among young people.

Conclusion: Cessation interventions targeted at young rural tobacco users should aim to build motivation to quit by utilizing the motivators of pregnancy and/or children, dancing performance (males only), cost issues and, to a lesser extent, health reasons. The social campaign should use edutainment to break misperceptions related to use of tobacco and help them making 'right' decisions based on accurate information. Prevention activities should be embedded in a comprehensive approach which aims to change the smoking and parenting behaviour of parents and teachers, and at creating non-smoking policies in schools, community and other places where young people congregate.

PD-910-20 Awareness about anti-smoking related laws and legislation among general population in slums of Delhi, India

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Background: The state of Delhi has been a front runner in the implementation of The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003” (COTPA). To enforce compliance of this Act, Delhi government started the ‘Smoke Free Delhi’ initiative in 2009. Effective implementation of a law that seeks to alter behaviour needs active co-operation and increased awareness about the law among the general public. Almost 40% of Delhi’s population lives in slums and is vulnerable to lifestyle diseases in addition to the infectious ones. It is therefore important to assess their opinion and ensure compliance. Therefore, the present study was undertaken to assess the awareness of the general public residing in slums regarding the initiative years after intensive implementation.

Design/Methods: It was a cross-sectional study conducted in the participants selected by cluster sampling from the slums in 6 districts of Delhi using a pre-tested semi-structured questionnaire. A total of 708 slum dwellers were interviewed.

Results: Out of the total, 32.1% (n=228) reported to be current smokers. Only 16.1% (n=114) of the participants were aware about the name of COTPA. Awareness about organization implementing the COTPA was also very low (n=45; 6.4%) among the slum dwellers. Even though the slum dwellers had less awareness about COTPA by name (as stated above), they were aware about some of the provisions of the act. Majority of the slum dwellers (n=529; 74.7%) perceived that smoke free zones are the places where smoking forms of tobacco are banned. Regarding the awareness about the places designated as “smoke free zones”, 82.1% (n=581) of the respondents named educational institutions followed by buses/trains (79.9%) and hospitals (77.3%). About 61% of the people interviewed reported to have seen people smoking at public places on the day of interview while only 21.5% reported to have seen any one getting punished/fined for smoking at public places.

Conclusion: The awareness about anti-smoking law and smoke free initiative was low among the study group. Further, action against the violators of the law was not being taken according to the study respondents. Thus, there is a need for stricter implementation of the law and increased spreading of awareness among the general public regarding the anti-smoking legislation.

PD-911-20 A study of tobacco-attributable cancer burden in Kazakhstan

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Background: Tobacco smoking is the largest preventable risk factor for morbidity and mortality in industrialized countries including Kazakhstan. Beginning in 2009, cancer mortality takes 2nd place in the structure of total mortality in Kazakhstan. Lung cancer for many years is the leading cause of cancer morbidity and ranks first place in the structure of cancer death.

Design/Methods: The study focused on lung cancer incidence data calculated per 100,000 of the population concerned, with age, region specific and tobacco consumption level incidence rates.

Results: The statistics of tobacco consumption in Kazakhstan shows all the signs of the tobacco epidemics, more than 26.5% of Kazakhstan citizens are smokers (4.2 million people, 2012), the 4% jump in the level of tobacco consumption (2001 – 23,3%) is a direct consequence of aggressive marketing and tobacco products advertising, low prices for tobacco products. Per capita consumption of tobacco products among Kazakhstan citizens increased more than 8 times, every day every citizen of Kazakhstan smokes at least 9 cigarettes a day. Variation between tobacco consumption level is very conceivable and this could be reflected in different tobacco-attributable cancer incidences. In accordance with the level of smoking Kazakhstan regions were divided into regions with high consumption of tobacco (North Kazakhstan oblast - 36.8%), medium-high (28,6-30,3%) - Karaganda, Almaty, East Kazakhstan, Almaty city and others), regions with medium level (23,2-26,4%) and low (19,5-21,1% - Kyzylorda, Mangistau, Atyrau regions). Strong correlation was found between regions with a high incidence of lung cancer and regions with high medium-high levels of smoking (p < 0,05) when comparing the age-specific incidence, especially among men older than 50 years. Also noted the ambiguous dynamics frequency of lung cancer among women since 2002 annual decrease incidence of 1.8%, but in 2010 the cancer rate was the increase annually by 9.4%. Study of the tobacco-attributable cancer burden is continued.

Conclusion: The study confirms the need for a strong national tobacco control policy in Kazakhstan according to FCTC and MPOWER in order to reduce the burden of tobacco-related diseases. After completion of the study results will be presented to the government as evidential argument to protect public health from the tobacco epidemic in Kazakhstan.

PD-912-20 Development of Thailand's youth leaders against smoking

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Background: National Statistics Office surveys from 2009 to 2013 showed an alarming increase in young smokers. Because of this trend and the importance of youth uptake in long term smoking harms and influences on the acceptability of smoking, ASH Thailand developed a project to strengthen the capacity of youth to advocate against smoking. Through collaboration with the teacher network for smoke-free schools, the project focused mainly on youth at the high school level in five provinces in Thailand.

Intervention: ASH and the teacher network organized two day training workshops focusing on leadership and ability to think outside the box. Workshops included an emphasis on teamwork, strengthening communication skills and raising awareness about tobacco industry tactics. The training also covered the adverse effects of smoking and an introduction to quitting. Then participants had the opportunity to participate in activities where they worked with friends to plan and organize anti-smoking campaigns. In the last 4 years, ASH Thailand has conducted five trainings with a total of 355 participants.

Results: After youth return from the training, they go back to school with activities suitable to their peers and of interest to their friends. This boosts awareness among youth of tobacco use and how they can protect themselves from smoking and exposure to second hand smoke. Youth work closely with teachers to help their friends quit smoking. The process begins with a survey to determine the number of students who want to quit, followed by open discussion about the benefits of quitting and the provision of materials and advice on how to quit. Advisors then follow up and provide continuing support until the youth is able to quit.

Conclusion: Youth communicating with each other gives them an opportunity to create exciting activities consistent with their nature and interests. Youth become more aware and understand the harms of smoking. Trainings have led to activities based on the involvement of young people, and this process serves as a model which can be applied in other schools.

PD-913-20 ASEAN Tobacco Control Atlas: resource tool for advocacy and policy change

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Background and challenges to implementation: This paper emphasizes the need for consolidating information on tobacco control issues from the same geographical region for the purpose of advocating stronger policy change in a country.

Intervention or response: As a regional tobacco control network, Southeast Asia Tobacco Control Alliance (SEATCA) has strengthened interactions and collaborations among its partner countries in the ASEAN region in sharing information, expertise and interdependent resources as well as to reduce any duplication effort. SEATCA therefore acts as a catalyst to ensure the consolidation of information and resources across partner countries considering the imbalance in availability and access to resources and level of capacity to influence decision making in each country.

Results and lessons learnt: Recognizing the power of knowledge sharing and evidence for advocating stronger tobacco control policies implementation, SEATCA worked closely with its partner countries to compile and consolidate information into infographic resources, producing the ASEAN Tobacco Control Atlas. It is meant as a reference on various tobacco control issues that plagued the world and how these affect all ASEAN countries. The resources present with graphic details of regional updates of evidence showing the progress made in strengthening tobacco control policies following major World Health Organization Framework Convention on Tobacco Control (WHO FCTC) articles across the ten ASEAN countries. They include the level of tobacco consumption, costs of smoking tobacco, progress in tobacco control in terms of prices and taxes, smoke-free environments, packaging and labelling of tobacco products, tobacco advertising, promotion and sponsorship, tobacco industry and its interference, tobacco farming and establishing sustainable funding. Such resources facilitate the effective use of evidence in fighting for stronger tobacco control policies through regional comparisons and benchmarking to put pressure on policy makers in a country.

Conclusions and key recommendations: By working together, resources can be coordinated and packaged to provide timely and regular up-to-date and relevant access to sufficient resources for country partners. The Atlas is designed to be a practical resource and reference as well as advocacy tool for policy development in ASEAN including other developing countries in other parts of the world.

PD-914-20 A new approach to communicating tobacco prevention to school students: HEART2

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Background and challenges to implementation: Preventing adolescent tobacco use is a key aspect of tobacco endgame strategies. As the majority of adult smokers commence tobacco experimentation during adolescence, it is imperative to incorporate educational interventions to promote a tobacco free future.

Intervention or response: We designed an educational campaign for school children between 10-18 years of age in Greece in 2013-2014 based -not on the negative reasons of tobacco use- but focused on the positive reasons for not using tobacco. This educational curriculum was facilitated through the creation of special tobacco education offices in three cities (Athens, Thessaloniki, Tripoli) and through hands on training sessions with individual school classes with the use of props

Results and lessons learnt: Three individual themes were created to address tobacco use in ages 10-12, 13-15 and

Conclusions and key recommendations: The methodological framework indicates the importance of creating a “tailor fitted programme” to each age group that focuses on aspects that are important to that specific group which include positive perceptions among 10-12 year olds, personal choice among 13-15 year olds, and active engagement among 16-18 year olds.

16-18 year olds. The three separate themes “I learn not to smoke”, I choose not to smoke, and “I demand a tobacco free future” were well received among the three age groups respectively (Figure 1). Within these three themes a line of continuum was created that linked the classroom (posters, stickers), the house (take home books), and the community (mass media intervention on TV) so as to triangulate the adolescents exposure to the educational campaign. The above actions were subsequently supported by a strong online presence design to be attractive to teenagers (www.thetruth.gr) and www.smokefreegreece.gr)



28. E-CIGARETTES: EVIDENCE AND ANALYSIS

PD-915-20 An empirical analysis on communications about electronic nicotine delivery systems (ENDS) in Chinese social media

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Background: China, with a smoking population of over 350 million, is the largest potential market for electronic nicotine delivery systems (ENDS). The importance of understanding how ENDS are promoted and discussed in China cannot be overstated. However, related research is

sparse. This study aims to explore the nature and extent of discussions around ENDS in Chinese social media, which have the power to influence a massive audience.

Design/Methods: We collected the data from Sina Weibo, which is one of the most popular Chinese microblogging sites. The dataset, which consisted of 999 messages, was analyzed in terms of polarities, genres and discussion topics. Statistical test and regression analysis were used to explore whether those features of messages will affect the message popularity, which was measured by repost number and comment number.

Results: Among the 999 messages, 67.8% were pro-ENDS messages, while 16.4% were anti-ENDS messages. The remaining 15.8% of the messages were “neutral”. Within pro-ENDS messages, the genre with the most messages was “advertisements”, which made up 24.3% of our sample. The most mentioned issue was the effectiveness of ENDS to quit smoking with 26.3% of messages, followed by the health effects of ENDS with 14.5% of messages and legality of ENDS with 11.5% of messages.

Conclusion: The results of our study showed that 1) The majority of the messages were Pro-ENDS; 2) The number of comments received by messages of different genres varies significantly; 3) Whether a message contains specific topics or not will affect the comment number.

PD-916-20 E-cigarette use and user profile among current smokers in Finland

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Background: Since 2010, the electronic cigarette (e-cig) has been in the centre of media attention in many countries of the western world, also in Finland. The present study investigated e-cig use among Finnish adult smokers. Additionally, we studied the differences in the background factors of e-cig users and other current smokers who didn't use e-cigs. Besides the common demographic variables, such as age, gender and education, we also studied the differences in the use of Nicotine Replacement Therapy (NRT), nicotine dependence and willingness to quit between conventional tobacco smokers and those smokers who were also e-cig users.

Design/Methods: The data were received within the Finnish National Study FINRISK. It is a population based survey that has been carried out every five years since 1972. In the current study, data from the 2012 survey were used. The sample was drawn from the national population register. The response rate was 65%. Nicotine dependence was assessed by the Fagerström test. In the statistical analysis, the associations between background variables and e-cig use were done by using the Pearson chi-square test. The associations with e-cig use were further studied with binary logistic regression.

Results: Among current smokers, the use of e-cigs was not frequent: 6.7% of men were e-cig users, and 6.0% of women, respectively. E-cig use was most common in men under 45 but, in general, age differences were small. No significant differences were found in age, gender and education level between current smokers who used e-cigs and those who didn't. Only little short of statistical significance, e-cig users were more willing to quit smoking than those who didn't use e-cigs. E-cig users had used more NRT (38%) than non-users (14%). Nicotine dependence score was significantly higher in the e-cig group (4.4) than in the non-user group (3.3).

Conclusion: E-cig use was relatively low among conventional cigarette smokers. A larger percentage of e-cig users (70%) than of non-users (53%) wanted to quit smoking. Our study also showed higher nicotine dependence in smokers with e-cig use than in smokers using only conventional cigarettes. Regardless of the lack of scientific knowledge on e-cigs as a cessation aid, they seemed to be

used in the process of quitting smoking. More studies on the positive and negative aspects of e-cig use in smoking cessation are needed.

PD-917-20 E-cigarette marketing, sale and availability: an emerging challenge for tobacco control in India

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Background: E-cigarettes are being advertised as novel products in all media and platforms across the globe. Despite the fact that these products are still not evaluated for safety and effectiveness by any regulatory body in most countries including India; their advertisements claiming the e-cigarettes to be health friendly and protecting people from the second hand smoke is on rampant especially in the internet media. With an aim to explore the number of e-cigarette brands available in India, understanding their distribution network and marketing tactics, the researchers did the internet search. Design/

Methods: Researchers did the keyword search on google in March 2013 and May 2014 and did the content analysis of the advertisements in the respective e-cigarettes websites. Each of the websites was examined for specifics about each product (flavor and nicotine strength option), ingredients in their products, and claims about the product's safety, distribution networks and availability at the kiosks.

Results: Total 86 brands of different flavor (12 types) and different nicotine strengths (9 types) of the e-cigarettes were found. In most of the brands (93%), the description about ingredients was given, with most common ingredients being nicotine, propylene glycol, water and flavor. 10% (9) brands claimed it useful for the cessation, whereas one-fourth of brands explicitly declared that their product could not be used as a smoking cessation device. Most brands claimed their product to be healthier and safer (90%), suitable to use in public places (92%) and an economical option (70%) than conventional cigarettes. Near half of the websites displayed the information about their distribution network. 12 websites offered free shipping services and 23 websites offered the live web chat options. Near one fourth of websites has displayed the user's testimonials, which overtly were promoting the products. More than three-fourth of the products advertised were manufactured in China, while six manufacturers were from India.

Conclusion: E-cigarettes are now emerging public health challenges in India. E-cigarettes are being marketed and sold with unsubstantiated claims for being health friendly, cessation tools and alternative for conventional cigarettes smoking. These claims are questionable and need further research. However, the ongoing advertisements in the internet media are a violation of Indian tobacco control legislation and warrants immediate enforcement.

PD-918-20 E-Cigarette use among Irish teenagers: a cross-sectional study

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Background: The use and regulation of e-cigarettes is a controversial issue, particularly as their use becomes more prevalent. E-cigarette use is an under-researched area and the majority of available studies have been undertaken with adults via online data collection methods. Prevalence and use among young people is available for few populations and appears varying. The current study explores prevalence of e-cigarettes among a representative sample of Irish teenagers and provides national data on this developing topic.

Design/Methods: A cross-sectional, representative sample survey of 824 young people across Ireland aged 16-17 explored e-cigarette awareness and prevalence.

Results: A total of 89.0% (797) of participants were aware of e-cigarettes and 196 participants (23.8%) had used e-cigarettes at least once. 20 participants (2.4%) used e-cigarettes at least once a week. Regular and ever e-cigarette use is substantially lower than regular and ever tobacco use. The number of young people who had tried tobacco at least once (391, 47.5%) was double that of young people who had tried e-cigarettes (196, 23.8%). Chi-squared tests found that young people who used tobacco were significantly more likely to use e-cigarettes [$X^2(4, n=823)=286.86, p<.001$]. In line with much of the existing literature, we found that 'dual use' of tobacco and e-cigarettes is more common than 'sole use' of e-cigarettes. In total, 77.4% of regular tobacco smokers have tried e-cigarettes. Of ever-use tobacco smokers, nearly a third (33.2%) has used e-cigarettes. Notably, among those who had never used tobacco, 4.2% had tried e-cigarettes.

Conclusion: E-cigarette use remains less common than tobacco use among young people in Ireland. However, young people who use tobacco are significantly more likely to have used e-cigarettes. There is a proportion of young people who have never used tobacco who have tried e-cigarettes and a small percentage of young people who do so regularly. This contributes new information to help assess the role of e-cigarettes particularly with regards to under-18s.

PD-919-20 E-cigarette smoking and its risk factors in Korean adolescents

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Background: E-cigarettes were introduced into the Korea market in late 2008 and use has grown among adult and youth in recent years. And due to recent increases in using of e-cigarette, the Korea government has warned smokers to use. But there is a lack of research on risk for the

e-cigarette. And no one knows what will appear the health effects of long-term use. Despite concerns regarding the long-term health effect of this tobacco products, there is little known about use of e-cigarette among adults and youth in the Korea. As the popularity of e-cigarettes increases, it is becoming important to find out more about the characteristics of e-cigarette users, why and how they use the product. The objective of this study explores the experience of e-cigarettes among adolescents in Korea.

Design/Methods: The data were from the 2013 Korea Youth Risk Behaviour Web-Based Survey, which included a representative sample of middle and high school students in Korea. Chi-square tests and one-way ANOVAs were used to analyse the relationships between e-cigarette smoking and the risk factors. Logistic regressions were used to calculate odds ratios.

Results: The prevalence of ever cigarette smokers and current cigarette smokers were 21.4%(29.7% of boys and 12.3% of girls) and 9.7%(14.4% of boys and 4.6% of girls). Otherwise, the prevalence of ever smoking a e-cigarette among Korea youth was 7.5%(11.7% of boys and 2.9% of girls). The prevalence of current smoking a e-cigarette among total, boys, and girls youth was 3.0%, 4.7%, and 1.1%, respectively. Logistic regressions showed that youth were more experience in a e-cigarette smoking if they had experimental cigarette smoking and lower cigarette smoking days. And Korea youth were more likely to have smoked a e-cigarette if their school grade were good or their economic status of household were better. For Korea youth, part-time experience, skip breakfast, physical activity were significantly associated with ever e-cigarette smoking. Especially, oral health, safety, alcohol, smoking education in school were very significantly associated with ever e-cigarette.

Conclusion: Experience of e-cigarette smoking in adolescence increases the possibility of cigarette smoking in adulthood. Early intervention certainly works and is cost-effective. So this study supports the idea that antismoking interventions through the school should continue to middle and high school students.

PD-920-20 Awareness and use of e-cigarettes in Malaysia

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Background: As in many other countries throughout the world, e-cigarettes (ECs) are becoming more popular in Malaysia. Given their potential benefit (if effective as a ces-

sation aid) and their potential harm (e.g., if not effective as a cessation aid and/or if they cause an increase in smoking uptake among young people), there is an urgent need for studies on the use of ECs and on their possible impact on tobacco use. This is the first study, to our knowledge, of the perception and use of ECs among Malaysian smokers.

Design/Methods: This study analysed data from two waves of the ITC Malaysia Survey (n=2,007 at Wave 5, conducted in 2010-11 and n=2000 at Wave 6, conducted in 2013-14), a longitudinal cohort survey of a broad sample of adult smokers and ex-smokers in Malaysia. Questions in the survey assessed the beliefs, attitudes, perceptions, and use patterns of smokers and quitters with respect to ECs

Results: At Wave 5, 61.8% of respondents were aware of ECs in Malaysia. Of those who were aware, 33.4% of current smokers (20.6% of all smokers) and 13.5% of ex-smokers had tried ECs; and notably 36.5% of non-triers were eager to try in the future. At Wave 5, daily use of ECs among both current and ex-smokers were low (6.1% and 10%, respectively) but non-daily use among both groups were high (68.3% and 50.7%, respectively). By Wave 6, daily use of ECs appeared to have increased among both current and ex-smokers (9% and 25.2%, respectively). Reported reasons for using ECs were to reduce consumption of conventional cigarettes (56.9%), to smoke freely anywhere (56%), as an aid for quitting (49.1%) and because of the taste (18.4%). 51.8% of EC users believed that they are less harmful than conventional cigarettes. Among dual users (using conventional cigarettes in combination with ECs), conventional cigarette consumption appeared to have decline between waves. At Wave 5 survey, only 3.8% of smokers reported smoking more than 20 sticks a day while 53.1% said they smoked less than 10 cigarettes a day in combination with ECs but by Wave 6, the proportion of less than 10 cigarettes a day users had increased to 58.7%.

Conclusion: Despite no direct advertising, many Malaysian smokers are aware of the existence of e-cigarettes and are using them for various purposes including replacing the nicotine they get from smoking.

PD-921-20 Do smokers have differential demand for conventional, very low nicotine and electronic cigarettes?

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Background: The Netherlands has been identified as a potential test market for a very low nicotine (VLN) cigarette called Gold Magic. In anticipation of the launch of this product we undertook a survey to assess consumer

attitudes and beliefs about VLN cigarettes as well as other tobacco products. This paper uses a behavioural economic approach to test whether smokers had differential demand (relative value) for conventional, VLN and electronic cigarettes (e-cigarettes).

Methods: The parent study was a web-based consumer survey of smokers and non-smokers, aged 16 years or older, in the Netherlands conducted in April 2014. Daily smokers who completed purchase tasks for each product were included in the current study (N=429). Participants indicated the number of cigarettes they would consume in a 24 hour period, across a range of prices (0-30 euro per cigarette). The relationship between consumption and price was quantified through demand curve analyses, which generated five indices of demand: 1) peak consumption (intensity), 2) price that initiates elastic demand (Pmax), 3) price that suppresses consumption to zero (breakpoint), 4) maximum expenditure (Omax), and 5) price sensitivity/slope of the demand curve (elasticity). Differential product demand was examined with generalized estimating equations (GEE).

Results: Greater demand was observed for conventional relative to VLN cigarettes across all demand indices (ps<.001), except Pmax (p=.38). Conventional cigarettes were in greater demand than e-cigarettes (ps<.01). There was no difference in demand for VLN cigarettes and e-cigarettes for intensity (p=.65), Omax (p=.18), and breakpoint (p=.53); however, Pmax and elasticity indicated greater demand for VLN cigarettes (ps<.05).

Conclusion: Smokers valued conventional cigarettes more than VLN cigarettes or e-cigarettes, and conventional cigarettes were less sensitive to price increases. Unless preferences change (e.g., via positive experiences from use), VLN cigarettes and e-cigarettes will need to be priced lower than conventional cigarettes if they are to serve as viable substitutes for conventional cigarettes.

PD-922-20 Awareness and contact routes to electronic cigarette in UK adolescents

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Background: In the UK alone, it is estimated that there are 2.1 million adult e-cigarettes users (Action on Smoking and Health, 2014), with usage growing rapidly from 700,000 in 2012 (Kmietowicz, 2014). Awareness of the e-cigarette is rapidly increasing and an international study including UK, USA, Canada and Australia found 46.6% of current and former smokers were aware of the e-cigarettes, with awareness higher among younger, non-minority ethnic smokers (Adkison et al, 2013). This present study was conducted to review awareness in adolescents in a UK population and assess the ways in which they heard about the product.

Design/Methods: 256 adolescent sixth form students consented to be a part of the study and completed a survey during a school time in November 2013. It was hypothesised that awareness would be greater for smokers than

non-smokers and greater for males than females. Data was analysed using chi-squared analysis to test for difference.

Results: The majority, 94.5% of participants had heard of e-cigarettes, with friends/family (49.2%) being the most popular source of knowledge, followed by television (35.2%), although other sources including newspaper, on the news or radio, seeing adverts on bus stop, in train station and at the airport were identified. In addition to reports of seeing it sold in local shopping centres, on social networking sites by celebrities and a few students reported selling them. In addition, 60.9% of the sample had seen someone using one. There was no relationship between smoking status and awareness of e-cigarettes for both males $\chi^2(1, N = 66) = 0.54$, exact $p > 0.05$ and females $\chi^2(1, N = 190) = 4.09$, exact $p > 0.05$.

	(%)	(%)	(%)
Characteristics	Smokers	Non smokers	Total sample
Smoking status	(25)	(75)	(100)
Age (years old)			
16	(48.4)	(64.6)	(60.5)
17	(42.2)	(29.7)	(32.8)
18	(7.8)	(5.2)	(5.9)
19	(1.6)	(0.5)	(0.8)
Sex			
Male	(28.1)	(25)	(25.8)
Female	(71.9)	(75)	(74.2)
Ethnicity			
White	(85.9)	(67.7)	(72.3)
Non-white	(14.1)	(32.3)	(27.7)
Seen someone use an e-cigarette	(78.1)	(55.2)	(60.9)
Heard of e-cigarettes	(98.4)	(93.2)	(94.5)
Friends / Family	(67.1)	(43.2)	(49.2)
Television	(28.1)	(37.5)	(35.2)
Books/Magazines	(9.4)	(8.3)	(8.6)
Internet	(14.1)	(23.4)	(21.1)

Conclusion: Electronic cigarette awareness has risen rapidly in this group and continues to do so. An astonishing 94.5% of the sample has heard of the e-cigarette compared to 10% reported in 2008 (Cho et al, 2011) and 67% in 2010 - 2011 (Pepper et al, 2013). Contrary to the hypothesis, gender or smoking status did not effect this. The recent development of electronic cigarettes and the rapid increase of awareness in adolescents has led to concerns that this new product could act as a gateway to addiction in never smokers.

PD-923-20 E-cigarette use was associated with the intention to smoke in Chinese adolescents

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Background: E-cigarette use arguably could reduce cigarette smoking and the intention to smoke, although such studies are few, especially in adolescents. We investigated the association between e-cigarette use and the intention to smoke in Chinese adolescent smokers and never-smokers.

Design/Methods: A total of 45857 secondary 1-6 (US Grade 7-12) students (response rate 96%) from 75 randomly selected schools completed an anonymous questionnaire in 2012/13 in Hong Kong. Students were classified as never-smokers, experimenters (smoked just a few puffs), ex-smokers and current smokers (occasional or daily smoking). E-cigarette use in the past 30 days was recorded. Smoking intention referred to the students' response of would smoke when cigarettes were offered by friends or in the next 12 months. Logistic regressions yielded adjusted odds ratios (AOR) for smoking intention in all students adjusting for socio-demographic characteristics, smoking status and school clustering effects. Similar subgroup analysis by smoking status was also conducted.

Results: Among 45128 (98.4%) students (53.9% boys, mean age 14.7±1.8) with information on smoking, the prevalence of never, experimental, ex- and current smokers was 83.6%, 8.3%, 4.2% and 3.9%, respectively. Only 1.1% (N=472) of students were currently using e-cigarettes and the prevalence was 0.2% in never-smokers, 5.5% in ever smokers, 2.1% in experimenters, 8.1% in ex-smokers and 10.0% in current smokers. Among all students, e-cigarette use was associated with an AOR (95% CI) of 1.74 (1.30-2.31) for smoking intention adjusting for smoking status. The corresponding AORs (95% CI) were 2.18 (1.12-2.31) in never-smokers, 2.79 (2.05-3.79) in ever smokers, 2.17 (1.32-3.62) in experimenters, 1.48 (1.02-2.13) in ex-smokers and 1.25 (0.58-2.72) in current smokers.

Conclusion: E-cigarette use in Chinese adolescents was significantly associated with smoking intention in never-smokers, experimenters, ex-smokers and ever smokers. These results suggest that e-cigarettes should not be advocated to reduce or prevent cigarette smoking in adolescents.

PD-924-20 E-cigarette use, nicotine addiction and intention to quit among adolescent smokers in Hong Kong

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Background: Although some studies have shown beneficial effects of e-cigarettes on smoking cessation in adults, less is known about e-cigarette use and its association with nicotine addiction and intention to quit smoking in adolescents.

Design/Methods: A school-based smoking survey was conducted on 45857 secondary 1-6 (US Grade 7-12) students (response rate 96%) from 75 randomly selected secondary schools in Hong Kong in 2013/13. A total of 1768 (3.9%) current smokers (occasional or daily) were included in the present analysis. E-cigarette use in the past 30 days, intention to quit smoking (cigarette), and quit attempts in the past 12 months were recorded. Smoking or wanting to smoke first thing in the morning (morning smoking), and consuming more cigarettes (heavier smoking) indicated higher level of nicotine addiction. Logistic and linear regressions were used to calculate the odds ratios (AOR) of intention to quit, quit attempt and morning smoking, and adjusted -coefficient of cigarette consumption with e-cigarette use, adjusting for socio-demographic characteristics, parental and peer smoking, and school clustering effects.

Results: On average, the smokers consumed 17.2 (SD 11.1) cigarettes/month and nearly half (48.4%) reported morning smoking. Over half the smokers reported an intention to quit (50.7%) and quit attempts (59.3%). About 10% current smokers used e-cigarette in the past 30 days. Compared with conventional cigarette use only, e-cigarette use was significantly associated with morning smoking (72.1% vs 46.1%, $p < 0.01$) and heavier smoking (19.4 vs 17.0 cigarettes/month, $p < 0.01$) with an AOR (95% CI) of 2.16 (1.50-3.11) for morning smoking and adjusted -coefficient of 0.16 (0.09-0.24) for heavier smoking. In contrast, e-cigarette use was non-significantly associated with lower intention to quit (AOR 0.75, 95% CI 0.52-1.09) and fewer quit attempts (AOR 0.80, 95% CI 0.56-1.13).

Conclusion: E-cigarettes use was significantly associated with nicotine addiction and might be negatively associated with quitting in adolescent smokers. These results highlight the need to examine potential adverse effects of adolescent e-cigarette use.

PD-925-20 Awareness and perceived harmfulness of e-cigarettes and their associations with smokers' intention to quit in Hong Kong

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Background: There is an ongoing debate on using Electronic cigarettes (E-cig) as an alternative to reduce harms or assist in smoking cessation. Currently, the use of E-cig in Hong Kong adults is extremely low because sale of nicotine-loaded E-cig is restricted by law. We investigated the prevalence of awareness, perceived harmfulness of E-cig and their associations with smokers' intention to quit.

Design/Methods: A population-based computer-assisted telephone survey was conducted in 2013 in 2401 randomly selected Chinese respondents aged 15 to 65. Information on awareness and perceived harmfulness of E-cig was collected in a randomly-selected subsample of 697 respondents. Intention to quit in the next 6 months was asked in current smokers. Using logistic regression models adjusting for demographic variables and nicotine dependency (including daily consumption and first cigarette in the morning), associations of intention to quit with awareness and perceived harmfulness of E-cig were examined. Data were weighted by sex, age and smoking status using census data in 2013 to compensate for oversampling of current and ex-smokers and to increase the representativeness to the general population.

Results: Most respondents (66.1%, 95%CI: 60.4-71.4%) were aware of E-cig with 75.0% (95%CI: 68.0-80.9%) of current smokers, 68.7% of ex-smokers (95%CI: 59.1-76.8%) and 64.8% of never smokers (95%CI: 58.0-71.0%) ($p=0.06$). Of those who were aware of E-cig, 39.2% (95%CI: 31.3-47.8%) believed it was less harmful than traditional cigarettes while 46.1% (95%CI 38.3-54.1%) did not know whether E-cig was less, equal or more harmful. Awareness (OR=1.1, 95%CI: 0.3-3.9, $p=0.90$) and perceived E-cig as less harmful (OR=0.9, 95%CI: 0.2-5.1, $p=0.89$) were not associated with intention to quit in the next 6 months in smokers.

Conclusion: The majority of Hong Kong people were aware of E-cig and more than one third believed it was less harmful than traditional cigarettes. However, in current smokers the awareness and perceived harm was not associated with intent to quit. Further studies are needed to investigate these associations.

29. STRATEGIES FOR COUNTERING TOBACCO INDUSTRY INTERFERENCE

PD-926-20 Ten years of control of tobacco in Argentina (2003-2013)

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Background and challenges to implementation: Argentina in 2003 signed the FCTC while the Ministry of Health launched the National Tobacco Control Program. Starting from a situation with very high levels of consumption and exposure to second-hand smoke, for 10 years the program has developed strategies to face resistance from the tobacco industry, the sectors producing tobacco and other stakeholders. The aim of the study was to analyse the process of construction and implementation of control policy tobacco in Argentina and the factors that influenced its development and results.

Intervention or response: The study analyses the process from 2003 to 2013. The units of analysis were the policies of the national government, the actions of civil society, the media, the tobacco industry and its partners, and the behaviour of the population. The sources used were documents, statistics, legislation, publications, news archives, and interviews with key informants.

Results and lessons learnt: Significant progress between 2003 and 2013 were achieved in the following areas: • Tobacco smoke-free environments: law 100% smoke-free in 15 provinces, and the enactment of the national law. The enactment and implementation of legislation in some provinces is pending. • Creating quit line, and training resources for the treatment of smoking. Treatment coverage in all provinces is pending. • Health warnings with pictures on packages of tobacco products, prohibiting the use of deceptive terms and bans on advertising and promotion, with the exception of points of sale and direct communications. • Broad consensus of the population, about tobacco control policies • Continuous reduction of the percentage of adult smokers and adolescents. This was achieved through actions of the National Program and the support of civil society. For its part, the industry developed a policy of low prices, which remained relatively stable sales volume despite the reduction in the number of smokers. However, the observed consumption was lower than expected according to elasticity analysis, showing the impact of control policies.

PD-927-20 How social media and formal media work together to expose ill tactics of tobacco industry in Bangladesh

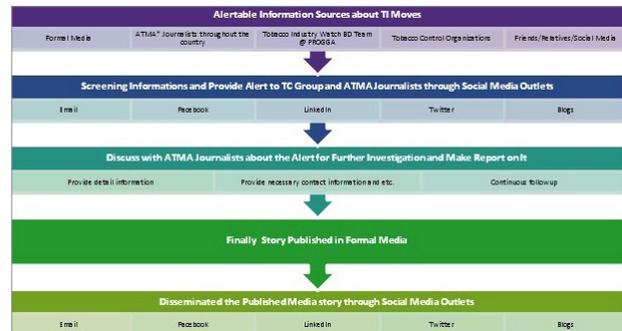
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Background: Social media is becoming popular among Bangladeshi people as one of the important mediums of communications. Though PROGGA has been using formal media for tobacco control since 2011 through facilitating a large media network Anti Tobacco Media Alliance (ATMA) consist of more than 300 journalists, the use of social media for tobacco control is very new. Recently, the organization has conducted a number of successful earn media campaign by using social media and formal media together. The present study illustrates the successful cases about how social media complement mainstream media in countering TI moves. Design/Method: Alertable information on important tobacco industry moves to undermine tobacco control was collected from different sources like ATMA journalists, published media story, TI Watch Team BD, and friends/social media. Thus, based on the collected information, messages for deferent stakeholders including journalists, tobacco control organizations/ advocates and social media outlets were prepared and disseminated. After the alert had been sent, some ATMA journalists contact PROGGA to know more about the alert. PROGGA replied to their queries and provide relevant information to facilitate further investigation for in-depth reporting

on the issue. Following continuous follow-up with the interested ATMA members, the story published in formal media finally. Finally, the story was emailed to relevant stakeholders and disseminated through social media outlets for exposing the ugly faces of tobacco industry for earning greater policy and public attention on the need for tobacco control movement in Bangladesh.



Results: Although using of social media for tobacco control in Bangladesh is very new, but some success cases to expose the ill tactics of tobacco industries are exemplary in the history of tobacco control in Bangladesh. The cases are; Case 1: The 'Be the One' campaign of Phillip Morris International (PMI) in Bangladeshi private universities has been unveiled Case 2: The covert pre-budget meeting on tobacco taxation with Cigarette Manufacturer Association of Bangladesh (CMAB) and National Board of Revenue (NBR) Chairman has been exposed Case 3: BAT Logo from Aysha Memorial Specialized Hospital's Website has been removed

Conclusions: The conjoint uses of social media and formal media for tobacco control can be played powerful role to expose tobacco industry moves.

PD-928-20 Strengthening development of law and implementation and lessons from Bangladesh

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In order to ensure strong implementation of law merely enactment of a statute is not enough. Implementation can be strengthened through proper drafting of the statute, making convenient and appropriate rules to ensure the roles and responsibilities of the government for enforcement which is to be followed by involving a wide range of stakeholders in monitoring and support to government for proper enforcement. Specific actions to be taken to strengthen the implementation in Bangladesh which includes designing newspaper advertisement on the banning of smoking in public places and helping the government to establish mobile courts to remove illegal signboards. NGOs and others can play a vital role in monitoring, for instance by checking cigarette packets for proper warnings, taking note of the location of bill boards or advertisements and providing photographic evidence, checking on smoke-free, and so on. Regularly providing such

information to local officials and other interested parties, including journalists, and following up the actions, can also help to ensure the implementation. Approaching to the question of implementation as an area where further NGO involvement is needed, rather than simply a weakness of government which needs to be criticized, would do much to advance the tobacco control agenda.

PD-929-20 The observatory of the strategies of tobacco industry in Brazil

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Background: Tobacco industry is a vector in the tobacco-related epidemic diseases and is responsible for over 5 million deaths per year globally. The preamble of the WHO/Framework Convention on Tobacco Control recognizes that Parties “need to be alert to any efforts by the tobacco industry”. Further, Article 5.3 requires that “Parties shall act to protect these policies from commercial and other vested interests of the tobacco industry in accordance with national law”.

Intervention: Considering that Brazil ratified the WHO/FCTC in 2005, the Center for Studies on Tobacco or Health from National School of Public Health of the Oswaldo Cruz Foundation (CETAB/ENSP/FIOCRUZ) pledged, among other things, to monitor the activities of the tobacco industry. Thus, a virtual platform called “Observatory the Strategies of the Tobacco Industry” was created. Our objective is to offer online information for advocates, journalists, politics, researchers and others, about the influence of the tobacco industry, guiding and answering central questions about the subject. In 2013, a research group at CETAB/ENSP/FIOCRUZ, based on the model of the University of Bath (<http://www.tobaccotactics.org>), developed a website called “The Observatory of the Strategies of Tobacco Industry”. Using the same open software as Wikipedia, the Observatory will offer (in 2015) up-to-date information on tobacco industry’s strategies, its front groups and its efforts to influence public policy, creating a repository with information such as strategies academic texts, newspapers, videos, and photos. After collected and stored, the data will be available to interested parties. Our Center will also update source of studies on the tobacco industry (including its allies or those who promote their agenda) available in scientific papers, academic reports or civil society groups, among others.

Highlight opportunities for future programme practice, as well as implications for other programmes: Once consolidated, the Observatory represents a new model of research dissemination. The Observatory has the potential to expand its media through Latin America and Lusophone Africa. Its analysis can draw a parallel between the strategies used by the tobacco industry to undermine tobacco con-

trol policies and the efforts of other industries, notably food and alcohol, to influence public policy in controlling risk factors of Non-Communicable Chronic Diseases.

PD-930-20 Maybe you’re the target: anti-tobacco campaign on Marlboro global marketing focusing teens

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Background and challenges to implementation: In March 2013, Brazilian NGO Alliance for the Control of Tobacco Use launched a report, in partnership with other international public health organizations and coordinated by Campaign For Tobacco Free Kids, exposing how Philip Morris International’s (PMI) ‘Be Marlboro’ marketing campaign uses themes and images that appeal to youth across the globe. The campaign, named Maybe You’re the Target, has expanded to more than 50 countries despite being banned by a German court for targeting teens and generating similar complaints in other countries. In Brazil, the National Council for Ads Regulation (Conar) had prohibited the campaign few months ago and a public prosecutor from São Paulo recommended the suspension of all campaigns in points-of-sales. The report calls on PMI to immediately end the ‘Be Marlboro’ campaign. It also calls on governments to enact comprehensive bans on tobacco advertising, promotion and sponsorship in accordance with the WHO Framework Convention on Tobacco Control. Its target was legislation makers, politicians and public opinion.



Intervention or response: After the launching of the report, during two weeks between April and May, with the support of Havas Worldwide advertising agency, we circulated the campaign Maybe You’re the target. The agency

developed pro bono six ads linking the image of PMI campaign with the risks of cigarette consumption, making a counterpoint to PMI's.

Results and lessons learnt: The campaign in social media had a huge success, with posts in Facebook, website and Twitter, and we had more than 25.000 views and 500 shares during the period. It was subject, also, of reports in media. In April, National Council for Children and Teenagers, organism related to Brazilian's Presidency, prohibited advertising focusing in minors (less than 18 years old). Finally, in May 31, Brazil government publicized the decree that prohibits smoking in all public indoors places all over the country and prohibits the advertising of tobacco products. The law was approved in December 2011, but was without regulation and cannot be take into force. Now, the deadline is December 2014.

Conclusions and key recommendations: Social media campaigns have excellent results and are not expensive. Frequently it's a fast and a creative answer to TI marketing and helps in de-normalisation of tobacco use. Key recommendations are:

- Definition and focus in target
- Simple messages
- Clear and simple images

PD-931-20 The 2014 FIFA World Cup Brazil: - failure of being a smoke-free mega event

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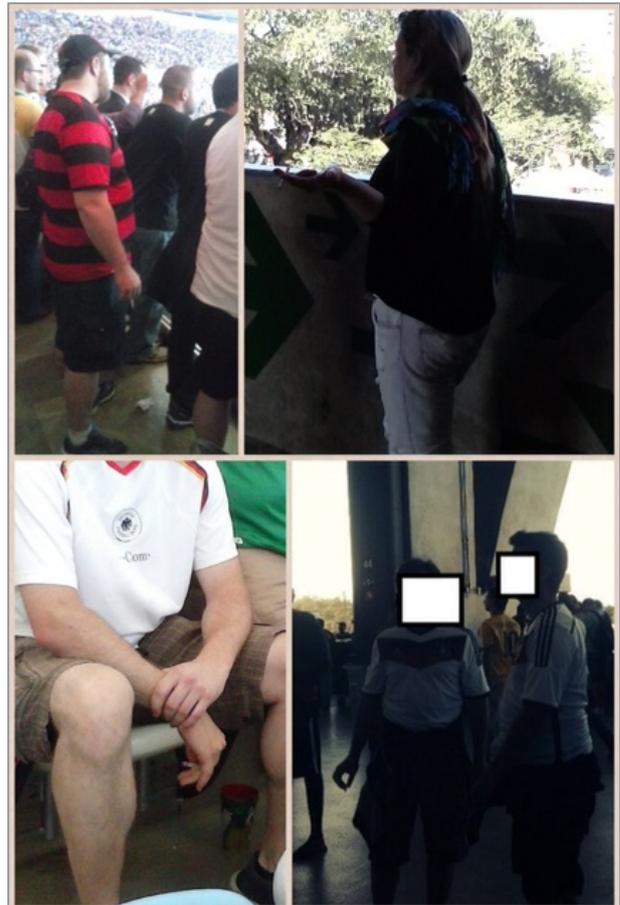
Background and challenges to implementation: Scientific evidence has firmly established that there is no safe level of exposure to second hand smoke (SHS). The World Health Organization (WHO) recognizes banning SHS as a human right. These recommendations are based on the WHO Framework Convention on Tobacco Control (WHO FCTC). Chronic non-communicable diseases are the number one cause of death and disability in the world. Tobacco use and exposure to SHS are major risk factors for 6 of the 8 leading causes of death, killing nearly 6 million people worldwide. In December 2011, Brazil enacted a national smoke-free Law No. 12.546 forbidding smoking in collective area. However, the Decree which regulates that Law was just released in June, 2014. This delay could be attributed to tobacco industry lobby. There were several requirements imposed by FIFA (Fédération Internationale de Football Association) regarding the marketing of products and services that the Brazilian government has accepted. Such requirements represented a setback in public health, as the case of sales of alcohol inside the stadiums during the games, as the Brazilian leg-

islation already prohibits this practice.

Intervention or response: Brazil volunteered in 2007 to host the 2014 World Cup. In 2010, the Ministry of Sports, motivated by the Ministry of Health has written a letter with the commitment that the World Cup 2014 and Olympic Games 2016 would follow WHO guidelines - public places and workplaces would be 100% smoke free. However, this has not occurred, it was permitted the inclusion of smoke areas inside the stadiums.

Results and lessons learnt: São Paulo State is known for its tobacco control policy and enforcement at local level. FIFA has been fined twice by the local Health Surveillance for the non-compliance with the tobacco control law in the stadium during the World Cup. In addition, this paper includes a discussion and an analysis of the Sovereignty/ Current federal and Sao Paulo State tobacco control legislation/ and non-compliance tobacco control cases published on the media occurred during the World Cup Brazil 2014.

Conclusions and key recommendations: Thousands of citizens and visitors were not protected as they could be from the harms of SHS during this mega event. Now, with the lessons learned, the aim is to work in order to strengthen efforts to prepare Rio de Janeiro City to host the Olympic Games in 2016.



PD-932-20 The effect of tobacco smoking during pregnancy on pre-term birth and low birth weight in Hungary

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Background: In Hungary, 9.0% of all live birth cases were preterm (PTB) and 8.5% of low birth weight (LBW) in 2012. We assume that there is a significant association between the high PTB and LBW rate and tobacco smoking during pregnancy influenced by socio-economic risk factors of expectant mothers.

Design/Methods: Our repeated retrospective cohort study was conducted 2009 (n=3962; 75%) and 2012 (n=3742; 67%) in the same underdeveloped north-eastern region of Hungary. Logistic regression model was used to estimate the factors of continued smoking during the pregnancy (p<0.05).

Results: In 2009 40.2% of pregnant women smoked prior to pregnancy and 64.1% of them continued smoking after they learned they were pregnant. In 2012 the same percentages were 34.0% and 67.2%. In the 2009 sample 22.1%, in 2012 21.2% of foetuses were exposed to maternal smoking. The association of tobacco smoke exposition with PTB/LBW was confirmed by our data 2009 (OR=2.033 CI 1.600-2.582; OR=2.997 CI 2.406-3.739) and 2012 (OR=1.891 CI 1.477-2.422; OR 3.177 CI 2.462-3.946). Among the risk factors of maternal smoking during pregnancy there were highly significant the mothers' low education (OR=12.767 CI 10.00-16.298; OR=14.613 CI 11.137-19.174), low income (OR=6.397 CI 5.364-7.629; OR=6.890 CI 5.706-8.320) and Roma ethnicity (OR=5.816 CI 4.953-6.828, OR=5.453 CI 4.603-6.460) in both years.

Conclusion: Continued smoking during pregnancy is a significant but preventable risk factor of LBW and PTB. In order to improve the current situation in underdeveloped regions targeted in person health policy interventions are needed. In the second half of 2014, the special Hungarian network of maternity and child health service with family nurses starts a targeted prevention program to change harmful behavioural patterns of disadvantaged and minority populations.

PD-933-20 Worldwide response to the observance of the initial World No Tobacco Days: a tobacco industry document study

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Background: It was a major step in the fight against tobacco when World Health Organization passed a resolution in its fortieth World Health Assembly in 1987 deciding to observe the fortieth foundation day 7th April 1988 as World No-Smoking Day. Then in 1989, by a World Health Assembly Resolution, World Health Organization called for the celebration of World No Tobacco Day every year on May 31. That was a landmark event in the de-normalisation of tobacco worldwide. Hence there was extensive response from the tobacco-industry, governments, civil society etc around this development. This study aims to provide some insights into the reactions of these stakeholders based on a study of the tobacco-industry documents accessed via Legacy Tobacco Documents Library (LTDL).

Design/Methods: Extensive search of the LTDL was undertaken using a combination of keywords like 'world no tobacco day', 'no-smoking day', 1988 World No-Tobacco Day, fortieth foundation day etc.

Results: Study of the industry internal documents reveals that the tobacco-industry took this declaration very seriously and sent off memos to its staff members on the do's and don'ts around this occasion. There is mention of governments making strong no-tobacco declarations as well as civil society voicing tobacco-related concerns. A newspaper clipping made a mention of an insurance company declaring a 20% reduction in premium for non-smokers. Apart from that strong negative sentiments were carried by the newspapers with headlines that read 'Smokers choke as lights go out all over the world', 'WHO turns World Health Day into a bizarre no-smoking day.... AIDS, other crises ignored'. Another article laments that it is easier to smoke some narcotics than it is to smoke cigarettes.

Conclusion: Since its inception WNTD has been able to generate strong public sentiments against tobacco proving to be a major component of the de-normalisation exercise. Innovative ways to increase popular response around this occasion may help in preventing uptake and promoting quitting. Steps may be taken to ensure greater involvement of all stake-holders in the observance of WNTD. Areas of further research in this area could pertain to ways of enhancing stake-holder engagement especially youth and other high-risk groups as also innovative strategies to capture the imagination of the public. Additional no-tobacco occasions could be established in high-burden countries to ensure a more sustained impact.

PD-934-20 Exposing tobacco industry interference through rapid-response social media campaigns: the Philippine graphic health warning experience

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The Article 11 legislative advocacy posed unique communications and message framing challenges for tobacco control (TC) advocates in the Philippines. While TC measures were not in the final list of priority bills submitted by the Department of Health (DOH) to the 16th Congress in 2013, legislators from the Senate and House of Representatives identified graphic health warning (GHW) labelling as a priority legislative measure in February 2014. Weeks prior this decision from Congress, the tobacco industry (TI) issued press statements expressing “support” for GHWs “in principle,” but with caveats as to the implementing details of the proposed law. Media focus shifted to the “good news” angle exploited by the tobacco industry, i.e., Congress ratification of a GHW bill before the 16th Congress adjourned its First Regular Session in June 2014. TC advocates had to quickly develop an effective counter-strategy to respond to media whitewashing by the TI. There was also little media interest because of ongoing investigations of a corruption scandal involving the misuse of public funds worth billions of pesos. TC advocates navigated these obstacles by launching a series of strategic rapid-response social media campaigns (RRSMC) across different social networking platforms and online news sites. The significance of RRSMC as a counter-strategy is assessed by reviewing campaign materials, media log reports, and public and media responses to the campaigns.

Results were analysed and correlated to the negotiated provisions of the GHW Law. Based on the Philippine experience, the use of RRSMC played a key role in increasing visibility of tobacco industry interference (TII) and pressuring lawmakers to comply with Article 5.3 obligations. While the GHW Law may not contain all provisions the TC advocates lobbied for, it mandates manufacturers to print GHW labels on 50% of the front and back panels of tobacco packaging, with the DOH and Department of Trade Industry as lead implementing agencies instead of the Inter-Agency Committee-Tobacco. RRSMC, when used appropriately, supplements and strengthens traditional media-based TC intervention strategies. Reporting incidents of TII through the Internet and providing real-time news updates as they occur through “free media” channels allow small groups with limited resources to reach previously untapped sectors, engage a global audience, mobilize networks, and monitor legislative procedures through participatory political actions.

PD-935-20 Awareness of policy makers about FCTC article 5.3 in Turkey

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Background Tobacco control policies must be protected from commercial and other vested interests of the tobacco industry according to Framework Convention on Tobacco Control (FCTC). In order to achieve best tobacco control practice, the policy makers must not perceive tobacco industry as a normal industry and be aware that health is above trade interests. The aim of this study was to investigate the knowledge, perception and attitude of the members of the parliament with regard to tobacco industry.

Design/Methods: A quantitative descriptive study using face-to-face questionnaire survey was carried out among randomly selected 60 members of parliament (MP). The questionnaire used consisted of ten questions based on the FCTC article 5.3 implementation guidelines. Four questions were on the conflict of tobacco industry interests and public health policy, five questions on accountability and transparency of the authority or the industry, one question on the incentives for the industry.

Results: Of the participants 87% were between 45-65 years of age, 88% were males, 90% had university education. 14% of the MPs believed that tobacco control was a group of pricing and production strategies that protected Turkish tobacco leaf from rivals. 46% thought tobacco use was an individual choice. 73% believed that high prices and taxation increased smuggling. 35 % knew the official responsible body for tobacco control. 43% believed that tobacco industry must be protected for providing jobs and economic return. 14% thought relations of civil servants and the industry must be regarded under trade privacy. 70% believed tobacco control must be carried out in collaboration with the industry. While 65% did not believe in the public benefit of tobacco industry social responsibility projects. 23.33% was in opposition to “public health being superior to the principle of free trade.”

Conclusion: The positive perception of policy makers about the industry may be an impediment to successful tobacco control. Parliament mapping should be conducted by civil society to detect and publicize any partnership or collaboration. Capacity building of the civil society stakeholders to support advocacy efforts towards the Parliament is crucial.

PD-937-20 Tobacco industry de-normalisation campaigns in a UK context: findings from Cancer Research UK's pilot activity

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Background: Although the UK is a leader in Europe on tobacco control legislation, the fall in smoking prevalence rates has slowed, reaching 20% in 2012, after standing at 21% for three years. Cancer Research UK (CRUK) has an

ambition to see a virtually tobacco free UK and is funding research into endgame strategies to accelerate progress. "The Endgame Thinking Report" by Ruth Malone et al commissioned by CRUK, recommended testing and funding a phased, sustained mass media-supported tobacco industry de-normalisation campaign to pave the way for stronger tobacco control measures. The UK has never had a major national focus on de-normalising the tobacco industry although local activity is conducted by regional tobacco control organisations. CRUK, building on the body of evidence from the 'The Truth' campaign in the US, has developed digital content to pilot a de-normalisation campaign in a UK context aiming for a launch in October 2014

Design/Methods: CRUK used qualitative research into attitudes towards the tobacco industry - undertaken by Smoke-free South West, a regional tobacco control organisation - to identify three key message areas of product manipulation, profits of global tobacco companies and the

tobacco industry's need to recruit replacement smokers to replace those who have died from tobacco related diseases. We wanted a clear focus on young people 16-22 to both inform engaging digital content and build on the experience of 'The Truth' campaigns in the US. We conducted a large quantitative survey to further test messages about the tobacco industry before commissioning digital agencies to produce creative concepts. Content dissemination will be focussed across digital and social media channels; informed by the 16-22 age cohort which is the primary campaign audience. Both organic (free) and sponsored (paid for) promotion will be used to share the content across platforms used by audiences in the target age range.

Results: The evaluation of this work will be available by December 2014 and we hope to share our findings with international tobacco control colleagues and develop further de-normalisation campaigns for a UK audience to support policy campaigns for further industry regulation.

30. MASS MEDIA AND ADVOCACY STRATEGIES FOR TARGET AUDIENCES

PD-938-20 Mobilising organised media support in policy advocacy for tobacco control in Bangladesh

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Background: The issue of tobacco control was traditionally marginalized in Bangladesh society. As a reflection of this marginalization, the issue was never highlighted as a major one in the mainstream media of Bangladesh. The trend however has been reversed in recent time mainly due to emergence of an organized platform of journalists called 'Anti-Tobacco Media Alliance' (ATMA). The Alliance involves about 300 journalists from print, electronic and broadcast media who are not only doing consistent reporting on tobacco control issues, but also directly involved in the advocacy for stronger tobacco control policies. The present illustration was design to share how an organized media support played a vital role in the tobacco control policy advocacy in Bangladesh particularly for law amendment and tobacco taxation.

Design/Methods: PROGGA has been facilitated a platform of journalists called "Anti-Tobacco Media Alliance-ATMA" following a series of training programs on tobacco control issues for the journalists representing all the major media houses of the country. The trained journalists felt the need of an organized platform and thus created the Alliance. As the secretariat of the network, PROGGA has continued its interactions with member journalists throughout the year to make the network an integral part of the mainstream tobacco control movement in Bangladesh.

Results: ATMA has become one of the key drivers in the process of formulating stronger tobacco control legislation. While the process has been facing a lot of barriers at different stages, the Alliance of the journalists has always appeared as an organized force in fighting those barriers. Apart from their own reporting in the respective media, the journalists as a group organized different events to draw attention of the policy makers and the public on the need for moving the process of stronger tobacco control law forward. Similarly, for increasing tobacco taxes, the Alliance has been vocal particularly before and after the announcement of the national budget of the country. Finally, all the activities done by ATMA for stronger tobacco control legislation and the demand for higher tobacco taxation have got lots of media attention and substantial policy attention.

Conclusions: Despite all constraints, the earned media environment created by Anti-Tobacco Media Alliance has contributed significantly in advancement of tobacco control advocacy in Bangladesh.

PD-939-20 Online dissemination strategies for tobacco control in global Chinese community: Taiwan's Online Chinese Smoke Cessation Network as a model

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Background: In 2007, the same year that the TOBACCO HAZARDS PREVENTION ACT Amendment was passed by the Legislative Yuan in Taiwan, the John Tung Foundation launched the "Online Chinese Smoke-Cessation Network" (www.e-quit.org). The Network has systematically presented the more than thirty years of expertise and

proress that the John Tung Foundation has accumulated in the area of tobacco control.

Methods: Online Chinese Smoke-Cessation Network provides all types of users with comprehensive tobacco control information: 1.Smokers & Non-smokers: promptly obtain complete and accurate information on smoking cessation services and tobacco health threats. 2. Health education professionals: receive compilation of international tobacco control information that can be used as educational material. 3. Media: acquire the most recent developments in Taiwan's and international tobacco control efforts via topic-specific webpages. 4. Social advocacy workers: dissemination platform of timely and complete information on tobacco control laws and policies. 5. Youth: attracting youth online familiarity with tobacco control through lively outreach literature and the use of idol figures as spokespersons.

Results: Continually guided by the goals of innovative and accelerated service, up to July 2014 Online Chinese Smoke-Cessation Network has accumulated more than 41 million internet visits, and more than 7,000 individuals have become members. In addition, more than 500 members have created blogs on the website to share their personal smoking cessation or anti-smoking stories. The Network can thus claim to be the most important Chinese-language tobacco control portal website.

Conclusions: In accordance with the WHO Framework Convention on Tobacco Control (FCTC), Taiwan is now promoting legislative amendments, actively working toward such goals as a 100% Smoking Ban in Indoor Public Areas and Workplaces, a Ban on the Display of Tobacco Products, Warning Labels Covering 80% of Container Surfaces, a Total Ban on Tobacco Industry Advertisement and Sponsorship, Regulation of Electronic Cigarettes and Prohibition of Flavored Cigarettes, and Raising Tobacco Taxes, etc. At the same time, the Network will continue to enhance its system features and the depth of its content, carry out media outreach, present the tobacco control work of Taiwan, Mainland China, Hong Kong and Macau in a timely manner, thereby becoming an important online platform for tobacco control work in Global Chinese Community.

PD-940-20 Strengthening tobacco control at the local level to improve health and reduce poverty in Ghana

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Background and challenges to implementation: In Ghana, cigarette advertisement and cigarette sale to minors are frequently found in deprived communities thereby influencing the use of tobacco in poor families. A smoking father can spend more than 10% of the household's budget on tobacco. If nothing is done to prevent tobacco use in Ghana, by 2015, 20% of the population in Ghana will

be smoking, according to Tobacco Atlas. In Ghana, every smoker faces the trouble of loss of health, productivity and income. While some structures exist at the national level to undertake tobacco control programmes, structures and institutions are non-existent or inadequate at community levels This project aimed to inform and sensitise communities on the hazardous effects of tobacco use and key provisions of Ghana's Tobacco Control Legislations.

Intervention or response:

1. Hold community sensitization seminars and outreach in 15 selected communities and community members on the provisions of the Tobacco Control Legislations
2. Production and dissemination of education, information and communication materials for on the Tobacco Control Legislations
3. Hold regular planning meeting to review and make recommendations
4. Media coverage and publication of tobacco control events nationwide on print and electronic media
5. Independent evaluation of the activities

Results and lessons learnt:

- 15 community sensitization seminars and 50 outreach in the selected community were organised and public knowledge on the Tobacco Control Legalisations and hazardous effect of tobacco use improved
- 2000 posters produced pasted and distributed at vantage points to inform community on the Tobacco Control Legalisations and hazardous effect of tobacco use
- 3500 flyers distributed to communities nationwide

Conclusions: Many communities, organized groups, public and private schools have been sensitized and educated on the Tobacco Control Legislations and the ill effects of tobacco use.

Key recommendations: Government and development partners should allocate funds to Civil Society Organizations to be able to expand and reach out to more communities in Ghana on awareness on the Legislation and harmful effects of tobacco use.

PD-941-20 Print media coverage of tobacco control activities undertaken by the Mizoram State Tobacco Control Society in Mizoram, India

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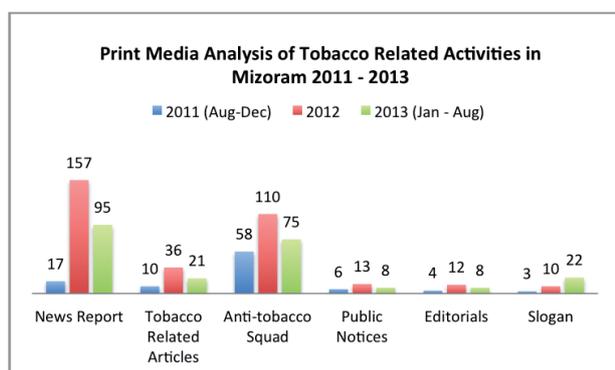
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Background: Mizoram has the highest prevalence rate of tobacco consumption (current tobacco users) in the country. As per the Global Adult Tobacco Survey (GATS

2009), 67.2% of adults are current users. Due to high burden of Non-Communicable Diseases (NCDs); Mizoram has one of the highest burden of cancers in the country, tobacco control is imperative in the state. Funded by the Bloomberg Initiative (BI), tobacco control has been intensified during the project period 2009 – 2013 in Mizoram through the nodal agency, Mizoram State Tobacco Control Society (MSCTS). There are 31 local newspapers in circulation in Aizawl out of which 7 are subscribed to by the Society - Vanglaini, Tawrhawm, Newslink, Mizo Aw, The Aizawl Post, Mizo Arsi, and The Zozam Times.

Design/Methods: Secondary content analysis of newspapers such as news reports, articles, ATS reports, Public Notices, Editorials, and Slogans etc. for tobacco control related activities.

Results: From the analysis of the newspaper content during the project period, the average monthly coverage is 26.5 times. The maximum media coverage received in a month is 61 times in May 2013 and the least coverage during the project period is 7 times. 41.35% of items published were news reports of various activities and events. 36.95% were anti-tobacco squad (ATS) reports. 10.38% were tobacco-related articles. 4.25% were slogans. 4.08% were public notices and 2.99% were editorials.



Conclusion: Media coverage, both print and digital, regarding tobacco control activities has been steadily increasing in the state as the Society is working in close collaboration with the Mizoram Journalists Association (MJA). Further research is warranted to find out if increased print media coverage has contributed to improvement in compliance to anti-tobacco regulations such as smokefree rules - compliance improved from observation of smoking in public places from 62% in 2009 to 8% in 2013.

PD-942-20 Media advocacy for the implementation of regulating smoking in films

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Background and challenges to implementation: India, the world's largest producer of movies produces more than 1000 movies a year in several languages. Bollywood represents the Indian Hindi movie industry and the worldwide viewership for their movies is estimated to be about 3 mil-

lion. Bollywood movie stars in India are public figures, have large fan followings and exercise tremendous influence on the behavioural attitudes of adolescents. One of the major influences on the uptake of teen tobacco use is the glamorization of tobacco use in movies and on television. Movies are seen as very influential for kids and teens.

Intervention or response: Using earned media to create pressure on policymakers and to put indirect pressure on the Government to ensure implementation of the rules notified by the Government of India which firmly intended to regulate the depiction of tobacco use in Films and Television w.e.f the prescribed date of implementation. The strategy was to ensure that news items or stories come out to attract the attention of the government and the public. To do so, VHAI decided to increase consumer awareness about the issue of smoking scenes in films through a sustained strategy of media engagement. We increased our interactions with the media, both on a one-to-one basis.

Results and lessons learnt: In order to sustain the media's engagement with the issue, over the period of time, about 8 to 10 press releases were shared with the journalists and this strategy of media advocacy resulted in nearly 50 – 55 stories in National and Vernacular Media during May to December 2012.

Conclusions and key recommendations: From November 2012 onwards, the new films screened at movie halls started showing the disclaimers of 30 seconds each on the ill-effects of tobacco use with strong graphic pictures of cancer affected mouth, pictures on how smoking causes heart attacks, effects of second hand smoke etc both in English & regional language that appeared in the beginning and during the interval of the movie.

PD-943-20 Newspaper and online media coverage of tobacco control in Indonesia: a quantitative content analysis

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Background: Indonesia is the 3rd world highest tobacco epidemic now. This condition is expected getting worse as the government has not signed the WHO Framework Convention on Tobacco Control (FCTC). Given that media is able to shape public perception and influence public policy changing, this study aims to perform a content analysis of tobacco control media coverage in Indonesia.

Design/Methods: A quantitative analysis was conducted. Data consist of article on FCTC as the main or subtopic from 182 articles of newspaper and online media published between 1 January and 30 June 2014.

Results: Government officials are main source of information (40.1%), followed by tobacco control activist (31.9%), and tobacco industry and its front groups by 28%. The frequency of media coverage varied across time, the highest was in March as 41 articles (22.5%). Overall

results indicated that 51.1% articles were negative, 11.5% were neutral, and 37.4% were positive toward FCTC accession. There is no difference position toward FCTC accession between newspaper and online media.

Conclusion: Tobacco control advocates have not used both media (newspaper and online) optimally. Advocates should seek to address this immediately since both media are main source of information for public. A systematic social media campaign is also needed as extra ammunition to support advocacy.

PD-944-20 Smoking display time trend of favourite movie stars in Iranian movies

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Background: Depiction of smoking in movies has been recognized as a critical contributing factor to its appeal among the young for a long time. In spite of current laws against any tobacco related advertisement in movies, many spectators believe Iran's movie industry has yet to curb this crucial element. This study was designed to analyse the smoking-display-time-trend, based on roles and actors, during the past 30 years in Iran.

Design/Methods: This cross-sectional study was done from 2013 to 2014. The list of all movies shown in the last three decades was prepared and the top 10 best sellers of each year were purchased amounting to 300 movies. The movies were then divided into ten groups, each of which was investigated by three calibrated assistants on separate occasions. The results were then analysed by Cohen's kappa coefficient. Numerical differences below 5% were considered reasonable to be included in the table of values. In the event of greater differences between reviewers, the movie would have to be watched and timed repeatedly until the desirable numerical agreement was achieved.

Results: The average total smoking time in these movies over the last 3 decades was 39.1, 67 and 99.3 seconds, respectively. Average smoking time during the past three decades in order were found to be 0.9 s, 10.8 s, 20.6 s for females, 25.7 s, 42.9 s, 70 s for males, 5.2 s, 18.8 s, 47.1 s for the leading role and 21.3 s, 36.3 s, and 44.9 s for the supporting role. A variance analysis revealed that the on-screen smoking times for male, female and leading roles have significantly increased during the 30 year period.

Conclusion: The trend of smoking scenes in Iranian movies by actors/actresses has increased dramatically and this could be considered as critical factors in increasing the prevalence of smoking among the younger generation. Therefore, health and cinema concerned authorities should reconsider their tactics and undertake more effective approaches to impede tobacco use by actors on movie screens.

PD-945-20 Media coverage of tobacco control in Jordan: an analysis of newspaper reporting

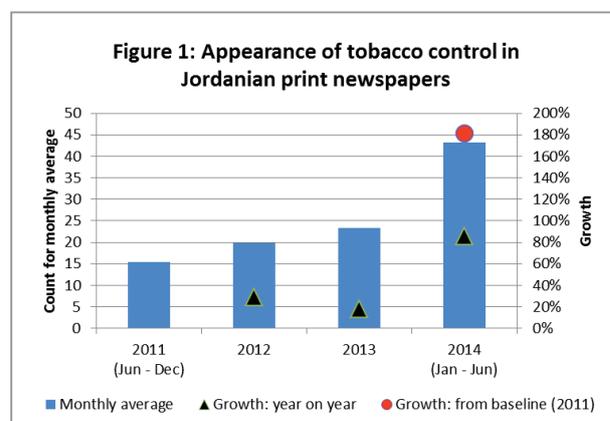
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Background and challenges to implementation: Article 12 of FCTC demands the use of all available communication tools -including earned media (i.e. unpaid news media)- to strengthen tobacco control (TC) awareness. Generally, the volume of news media (NM) outweighs the most extensive antismoking advertising campaign. An increase in coverage reflects a rise in number of events found worthy of coverage and in planned efforts to create content worth publishing. NM can influence public opinion and decision maker stance, and the emphasis NM place on an issue influences the priority the public affords to the issue. In many low- and middle-income countries (LMICs), mass media campaigns are non-existent due to lack of funding. LMICs, including Jordan, can benefit from NM to shape public opinion on TC, and contribute to norm change.

Intervention or response: The Cancer Control Office (CCO) monitors NM (print papers, online news, TV, radio, in addition to social media) to track trends in TC coverage. Pieces are coded based on date, type and name of medium, and relevance to TC strategies. Significant national TC events are logged on monthly basis and contrasted with NM trends. CCO engages with media to build capacity to identify newsworthy topics, through:

- Conducting workshops on principles of TC (building capacity)
- Holding press conferences and sharing press releases (pushing news)
- Creating communication channels (relationship building)
- Running an annual media award (creating incentives)
- Engaging media in a national project seeking to strengthen TC in Jordan (strengthening ownership)



Results and lessons learnt: Appearance of TC in print newspapers is used as an indicator of newsworthiness of TC to Jordanian media. Between 2011 and 2014 the average monthly appearance almost doubled. Figure 1 details year

on year growth and growth from baseline (2011). NM's timely interest in pressing national TC topics is evident. National developments in enforcing smoking bans and protecting minors from exposure translated into growing emphasis by NM. Between 2013 and 2014, there was a growth in the share of coverage awarded to the topics of minors (196%), protection and secondhand exposure (99%), and policy (18%).

Conclusions: Furthering media advocacy efforts in Jordan is worthwhile as NM are poised to play a significant role in shaping TC. Monitoring of NM indicates an increase of newsworthiness of TC and a shift in emphasis in line with national developments.

PD-946-20 Social media: strategy for the dissemination of campaigns for the tobacco control

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Background and challenges to implementation: In Mexico, the tobacco industry has a close relationship with policies makers, opinion leaders and important journalists. Therefore, the main strategy of the tobacco industry in Mexico is the lobbying. For this reason, doing and pursuing health policies related with for the tobacco control had been a huge challenge for the Fundación InterAmericana del Corazón México (FIC México). One of the challenges for FIC México in 2014 is that policies makers approve the tobacco reform concerning the Ley General para el Control del Tabaco in México (General Law for Tobacco Control in Mexico). The topics more important are: publicity, tobacco advertising, smoke free environments.



Intervention or response: The social media represent an important tool for FIC Mexico on the dissemination of campaigns related with tobacco control in Mexico; enhancing relationships with policies makers and important journalists to strengthen new bonds. In March 2014, FIC Mexico started the campaign "Reform to Tobacco". During this period, FIC Mexico used the social media to disseminate this campaign. FIC Mexico relied on facebook and twitter to send images to spread the campaign #ReformadelTabaco. With the institutional twitter account of FIC México, public messages were sent to the personal accounts of policies makers and journalist in order to disseminate the campaign #ReformadelTabaco. The general audience spread this campaign throughout their personal accounts.

Results and lessons learnt: When FIC México sent public messages to policy makers, some of them responded positively and helped us potentiate the campaign "Reform to tobacco" by supporting it and sharing our information. An important journalist in Mexico created a picture about the campaign "Reform to tobacco" and helped us disseminate the campaign. He supported us without getting any monetary reward about it.

Conclusions and key recommendations: The social media is efficient and it can be considered a low cost tool. The social networks can help the civil society spread campaigns and shorten connections with policy makers and important journalist. The social media is a useful tool to bring people aware of the importance of the tobacco control.

PD-947-20 Smoking prevention and cessation in Romanian women: a vulnerable population that needs a more personalised approach

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Background and challenges: There is a great need for a personalized approach of preventing harmful effects of tobacco in women versus men. Smoking rates are high in Romanian women and multiple educational, economic and social barriers challenged prevention and cessation in this category of population, in the past 2 decades. Chronic governmental underfunding of tobacco treatment had also a negative impact and no such educational or treatment programs specifically targeting women have ever been available. **Aim:** To design a personalized quit smoking approach for women addressing Romanian tobacco cessation centres.

Intervention: A group of 68 smoking women addressing a smoking cessation program in the tobacco treatment center of the Clinic of Pulmonary Diseases Iasi received an educational intervention about tobacco use and dependence, by DVD, repeatedly, 20 minutes before the counselling sessions. Another face to face intervention,

emphasizing particularities of smoking and cessation in women (pregnancy, passive smoking in children, weight gain, female hormones configuration and nicotinic receptors interaction, some more effective cessation treatments according to gender, etc.) was delivered after 2 weeks. Quit rates in the study group were compared to previous female abstinence rates, in the center database.

Results and lessons learnt: Abstinence rate at 6 months post quit date was 44.1 % in the study group, much higher by comparison to our previous data in women not benefiting educational DVD and face to face sessions (27 %). A more personalized approach, focusing on tobacco specific women concerns, was very welcomed by all participants and has proved its utility. A very good compliance to the personalized approach was registered, as 100% of women in the study group attended all educational sessions. Most important lesson learnt from this intervention is that adding a specific educational component to a standard tobacco treatment strategy improves motivation towards stopping smoking and enables high abstinence rates in exposed subjects.

Conclusions: A personalised smoking prevention and cessation approach, based on face to face and DVD educational interventions, can increase abstinence rates in women.

PD-948-20 Social media and tobacco messages: a randomised controlled pilot study in Brazil and China

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Background: Social media is a powerful tool to deliver pro- and anti-tobacco messages. Messages from advertisers, family and friends can shape young people's attitudes and uptake of tobacco. This pilot study explores tobacco messages conveyed through social media, and whether it varies by country and online activities.

Design/Methods: In Spring 2014, 58 college students from Rio de Janeiro, Brazil and Shanghai, China participated in a 4-week study. After a baseline survey, students monitored and recorded sponsored tobacco ads, pro-tobacco messages from family and friends, and anti-smoking messages appearing through their social media for one week. Students were then randomized into control, low and high interest groups. For two weeks, those in the control group did not alter their online behaviors. Students in the low and high interest groups engaged in pro-tobacco activities (e.g., searching for products, chatting in pro-smoking groups, and learning about smokers' rights). Groups differed in time spent doing activities. During week four students reverted to not engaging in online tobacco activities, but continued monitoring their social media.

Results: At baseline, 5% of the students reported they had been contacted online with offers from a tobacco company and 12% had seen pro-tobacco messages posted by family or friends. In the study's first week, students saw an average of 0.014 sponsored tobacco ads, 0.072 pro-tobacco messages from family and friends, and 0.027 anti-smoking messages, with no significant differences by country or interest group. Over the study, control group students did not see differential message rates. In contrast, students in the low and high interest groups observed a significant increase in sponsored tobacco ads ($p < 0.05$), pro-tobacco messages from family and friends ($p < 0.01$), and anti-smoking messages ($p < 0.05$), comparing the first no-activity week to the subsequent weeks.

Conclusions: Young people encounter tobacco messages through social media, and those who engage in online tobacco activities receive more messages (both for and against tobacco use) than those not doing such activities. This small study occurred for just four weeks; however, it used students' existing and real social media. If young people, especially those who may be vulnerable and engaging in online tobacco activities, receive pro-tobacco messages, then stronger regulations must be put in place to curb pro-tobacco messages delivered via social media.

PD-949-20 Master tobacco settlement funding of tobacco prevention for teens: a longitudinal study

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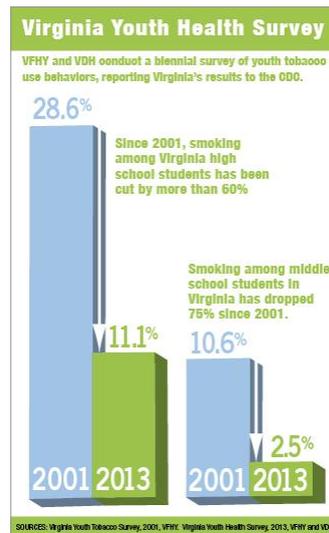
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Background and challenges to implementation: The U.S. Master Tobacco Settlement Foundation was entered in November 1998 between the four largest U.S. tobacco companies and 46 states. This funding established the Virginia Foundation for Healthy Youth (VFHY), which leads a state wide effort to reduce and prevent youth (ages 11-14 and 15-18) tobacco use. VFHY promotes healthy living habits to children and teens in Virginia through a variety of methods, including: classroom programs; a multimedia youth marketing campaign; university-based research and implementation of youth tobacco prevention strategies. Efficacy of this campaign has been evaluated using a biennial survey of youth tobacco use behaviours.

Intervention or response: The Youth Tobacco Survey (YTS) was designed by the Center for Disease Control and Prevention (CDC) as part of its Youth Tobacco Surveillance and Evaluation System. The Virginia YTS was administered by the Virginia Commonwealth University Survey and Evaluation Research Lab to public school students ages 11-14 ($n=21,848$) and ages 15-18 ($n=28,667$) from 2001-2013. Students were questioned about topics including: tobacco use; availability of tobacco products; second-hand smoke exposure; tobacco prevention education; tobacco advertisements; and media depictions of tobacco use.

Results and lessons learnt: Overall smoking rate in students age 15-18 years decreased from 28.6% in 2001 to 11.1% in 2013 ($p < 0.0001$). Students ages 11-14 years decreased smoking from 10.6% in 2001 to 2.5% in 2013 ($p < 0.0001$). Data trends suggest decrease in percentage of teens who have ever tried smoking; smoking before age 13; use of smokeless tobacco products; recall of pro-tobacco marketing. Increase trends are noted in negative media representation of smoking, exposure to pro-health messages, and belief that secondhand smoke is harmful.

Conclusions and key recommendations: Targeted evidence-based prevention strategies, including multimedia campaigns, can result in positive attitudes and habits toward tobacco prevention. A longitudinal survey instrument is helpful in the evaluation of overall smoking rates as well as the impact of the programs on knowledge and attitudes regarding tobacco use in teens.



31. ASSESSING NEEDS FOR STRONGER COLLABORATION WITH CIVIL SOCIETY

PD-950-20 Peer-to-peer intervention: 'The Blue Ribbon Way'

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Background and challenges to implementation: SMOKING HARMS YOU AND THE PEOPLE AROUND YOU This statement is the motivation behind this experiment carried out in an undergraduate business school and is an extension of a sustained activity of awareness of Tobacco harm. It is titled the Blue Ribbon Project inspired by the project presented at the 15th WCTOH, Singapore.

Intervention or response: Students were asked to sport a blue ribbon and convince their smoking peers to quit. The project had two objectives in mind, namely to help the non-smokers to abstain from smoking tobacco in all forms and to use positive peer pressure to convince the smokers to quit. The activity was initiated with a presentation by a cancer surgeon and interactions with a de addiction center to make students aware of the harmful effects of all forms of tobacco and moreover of second hand smoke. This group initiated several youth oriented and innovative concepts to spread the message among the youth like creating a dedicated Blue Ribbon project page on Facebook, using mobile applications to spread positive messages to the smoking group and more importantly use innovative techniques like flash mob dance and street plays to create awareness of harm of second hand smoke. Moreover, certain group activities were conducted like visits, group discussions to encourage positive means of socialization.

Results and lessons learnt: The outcome has been very positive as those enrolled for the project [460 students] have not succumbed to the peer pressure of smoking. On the contrary, they have been able to convince their peers to considerably cut down on their smoking habits. Some have managed to convince their peers and parents to quit. In a continuous period of two years, the activity was carried out without any coercion and students voluntarily got involved in the same. One of major reasons of its sustainability is perhaps the fact that it worked on the application of viewing youth as social leaders and focused more on peer to peer intervention

Conclusions and key recommendations: The experiment may be limited to a single institution and that too not related to medical background but could be easily replicated in other institutions as well. The most important lesson from the experimentation is that Youth power - if motivated - can prove the best change makers. 'Be the change you want to see in others', the quote of the father of India, Mahatma Gandhi is the guiding force of the activity.

PD-951-20 Assessment of periodontal health status and its association with smoking habits in Paniya tribes of India

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Background and challenges to implementation: The tribal populations throughout India have remained socially and culturally alienated from mainstream Indian society until developmental and conservation activities in tribal areas forced interactions between them. Even

though major developments with regard to tribal welfare have gradually led to appreciable improvements in the general health status of the tribes, the case of oral health remains far neglected especially among the underprivileged tribal populations. The aim of this study was to assess the periodontal health status among smoking habits in Paniya tribes of Wayanad, India.

Intervention or response: A cross sectional survey was done among 300 non-smoking and 200 smoking Paniya tribal populations of Wayanad District, India from January 2013 to June 2013 after approval from the Institutional ethical committee. A pretested structured questionnaire was used to collect data regarding study variables. Community Periodontal Index (CPI) was used to record the periodontal status of the study population after obtaining informed consent.

Results and lessons learnt: In this study periodontal disease was found to be far more prevalent among smoking Paniya tribes than among the non-smoking Paniya tribes. ($P < 0.0001$). The prevalence of severe periodontitis was found to be 42% amongst smokers. This was much higher than the 27% found among the non-smokers. Among the Smokers a statistically significant relationship was observed between periodontitis and poor access to oral health care ($P < 0.001$).

Conclusions and key recommendations: The present study demonstrates gross disparities in periodontal health status among smoking and non-smoking Paniya tribes. Oral health problems due to tobacco use are highly prevalent in the tribal community of Wayanad. Hence attention should be focused on improving the oral health status of this unprivileged group.

Some of the suggestion and recommendations are:

1. Primary prevention programs in the form of health education and health promotion as the first step towards reducing the tobacco use, and secondary prevention programs are introduced later depending on the availability of resources for oral health especially dental manpower.
2. Preventive programs should be organized at local community level in close Collaboration with key persons of tribal societies.
3. Animators of Primary health workers would be the key persons and could play an important role in disseminating oral health information.
4. Development of an accessible, low-cost, sustainable, primary preventive and referral programmes using existing Primary Health Care infrastructure and resources.

PD-952-20 Capacity building for female community health workers: an effective tool for tobacco control and empowerment

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Background: Tobacco is a significant public health concern in rural India. In Maharashtra, India's second largest state, 31.4% of adults report tobacco use. In villages across

the state, tobacco use is extremely problematic due to limited health clinics and infrastructure.

Methods: Salaam Bombay Foundation (SBF) began its rural initiative in 2007. An initial needs assessment was conducted in nine villages across Chandrapur, a rural district in Eastern Maharashtra. The survey found that 45% of villagers in Chandrapur reported tobacco use, including women and children. Following the needs assessment, SBF began conducting outreach with 60 female community health workers known as "tais" to empower them to become the primary implementers of tobacco control on the ground. Training through workshops was conducted with the selected tais covering tobacco's health effects and the existing tobacco legislation. Guidance was provided on how to address the tobacco control issue in the community. Tais use different methods to disseminate anti-tobacco messages including performing songs, rallies, puppet shows and street plays.

Results / Outcomes: Through this programme, SBF has addressed tobacco control issues among 28,000 residents in 60 villages and in 60 schools through the 57 trained health workers. An evaluation conducted one year after the program revealed that tobacco consumption among villagers has been reduced. Ninety percent of villagers were aware about the ill effects of tobacco.

Conclusions: Working through local health workers is an effective strategy to tobacco control intervention in rural villages. Tais, female community health workers, can be trained to implement tobacco control efforts in villages and work with all village stakeholders.

PD-953-20 Educating the youth on tobacco ills to stop them from the trap of tobacco

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Background and challenges to implementation: Himachal Pradesh in India, which was declared smoke free last year, has taken lead in tobacco control in the past in many ways. The state had passed Non Smokers Protection Act in 1997, wherein smoking was completely banned in public places, which made a difference. Sale of smokeless Tobacco (Gutka) and some other tobacco products was also banned in Himachal some years ago. The prevalence of tobacco users in the state is around 22 per cent as per a 2009 survey. But the state has not particularly focused on younger lot, which is continuously vulnerable to tobacco menace. There are no programmes to create awareness among the youth in colleges in the state, who are mostly dragged into smoking and tobacco use due to peer pressure and lack of guidance at all levels, including at home. The half-baked information with the youth from unauthentic sources about tobacco, sale of single cigarettes and legitimacy that the government allows sale of cigarette or tobacco products, also drive the students to buy them.

Intervention or response: We conducted a survey in one of the colleges in Shimla and found that students were not aware of the long term effects of Tobacco use. When

they joined the college after passing out from the school, the college did not offer them any knowledge on tobacco ills. There were no counsellors, who could educate them before they take to the habit under peer pressure. Fifty tobacco users/smokers were shown the pictorials and videos of cancer patients.

Results and lessons learnt: All the students, who were shown the pictorials and videos of cancer patients with their stories, were stunned and expressed their desire to quit smoking and tobacco use.

Conclusions and key recommendations: Effective counselling, including pictorials and videos of cancer patients, can convincingly motivate the youth shun tobacco. The National Tobacco Control Programme (NTCP) needs to comprehensively include a campaign against tobacco to sensitize the students in educational institutions by showing them ills of tobacco on health through pictorials and films. There should be regular counselling in schools and colleges on the issue for prevention. The students, who quit tobacco, can be mobilized in the drive against tobacco to convey the message even more strongly. The sale of single cigarettes should be banned and there should be a campaign against smoking at home to protect the family and the growing kids.

PD-954-20 Evaluation of smoking knowledge, attitude and behaviour in Iranian child labour

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Background: Children and adolescent smoking is one of the most important health problems in the world. It seems the younger a person start smoking, odds of becoming a regular smoker later in life will be higher. Usually, an adolescent will become a regular smoker by simple smoking experience. There is a major concern that child labor may generate a pseudo maturity syndrome, including smoking. The current survey focuses smoking behavior and, knowledge and attitude in child labor working in Tehran.

Material and Method: The study adopted a cross-sectional design, based on a primary pilot descriptive cross sectional study, using GYTS self-administered questionnaire. 816 child labor, which were student of work labor schools or worked as child labor on Tehran parks and crossing roads, were randomly selected using multi stage cluster sampling. The analysis used Spss v.22 (IBM statistic) software and chi square test to compare the frequency of variables in different groups and logistic regression.

Result: In this study 816 child labourers participated of which 49.4% were girls and 50.6% were boys. The age of children varied from 11 to 17 years old and their mean age was 13.9±2.01 years. 18.6% (CI 95%=17.3-20.1) of

child labor has smoking experience. Smoking prevalence analysis showed that 9.8% (CI 95%=8.6-10.9) were current smoker and 1.2% (CI 95%=0.9-2.1) current regular smoker. A quarter of child labor (19.8%) report peer's smoking; near to half of child labor (40%) had been exposing to second hand smoke at home; more than one of every three child labor (39%) had been exposed to tobacco smoke outdoors the previous week. Child labor smoking hazard knowledge was evaluated by considering the minimum score of 10 to maximum score of 30. Result demonstrates that the mean score of knowledge was 17.1±6.2. The mean score of attitude toward smoking (range 15-45) was 36.5±16.1 and the mean of smoking behavior (range 25-75) was 46.1±3.0.

Conclusion: Considering the study finding, planning of educational tobacco control program for these specific groups is required, aiming at preventing cigarette smoking by increasing the knowledge and correcting their attitude.

PD-955-20 Epidemiological profile, prevalence and some risk factors of (second-hand) passive involuntary smoking among Iraqi (adolescents and children) population

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Background: Design: Passive smoking is commonly understood as inhaling second hand smoke (SHS) from an active smoker. However, there is another type of passive smoking Second-hand tobacco smoke is present in virtually all places where smoking takes place (at home, in the workplace, in bars, restaurants, public buildings, hospitals, public transport and educational institutions /

Methods: A school-based analytical cross-sectional study conducted in primary, and secondary schools in, Baghdad/ Iraq. Age range: (6-18) both genders, males and females, through the computer program EPI-INFO version 6.04', using 3 % degree of precision, estimated prevalence of tobacco use among adolescents from previous similar studies (2010), (30 %), 1.5 design effect and 95% confidence interval, the adequate sample size selected was 1650, using Multistage stratified random sample technique, with proportional allocation according to the number of schools selected, number of classes as well as age and gender stratifications

Results: The study revealed that the prevalence of Passive smoking among child and adolescent groups enrolled in the study was 34.2% higher at younger age groups 17.2% among age (6-9) and 11.2% among (10-13) and 5.7% among (14-17), the difference was statistically significant P < 0.01. as for gender exposure to passive smoking, the study showed that females are more exposed than male (18.7, 14.4) respectively and P < 0.04, Indoor exposure showed significantly higher than outdoor (26.6, 9.4) respectively and P value < 0.002, passive smoking was more among those who exposed more than 3 days per

week in comparison with less than 3 days P value <0.03 . The study showed that passive smoking is more prevalent among those who have poor knowledge on second hand smoking (19.5%) compare to those who have good knowledge (4.1%) $p < 0.003$ same for believe (attitude) as it is more prevalent with those who do not believe in passive smoking hazards (24.9%) , $P, 0.001$. compare to 9.2% among believe in passive smoking , step was logistic regression analysis showed that the following factors are the main predictors for passive smoking impact , age (OR 2.08 95%CI 1.48-2.93, gender OR 1.8 95%CI 1.21-2.87, place of exposure 2.75 95%CI 1.62-4.68, knowledge OR 8.8 95% CI 4.65-14.39

Conclusion: Second-hand smoking is highly prevalent among children and adolescents segments of Iraqi population, exposure to passive smoking strongly linked with age , gender, place of exposure , duration of exposure, knowledge, attitude factors.

PD-956-20 Challenges in and measures against workplace smoking in Yamagata Prefecture's administrative offices

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Background and challenges to implementation: Since prevention of passive smoking was established in law in 2003, in the Health Promotion Act, Article 25, the importance of providing smoke-free workplaces has increased. Although more inside work environments are becoming smoke-free, there are many practical difficulties implementing all the work environments (including outside) smoke-free. This investigation aimed to clarify the current state and problems of smoke-free workplaces in administrative offices in some areas in Yamagata Prefecture, Japan, in order to develop a way to promote smoke-free work environments in government offices.

Intervention or response: We distributed questionnaire all the employees working at administrative offices in two towns and one city in Yamagata Prefecture. 736 completed a questionnaire survey administered between March 2011 and February 2012 through local government agencies by Nanyo City Higashi Okitama-gun Medical Association. The survey was supported by a Yamagata Prefecture Medical Association health research project.

Results and lessons learnt: Many who thought a smoking area should be preserved were passive toward a smoke-free workplace and had high KTSND scores, regardless of smoking status. As for support for a smoke-free workplaces, 38% felt that an outside smoking area should be preserved, 20% thought it should be a smoke-free workplaces, 21% were hopeful it would become a smoke-free workplaces, and 20% did not mind.

Conclusions and key recommendations: The results suggest that among both smokers and non-smokers were those who were passive toward a smoke-free workplace and who lacked awareness of smoking and passive smoking. These are among the reasons why the smoke-free

project has not proceeded in these locations. Assistance is required to provide employees specific information to improve their recognition of the need for a smoke-free project.

PD-957-20 Comparison of clinical profile and outcome of myocardial infarction in smokers and non-smokers

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Background: Cigarette smoking is leading preventable cause of death. Smoking adversely impacts the entire body
Objective: To compare the clinical profile and outcome of Myocardial infarction in smokers and non-smokers
Methodology: It is cross sectional study, conducted in September 2013 in National Institute of Cardiovascular diseases. On the basis of clinical history of smoking ,patients were grouped into smokers and non-smokers. There was 50 patients in each group. Patients symptoms like chest pain, sweating ,vomiting and complications like arrhythmias, acute heart failure, cardiac tamponade and final outcome like improved and expired were compared between both groups. Data was analysed using SPSS 20 and p value <0.05 was taken significant.

Results: Our study reveals that 46% non-smokers and 8% smokers present with chest pain (p value .001). More than half (54%) non –smokers and 14% smokers had history of sweating (p value <0.001). Around 22% of smoker and non-smokers had complains of vomiting, while 20% smokers and 4% of non-smokers had arrhythmia (p value 0.001). Acute heart failure was seen in 24% smokers and only 4% non-smokers (p value 0.004).Cardiac tamponade was seen in 10% smokers while non of the non-smoker had that complication (p value 0.003). Approximately 32% smokers expired as compared to only 6% expires in the non-smoker group (p value 0.001)

Conclusion: Specific symptoms of myocardial infarction were more common in non-smokers that might have helped in early diagnosis and thus good prognosis whereas fatal complications and death rate was found to be high in smokers group

PD-958-20 Comparison of policies and their implementation regarding tobacco use, and prevention of its consumption in public and private schools of Karachi

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Background: Schools play an influential role in students' life therefore school policies can alter the usage of tobacco among students drastically. The aim of the study is to compare the school policies along with their implementation regarding tobacco use and its prevention among public and private schools of Karachi

Methods: A cross-sectional study was conducted among teachers of 30 schools of Karachi. A modified WHO global professional survey questionnaire was used and data was analyzed using SPSS 20. Level of significance was taken <0.05

Results: Around 652 teachers responded to the 1000 questionnaires distributed; of these 53.8% belonged to Private while 46.2% were from Public schools. Approximately 25.5% public and 9.1% private teachers argued that there should not be any policy against student tobacco use within school premises (p.000). The presence of the policy regarding prohibition of tobacco use among students within school premises was negated by 48.1% public and 23.2% private school teachers (p.000). Furthermore, 30.09% private and 54.8% public school teachers denied its existence at school sponsored events (p.000). Upon inquiry of their implementation, private and public school teachers certifying this enforcement were only 30.9% and 10% respectively (p.000). Additionally 21.8% private and 54.1% public teachers denied the presence of policy of prohibiting tobacco use among school personnel within school premises (p.000) while 25.7% and 59.3% negated presence of any such policy at school sponsored events (p.0.05). On questioning 23.8% private and 3.7% public school teachers revealed complete implementation of this policy (p.000). Around 5% private and 3.7% public school teachers confirmed that tobacco could be purchased within school premises (p.001). Around 37.5% private and 56.3% public teachers denied having tobacco prevention measures in the curriculum (p.000). A striking 63% of government and 45.6% private school teachers said that there are no non-classroom programs used to teach tobacco prevention to students in the school (p.009)

Conclusion: Schools in Karachi lack policies regarding tobacco consumption; more so, in public schools than private. There is an indispensable need of implementing school policies against consumption of tobacco to counter the growing predicament of tobacco use from the society.

PD-959-20 Investing in youth tobacco control: a review of smoking prevention and control strategies

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Objective: To provide a comprehensive review of interventions and policies aimed at reducing youth cigarette smoking in the Uganda, including strategies that have undergone evaluation and emerging innovations that have not yet been assessed for efficacy.

Data Sources: Medline literature searches, books, reports, electronic list servers, and interviews with tobacco control advocates.

Data Synthesis: Interventions and policy approaches that have been assessed or evaluated were categorised using a typology with seven categories (school based, community interventions, mass media/public education, advertising restrictions, youth access restrictions, tobacco excise taxes, and direct restrictions on smoking). Novel and largely untested interventions were described using nine categories.

Conclusions: Youth smoking prevention and control efforts have had mixed results. However, this review suggests a number of prevention strategies that are promising, especially if conducted in a coordinated way to take advantage of potential synergies across interventions. Several types of strategies warrant additional attention and evaluation, including aggressive media campaigns, teen smoking cessation programmes, social environment changes, community interventions, and increasing cigarette prices. A significant proportion of the resources obtained from the recent settlement between 46 districts and the tobacco industry should be devoted to expanding, improving and evaluating "youth centred" tobacco prevention and control activities.

PD-960-20 Effects of tobacco and related products on health and its social implications: a cross-sectional survey from UAE

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Background: Tobacco and related products usage is prevalent in the Middle Eastern Region. We studied the perception of school students regarding the health related risks and social implications associated with tobacco and related products

Design/Methods: The study adopted a cross-sectional survey design among school students from Ajman, UAE. A self-administered questionnaire was filled in by student's

regarding health risk and social implications associated with tobacco and related products. Descriptive and inferential analysis of the data was performed using SPSS.19.

Results: A total of 411 students from Grade IX-XII participated. Of the total 229 were male and 182 female students (mean age: 15.6±1 years). More than 80% were aware of health risks associated with tobacco use. About 93% students attributed moderate-severe level of health risk to cigarette smoking, 92% to chewing tobacco, 89% to dokha and sniffing tobacco. About 21.4% felt no/mild health risk with smoking shisha/hookah in comparison to other tobacco forms ($p<0.001$). Female students were more aware regarding level of health risk with shisha/hookah smoking ($p<0.001$). The students believed frequent fights/ arguments, accidents, problems with parents, friends, and poor academic performance as the common social repercussions with tobacco use. Female students felt 'poor in academic performance, problems with parents and friends as major social repercussions with tobacco use ($p<0.05$). No association was found between parent's educational qualification and student's perception of tobacco-related health risks or social implications.

Conclusion: The findings imply students were aware of health risks and social repercussions of tobacco and related products. However, health risks with smoking shisha were perceived to be insignificant compared to other forms of tobacco. There is a need to increase the awareness of tobacco related health risks especially the water pipe smoking.

PD-961-20 Estimating the total costs of tobacco product litter in large U.S. cities

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Tobacco product litter is one of the most ubiquitous forms of litter, accumulating in increasingly large numbers on streets, highways, sidewalks, beaches, storm water drains, waste treatment plants, parks and other public places. Tobacco product litter ("TPL") has been shown to be toxic and costly to clean up. Several policies have been enacted to control TPL and offset TPL costs. In this paper we focus on the direct and indirect costs associated with TPL deterrence and abatement, and how accurate cost estimates are a necessary part of any solution. We put forth a conceptual framework which organizes the issues surrounding the direct and indirect costs of TPL. We also discuss measurement key issues. Data on the cost impact of the TPL problem is an essential prerequisite to the passage of thoughtful and effective legislation to address the issue.

PD-962-20 Building and utilising social media communities in resource poor settings to increase public engagement and compliance with smoke-free policies

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Background & challenges to implementation: Many resource poor jurisdictions have made important progress towards the control of tobacco with the adoption of smoke-free policies (SF). Unfortunately, many institutions tasked with enforcing and monitoring these policies often lack the capacity and resources to do so. Low compliance and public awareness of SF policies can undermine the effectiveness of such policies. Simultaneously, many jurisdictions have seen an increase in Internet access and use of social networking platforms. These platforms can serve as effective tools for civil society to communicate and support positive social change. We developed an intervention to test the ability of social media networks and purposefully developed an online community to 1) foster measurable engagement with and support for SF policies, and 2) increase compliance with these policies.

Intervention or response: In partnership with a local government agency tasked with enforcing SF policies at selected public transportation terminals in Metropolitan Manila, Republic of the Philippines, an engagement campaign was designed and is currently being initiated on the agency's Facebook page. Target audiences were identified and key messages were developed. An evaluation strategy was generated to test campaign messages and monitor engagement to inform future campaign activities which may include a dedicated SF community Facebook page, expansion to additional social networking platforms, or the development of a native mobile application, each designed to cultivate an online community that supports SF policies.

Results & lessons learnt: Key lessons learned during initial campaign development included the need to 1) adopt an incremental planning approach that allows for responsive online community development, and 2) consider and include all relevant stakeholders in campaign planning and coordination. Key metrics indicating message penetration, campaign engagement, and compliance with SF policies are essential to measuring campaign performance. These metrics comprise a monitoring and evaluation plan that identifies which messages and activities support engagement and compliance, in order to strategically inform future campaign activities through an incremental planning approach.

Conclusions & key recommendations Social networking may be a valuable and cost effective tool for increasing compliance with SF policies and could be utilized as a component of a larger compliance initiative.

32. BARRIERS AND STRATEGIES FOR BUILDING CAPACITY

PD-963-20 Prevalence of non-psychotic mental disorders in smokers assisted in a unit of smoking cessation in Buenos Aires city: cross sectional study

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Background: Several reports showed that the prevalence of anxiety and depression are higher in smokers. There is wide variability considering the study design, population included and the health care setting. Among the different forms of anxiety, panic disorder has the strongest association: 40% of prevalence. Prevalence of depression is very variable: since 22 to 61%. However, it is higher than founded in the population studies: 17%. In Argentine there is not any kind of data, including population studies.

Design/Methods: The main objective is to describe the prevalence of non-psychotic mental disorders (NPMD: anxiety-depression-somatic symptoms) and depression (separately) in patients treated at a Smoking Cessation Unit. In addition, the prevalence of previous psychiatric disease and use of psychotropic drugs in this sample are described. This is a cross-sectional study conducted in patients assisted since 2008 to 2014 at the Smoking Cessation Unit of the General Internal Medicine Program (SCU-PMIG), an ambulatory clinic for adult patients from the "Hospital de Clínicas", University of Buenos Aires, Argentina. The sample included 665 patients systematically selected and data on demographics, smoking behavior, previous psychiatric disease and current medication were collected. To assess NPMD and depression the Self Reporting Questionnaire (SRQ-20) and Beck's Test were used, respectively. All of them have been locally validated.

Results: Subjects' mean age was 51 years (SD± 12), 65.71% were women, and 49% had university level. They reported a consumption of 25 (SD±13.27) cigarettes/day and a mean for Fagerström score of 5.05 (SD± 2.44). The NPMD prevalence was 60.9% and depression: 15.49%. Previous psychiatric disease reported were 24.1%. The two most common previous diagnoses were depression and anxiety disorders (12.5% and 5.9% respectively). Use of psychoactive drugs were observed in 53.68%, 40.3% as a single medication. Logistic regression analysis showed that female gender (OR=2 95%CI 1.32-3.08) and age older than 60 years (OR=2.40 95%CI 1.23-4.68) were associated with the diagnosis of TMNP. Besides, living alone (OR=2.59 95%CI 1.33-5.04) and being unemployed (OR=2.6 95%CI 1.09-6.61) were associated with depression.

Conclusion: The NPMD prevalence in this sample is high. But, longitudinal studies are required to obtain a better understanding about the association between these disorders and their influence over abstinence rates.

PD-964-20 Missing information on smoking status in medical records of cancer patients in Brazil

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Background: The Approach of smoking status during clinical history is essential and should be recorded by health professionals in medical records, regardless of the reason for consultation. By knowing the status of the patient in relation to smoking, health professionals can advise for cessation or to prevent smoking initiation. The aim of this paper is to know the percentage of missing information on smoking status in Brazilian Hospital Based Cancer Registries (HBCR).

Design/Methods: The lack of information on smoking status in Brazilian Hospital Based Cancer Registries between 2000 and 2011 was evaluated in patients aged 15 years or more with the following tobacco-related cancers: oropharynx, larynx, esophagus, stomach, liver, pancreas, kidney, urethra, bladder, uterus, colon-rectum and trachea, bronchus and lung. The database of this study was extracted from IntegradorRHC ¾ Brazilian Web system to consolidate, at national level, databases from HBCR. The percentage of missing information was calculated for tumor site by year and time trends was assessed.

Results: The mean percentage of missing information on smoking status for selected topographies was 42% (95%CI: 39% - 46%). The lowest percentage of missing information was founded for Oropharynx tumors (23% (95%CI: 20% - 27%)) while liver, kidney and uterus showed higher percentages (>43%). Between 2000 e 2011 we observed an improvement of smoking status record just for Esophagus tumors.

Conclusion: For prevention and control of smoking the results of this study was very disturbing. Smoking cessation and prevention of initiation should be encouraged by health professionals, however a large proportion of patients with tobacco-related cancers do not have information on smoking status reported in their medical records. This finding makes us think about how smoking is addressed in medical consultations and therefore limits the use of this information, while variable, in epidemiological studies. The record of smoking status in the medical records should be encouraged.

PD-965-20 Maternal passive smoking in early pregnancy and pre-term birth in rural China: a prospective cohort study

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Background: Maternal active smoking is a well-documented risk factor for preterm birth (PTB), however evidence for passive smoking has been mixed. We aim to examine the effects of maternal passive smoking during early pregnancy on PTB in a prospective cohort study.

Design/Methods: The study was carried out in two counties in Shanxi province of China. The subjects included 3,314 nonsmoking pregnant women who were enrolled (before 20 weeks gestation) from December 2009 through December 2012, and who were delivered a singleton live birth. Passive smoking and other characteristics were collected by trained health workers at recruitment. Information on birth outcomes were abstracted from the medical records. Passive smoking was defined as exposure to smoking at least once per week on average and at least one 1 cigarette each time from other people in their environment at home or public places during early pregnancy. PTB and very preterm birth (VPTB) were defined as deliveries before 37, and 33 completed weeks of gestation, respectively.

Results: The total incidence of PTB was 6.0%. Although passive smoking did not show a significant association with all PTB, but was significantly associated with an increased risk of VPTB (adjusted OR = 2.28, 95% CI: 1.03-5.06). Compared to women without passive smoking, the women with >3 times/week of passive smoking showed 1.44(1.02-2.02) and 2.88(1.21-6.87) fold increased risk of PTB and very PTB (Table).

passive smoking	n	PTB		VPTB	
		incidence(%)	Adjusted OR (95%CI) ²	incidence(%) ³	Adjusted OR (95%CI) ²
No passive smoking ¹	1680	5.3	1	0.6	1
Any passive smoking	1634	6.7	1.28 (0.95-1.71)	1.3	2.28 (1.03-5.06)
1-3 times/week	818	5.7	1.09 (0.76-1.57)	0.9	1.67 (0.62-4.51)
>3 times/week	816	7.5	1.44 (1.02-2.02)	1.7	2.88 (1.21-6.87)
p for trend			<0.05		<0.01

¹ Reference group;
² Adjusted for age; BMI, education, ethnicity, parity;
³ The calculation of very PTB did not include other subtypes PTB in denominator.

Conclusion: Maternal frequent passive smoking during early pregnancy may increase the risk of PTB, especially VPTB in the offspring of Chinese non-smoking women.

PD-966-20 Smoking and illicit drug use: intensity of smoking predicts the experimentation with illicit substances in Hungarian adolescents

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Background: The role of cigarette smoking in the development of drug use is still not clear, however some studies pointed out the potential gateway mechanisms of nicotine that can open the door toward the use of illicit drugs. However, it is rarely documented that the intensity of cigarette smoking has dose response association with the probability of lifetime use of illicit drugs in adolescents. Our analysis has two main goals: (1) to test if the gateway effect of smoking is a general effect regardless of type of illicit drugs; and (2) to examine the pattern of intensity of smoking that can increase the chance of lifetime drug use.

Design/Methods: Data were collected in the framework of the European School Survey Project on Alcohol and Other Drugs (ESPAD). As part of this international collaboration a nationwide representative adolescent sample of 16-year-old students was obtained. A total of 3062 secondary school students were assessed (52% male). Self-report questions were used to measure the current tobacco use during the past 30 days and lifetime use of illicit drugs including marijuana, ecstasy, sedatives, amphetamines, LSD or other hallucinogens, crack, cocaine, heroin, GHB, mephedrone. Several binary logistic regression analyses were used to predict lifetime use of several illicit substances. In all analyses, gender was controlled.

Results: The association between smoking intensity and illicit drug use are presented in Table 1. We identified a general trend that higher intensity of current smoking is associated with higher odds of lifetime illicit drug use, and furthermore adolescents smoking at least 1 cigarette a day experiment significantly more likely with all illicit drugs than nonsmokers. The dose-response association is identified, therefore increasing consumption of cigarettes also increases the odds ratio of lifetime use.

Intensity of smoking during the last 30 days	Marijuana	Ecstasy	Sedatives	Amphetamines	LSD	Crack	Cocaine	Heroin	GHB	Mephedrone
Non-smokers	Ref.									
Less than one cigarette a week	3.95	3.48	2.89	1.77	0.93	4.56	4.05	1.16	1.47	1.75
Less than one cigarette a day	4.15	1.27	2.00	1.71	2.10	9.56	4.17	2.62	4.51	5.30
1-5 cigarettes a day	11.12	8.09	3.94	5.72	3.67	7.86	5.75	5.80	7.63	9.65
6-10 cigarettes a day	20.12	11.88	6.74	11.89	8.40	11.36	14.51	9.16	11.29	14.61
11-20 cigarettes a day	36.9	24.05	13.95	16.18	20.47	33.21	23.02	16.74	29.26	28.81
More than 20 cigarettes a day	28.42	45.44	14.42	23.32	46.49	39.55	66.97	17.02	13.40	24.93

Note: Significant (p<.05) Odds ratios are boldfaced. Gender is controlled in all analyses.

Conclusion: Smoker adolescents report more likely that they used illicit drugs than non-smokers. Although we cannot conclude about the direction of causality, our study highlights that prevention of smoking might be a key component of illicit drug use prevention efforts in adolescents. Further epidemiological cohort studies should clarify the role of smoking in initiation of illicit drug use.

PD-967-20 Salivary thiocyanate, uric acid and pH as biomarkers for tobacco

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Background: Saliva is the first biological fluid to encounter cigarette smoke. A number of clinical studies have compared the periodontal status of smokers and non-smokers. Biomarkers of tobacco exposure are used to confirm the absorption of specific smoke constituents in a quantitative manner.

Design: A total of 90 subjects in each group; tobacco smokers (30), tobacco chewers (30) and non tobacco users (30) were selected for the study. Periodontal status was measured by Community periodontal Index (WHO). Salivary thiocyanate was determined using spectrophotometric analysis, Salivary uric acid concentration was determined using the enzymatic uric acid assay reagent. pH was measured using pH strips.

Results: In this study CPI scores based on highest of all the six scores in an individual showed that non- tobacco users with highest percentage of healthy sextants (13.33%) and sextants with bleeding on probing (6.66%). Proportion of participants with periodontal pockets of 4-5mm was highest among tobacco smokers (80.0%) and periodontal pockets of 6mm or more were observed to be higher among tobacco chewers (26.67%). When LOA scores were compared with various forms of tobacco users, tobacco chewers had highest prevalence of loss of attachment of 0-3mm (26.7%) than tobacco smokers (23.3%). Attachment loss of 4-5mm was found to be higher (63.3%) among tobacco smokers than tobacco chewers (46.70%). The mean level of thiocyanate level detected in saliva of tobacco smokers was $172 \pm 54.7 \mu\text{g/ml}$ and $203.70 \pm 45.7 \mu\text{g/ml}$ in tobacco chewers where as it was only $97.63 \pm 17.98 \mu\text{g/ml}$ in non-tobacco users. The mean uric acid levels was found to be $2.54 \pm 0.63 (\mu\text{g/dl})$ in smokers and $2.65 \pm 0.37 (\mu\text{g/dl})$ in chewers and in non tobacco users was $2.33 \pm 0.47 \mu\text{g/dl}$ respectively. There was no significant difference in pH in all the groups.

Conclusion: Tobacco users had significantly higher concentration of SCN levels than non-users. Exposure to lower levels of cyanide over a long period results in increased blood cyanide levels, which can result in weakness and a variety of symptoms, including permanent paralysis, nervous lesions, hypothyroidism and miscarriages.

PD-968-20 The Union's interventions for tobacco control in Bangladesh

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Background: International Union Against Tuberculosis and Lung Disease (The Union) is providing technical and financial supports to tobacco control activities under the Bloomberg Initiative to reduce tobacco use. The Union is

supporting government and NGOs to implement WHO MPOWER policy package to curb tobacco epidemic in Bangladesh. National Tobacco Control Cell (NTCC) of MOHFW, National Anti TB Association of Bangladesh (NATAB), Action In Development (AID), Alliance for Co-operation and Legal Aid Bangladesh (ACLAB) and Work for a Better Bangladesh (WBB) Trust are directed funded by The Union. In addition, The Union also supports number of government ministries and departments and NGOs by providing technical assistance and capacity building trainings. The grantees also help to strengthen collaboration among networking NGO and government for tobacco control law implementation and to train government officials, journalist, local elites and partner NGOs.

Intervention or response: Ensure tobacco control law implementation is one major area of work of The Union; it provided technical support to amend the tobacco control law and in formulating the regulations. Since 2011, The Union organized at least 12 Management and technical courses for tobacco control where 116 government officers and 140 NGO representatives attended. NTCC trained 244 executive magistrates from all over the country to enforce the TC law through mobile courts. In collaboration with Government institutions, grantees supported to declare smoke free public places and transports as per law and distributed No-Smoking signage to ensure smoke free environment at public places and transports.

Results: As a result, 1104 mobile courts have been operated throughout the country and BDT 234,929 is being collected as fine for violating the law. 16,854 public places and 298,528 public transports declared smoke free. About 8.55 million populations are directly benefited from the smoke free environments.

Conclusions and key recommendations: Capacity building is key tools for make people active on tobacco control. Collaboration among government and civil society organizations can make positive changes for not only smoke-free concern, but also as a whole tobacco control movement.

PD-969-20 Prevalence and factors associated with use of tobacco in eastern Nepal

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Background: The use of tobacco is increasing like an epidemic, especially among the younger generation. Various forms of tobacco have been and are being used globally. Betel quid chewing is an ancient, socially acceptable habit in South-East Asia and comprises of arecanut, slaked lime, betel leaf with/without tobacco. This habit incorporated as a part of culture has helped in popularizing such chewing practices. Such a practice is gaining more attention in public due to lack of awareness and vigorous marketing strategy of companies commercially manufacturing these products. Tobacco chewing habit has been positively associated with oral potentially malignant disorders (OP-

MDs), carcinoma of oropharyngeal region, chewer's mucosa, periodontal diseases etc. Since continuous efforts are being made to control tobacco use in Nepal, documentation regarding prevalence and factors associated with tobacco use could make focused as well as extensive efforts possible.

Design/Methods: A cross-sectional survey was carried out from October 2012 to October 2013 among 16-70 year old in 16 districts of eastern Nepal. Study site consisted of one town and three villages in each district. A total of 3200 people, selected by systematic random sampling, were subjected to a self-administered questionnaire regarding demographic details and tobacco habits. Oral examination was carried out after obtaining written consent. Logistic regression analysis was used to identify the risk factors for tobacco use.

Results: Smoking and smokeless tobacco use prevalence was 12.6% and 17%, respectively. Multivariate logistic analysis showed that smoking was associated with use of arecanut (OR 2.19) and alcohol (OR 6.88), being married (OR 4.53), age >54 years (OR 10.24), and semi- or unskilled occupation (OR 5.45). Whereas, smokeless tobacco use was associated with smoking (OR 4.12), being married (OR 5.07), living in the mountains (OR 3.14), agriculture occupation (OR 2.82), and age >54 years (OR 3.30).

Conclusion: There is high prevalence of smoking and use of smokeless tobacco among 16-70 year old population of eastern Nepal. Exposure to arecanut and alcohol, being married, living in the mountains, laborious occupation and old age were associated with tobacco use. Public programs to help quit or reduce such habits should be implemented, monitored and evaluated. To assess the prevalence of tobacco use in eastern Nepal and the associated factors.

PD-970-20 PM 2.5 Determination: an indicator on Romanian young adults SHS exposure

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Background: Many studies have shown that small particles (PM_{2,5}) represent a risk factor for both chronic lung and cardiovascular diseases. These studies have contributed to issuing the EPA Guide of PM in the USA (recommended outdoor values 1 year ave. <0.012 mg/m³, 24 h ave. < 0.035 mg/m³). Other studies clearly show the positive relationship between elevated levels of PM pollution and air pollution caused by smoking (SHS, third HS). Thus, PM_{2,5}-even if considered a non-specific marker, is widely

used in demonstrating air pollution due to smoking and has had an impact on the legislation regarding smoking in many countries. The Romanian law in this field is still permissive, permitting smoking in public places. However, effectively enforcing the Romanian law remains a challenge, therefore populations are still exposed to SHS. In this study we have targeted a population that is vulnerable to SHS exposure: the young people attending universities. **Aims:** Comparative assessment of air quality (PM_{2,5}) in presumably smoke free places of some Romanian universities, which could have an impact on enforcement of the law in the future.

Design/Methods: Aerosol Monitor TSI SidePak was used to determine PM_{2,5} in 5 locations with a large population of students on two campuses in Romania: A-state medical university, B-a private non-medical university. The measurements were made in the same location in each campus, in a time span of one year, covering both holiday – only staff activity (A-3521 measurements, B-3045 measurements) and teaching period – students activity (A-1916 measurements, B-1911 measurements). Measurements were scheduled for two busy time slots, 10 AM – 12 PM respectively 2 PM – 4 PM. The study analyzes the evolution in time of the measured values.

Results: Significant differences (p<0.0001) were found during holiday period between state medical (0.0168 mg/m³) and private non-medical institutions (0.0138 mg/m³) with values at university A as high as 0.600mg/m³, which can be correlated with physical observations of individuals smoking. During the teaching period concentrations at the medical university (0.0305 mg/m³) and non-medical university (0.0398 mg/m³) were found to be significantly higher (p<0.0001) in comparison with the readings from the holiday season.

Conclusion: Evidence of smoking is prevalent in both universities. The smoke free policy appears to be less respected by the staff at the medical university demonstrated by holiday measurements. This should be an important issue for policy-makers and for institutes who are in charge of current law. **Research funding:** Research reported in this publication was supported by the Fogarty International Center and the National Cancer Institute of the National Institutes of Health under Award Number R01 TW009280-01.

Conflicts of interest: None.

PD-971-20 Physicians: awareness and barriers regarding smoking cessation counseling and therapy: a cross-sectional survey in Saudi Arabia

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Background: Smoking cessation advice and assistance by physicians play an important role in helping smokers quit. Awareness of the clinical practice guidelines for tobacco dependence (in particular the 5A's) and perceived barriers for their implementation is needed to improve the care

for individuals who smoke/use tobacco products in Saudi Arabia. This paper aims to report on the knowledge of physicians of clinical practice guidelines for tobacco dependence and barriers to adherence to these guidelines.

Design/Methods: A cross-sectional self-administered survey was conducted among 216 general and family practitioners in primary health care clinics belonging to two major medical centers in Riyadh city, Saudi Arabia. Descriptive statistics were used to report on knowledge variables. Logistic regression was used to examine the predictors of physicians' use of the 5 A's for smoking cessation.

Results: 57.4% of the contacted physicians responded to the questionnaire. One third (33%) never heard of the guidelines for treating tobacco dependence. Asking (71.8%) and advising (87.9%) were the most implemented for smoking cessation, while assisting (15.3%) and arranging for follow-up (17.7%) were the least implemented. The majority (96.0%) did not prescribe pharmacotherapy. Reported barriers were mostly lack of time (72.6%) and lack of training (66.9%). Training, years of practice, confidence in ability to advise and assist, and perceived patients' interest in smoking cessation were all predictors of implementing the 5 A's

Conclusion: This preliminary study showed that smoking cessation delivery according to the clinical practice guidelines recommendation in Saudi Arabia is inadequate. We identified barriers to delivery of smoking cessation therapy and counselling for the first time. Physician training is likely to improve compliance with implementing smoking cessation counselling and therapy. In addition an informed patient is likely to improve the care for tobacco users.

PD-972-20 Knowledge about tobacco smoking among medical students in Saudi Arabia: findings from three medical schools

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Background: Tobacco smoking is the leading cause of preventable death worldwide. Educating and training medical students about tobacco dependence prevention and treatment will prepare them for the task of counselling smokers to quit. In Saudi Arabia, little is known about the knowledge of medical students on smoking cessation and prevention.

Design/Methods: This study was conducted among 237 medical students (89% response rate) from three medical schools in Saudi Arabia. Students were asked to complete a 55-item questionnaire about the knowledge of smoking epidemiology, smoking cessation practice and benefits, and treatment of tobacco dependence.

Results: The majority of the students (91.4%) did not have adequate knowledge about the epidemiology of smoking. Students demonstrated a low knowledge of the health risks associated with tobacco use (average score 53%; SD=11.6), a fair understanding of the benefits of smoking cessation, and insufficient information about treatment of tobacco dependence. Respondents thought they were adequately prepared to counsel their patients to quit smoking.

Conclusion: Medical students in Saudi Arabia are not well informed and trained in tobacco dependence and treatment. It is essential to address this deficit by prioritizing these topics in medical education curricula.

PD-973-20 Nicotine-free cigarettes: history and marketing

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Background: The technology to extract nicotine from tobacco products dates back to the 1920s. This presentation analyses the marketing history of very low nicotine brands, health and cessation claims made to sell these products, and evolving technology to produce nicotine-free products today.

Design/Methods: Analysis of the tobacco industry document libraries and catalogued tobacco advertising collections at the University of California San Francisco and Tobacco Documents Online will serve as primary resources. Other sources include current nicotine free cigarette marketing as well as tobacco product and marijuana blogs and forums.

Results: Marketing claims regarding low nicotine delivery cigarettes can be found in the 1940's and 1950s. However, internal business records from the companies recognize that very low nicotine cigarettes would place their business in jeopardy. In the late 1980's Philip Morris developed a very low nicotine cigarette that was commercialized and tested in three US cities. Market search conducted by Philip Morris at the time found that consumer interest in the low nicotine product was strong, but the product sales declined when price promotions were reduced. In 2003 Vector tobacco marketed Quest cigarette a very low nicotine cigarette which used genetically modified tobacco to lower nicotine delivery. The product did not sell well and removed from the market in 2009. However a nicotine free variant of Quest will soon be marketed in Europe.

Conclusion: The history of marketing low nicotine tobacco products suggests that consumers will not adopt them as an alternative to traditional nicotine containing cigarettes without price discounting.

33. ECONOMIC EVIDENCE FOR TAX REFORM

PD-974-20 Using media for tobacco tax advocacy in Bangladesh

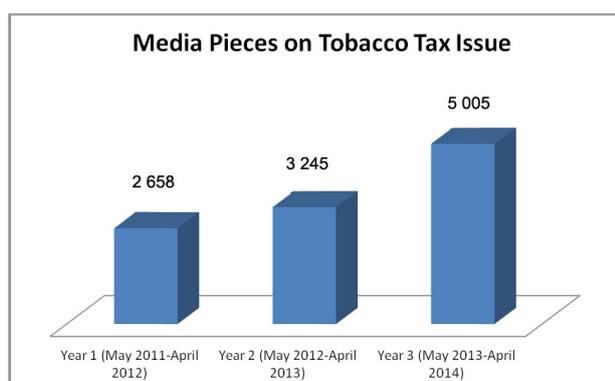
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Background: Tobacco taxation was never a major issue for the media in Bangladesh. It was one of the least attended issues related to the national budget through which all taxes are determined. But things have changed a lot in recent years due to strategic media-focused initiatives for creating interest and capacity on tobacco tax reporting in the media. As a result, the quantity and quality of media coverage on tobacco taxation before and after the declaration of national budget has been remarkable. Informed reporting, highlighting the demands of the tobacco control groups for higher tobacco taxes before the budget and critical reaction of the tax measures proposed in the budget, was widely visible during the few months around budget declaration and passage.

This has been possible through strategic and continuous capacity building of journalists since 2010. The present analysis was done to demonstrate the trend of quantitative increase and qualitative enhancement of tobacco tax reporting in Bangladesh media through strategic capacity building efforts targeting the journalists.

Design/Methods: Initially more than 300 journalists were trained in general tobacco control issues that included at least one session on tobacco taxation. Based on the interest of the trained journalists in tobacco taxation, follow-up capacity building was done with a smaller group focusing on tobacco taxation. This was done through training workshops exclusively focusing on tobacco taxation. Every year, at least two workshops are organized by PROGGA – one before and budget and one after – to equip the journalists with information regarding the demands for tobacco taxes that year and with critical analysis of tax measure announced in the budget.



Results: Increased quantity and enhanced quality of media reporting on issues of tobacco taxation were achieved, which ultimately created pressure on government to consider higher tax measure on tobacco in the budget.

Conclusions: Despite all constraints, the trend of quantitative increase and qualitative enhancement of tobacco tax reporting in Bangladesh media has been seen in the last few years (an example of increased coverage on tobacco taxation is given in the graph below).

PD-975-20 The impact of prices on the onset of tobacco use: an individual-data study for Argentina

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Background: The main objective is to measure the impact of tobacco and alcohol prices on the onset of smoking in Argentina using, for the first time in the region, individual-level data. We also explore the strength and direction of factors other than prices that may be associated with smoking onset including material deprivation measures, urban/rural status, gender, province of residence, etc.

Design/Methods: We use individual-level data from four surveys conducted in Argentina (Encuesta Nacional de Factores de Riesgo 2005 and 2009; ENPRECOSP 2008 and 2011). We link individual onset survey data with consumer price indices (CPI) of cigarette and alcohol goods. Then, we perform duration analysis using these retrospective data, which allow us to determine the impact that changes in prices of tobacco and alcohol goods have had on the decision to start smoking, controlling by a number of individual and household-level variables (gender, age, province of residence, material deprivation variables, etc.) To ensure models are correctly specified and results are robust to alternative specifications, we performed extensive diagnostic checks and sensitivity analyses, including different ways of modelling time-to-failure, cohort effects, etc.

Results: Overall, the effect of tobacco prices on smoking onset is found to be large and statistically significant. Although effect sizes vary with different models price measures are found to be significantly associated with smoking onset. We find that on average and holding everything else constant, a 10% increase in the real price of tobacco would imply a 5% decrease in the risk of starting to smoke at the relevant ages (from 8 to around 30, depending on the models). Additional statistically significant covariates include province of residence, gender (being female, which is associated with a lower risk of smoking onset), household head, etc.

Conclusion: Increasing those prices can delay, postpone or avoid onset and that effect is stronger among women or individuals from lower socioeconomic settings or living in poorer provinces. These results are consistent with international evidence conducting similar analyses and call for an effective increase in prices of tobacco and alcohol.

PD-976-20 Tobacco tax for health promotion: an advocacy strategy to support local government, case study allocation 70% tobacco tax for tobacco control in Jakarta

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Background: Tobacco tax is one source of local tax regulated in The Regional Tax and Retribution Law No. 28/2009. It levied by the central government and paid proportionally to the provincial general treasury account based on population. The law mandates at least 50% tobacco tax revenue to fund health promotion on tobacco control and law enforcement.

Objective: This aim of this study is to support Jakarta's local government to have an adequate regulation on tobacco tax revenue on maximizing the use of tobacco tax revenue for tobacco control.

Methods: Technical assistance in advocacy, drafting, conduct high level meeting with government official, and facilitating a harmonization meeting between Jakarta's local government and national government.

Results: Jakarta's tobacco tax was approved by parliament in 2013. An advocacy to support Jakarta's local government and parliament was contributed on maximizing allocation of tobacco tax revenue for health promotion and smoke free enforcement. The Regional Tax and Retribution Law mandates at least 50% tobacco tax revenue to fund health promotion on tobacco control and law enforcement. The advocacy has been done was successfully adopt "Tobacco tax revenue is allocated minimum 70% to fund health promotion programs related to tobacco control and law enforcement" which higher than mandated by the law which is only 50%. On the harmonization process, a challenge was coming from the national level. The national government asked Jakarta to revise one of the articles regarding health service and instructed to refer to the definition on the law for provision of smoking room. On the other hand, Jakarta's local government already ban provision of smoking room since 2008. At this stage an advocacy to strengthen Jakarta's government commitment to reject the national government recommendation was made. A counter argument and evidence based was provided to support Jakarta to defend its tobacco tax legislation. As a result of an intensive advocacy Jakarta responded national government evaluation by rejecting their recommendation. Eventually, Tobacco Tax Local Regulation No. 2 Year 2014 passed with no such provision of smoking room and 70% allocated for tobacco control health promotion and smoke free enforcement.

Conclusions: Civil society support is an effective strategy as a control and support to the local government to provide adequate tobacco control legislation for the people.

PD-977-20 Forecasting the future prevalence of current smoking: will Thailand achieve the global goal, 30% reduction of tobacco use in 2025?

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Background: Over 20 years, the percentage of current tobacco smokers decreased averagely 1.7% per year, from 32.0% in 1991 to 21.4% in 2011. In the last five years, 2006 to 2011, it increased 0.5% per year. Recognizing that the declaration of UN General Assembly in 2011 targets 30% reduction of tobacco use in 2025 and there is need to know the trend in the future for coping with appropriate tobacco control strategies to achieve the global goal.

Objective: To forecast the current smoking of adults aged 15 years and above and explore a potential factors affecting to the current smoking and smoking quitting.

Design/Methods: A nine national databases of tobacco use for over 20 years were drawn for time series analysis for forecasting the current smoking in the next 15 years since 2011. A binary logistic regression was performed for computing un-adjusted and adjusted Odds Ratio for predicting the potential factors affecting the behavior of tobacco smoking and smoking quitting in adults aged 15 years and above.

Results: According to the quadratic forecasting equation, the prevalent trend of current smoking decreases averagely 1.1% per year, from 20.3% (95%CI: 19.1-21.5) in 2011 to 17.5% (95%CI: 13.5-21.4) in 2025. As the global goal, the prevalence of current smoking will be 15.0% based on the rate of 20.3% in 2011. The 2.4% decrease in each year and the difference was two times (1.1% vs 2.4%). It implies that in 2025 the number of smokers as global goal, smokers will be 9.0 million and 10.5 million based on the forecasting equation.

Therefore, 1.5 million of current smokers should be decreased. By the binary logistic regression model, it points that the smoking of household heads have significant effect on smoking probability, compared with those who are non-smokers (OR: 13.3, 95%CI 12.0 to 14.7). Meanwhile, factor of household heads who are non-smokers or former smokers, compared with those who are current smokers also have effect on probability of smoking quitting significantly (OR: 19.0, 95%CI 16.4 to 21.9).

Conclusion: Moving forward to achieve the global goal, Thailand should accelerate with multipronged approaches according to the WHO FCTC guideline, especially strong support smoke free home and cessation program for household's member.

PD-978-20 The demand for cigarette in Tanzania and its implication on tobacco taxation policy

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The study attempts to estimate the demand for cigarette in Tanzania and presents simulation results on the effect of cigarette excise tax on smoking participation, on government revenue and related results. After briefly summarizing the magnitude and spread of cigarette consumption in the country, the paper reviews some empirical estimates from African and other countries. The 2008 Tanzanian household budget survey was used to estimate the demand for cigarettes in Tanzania. The descriptive statistics suggests that the smoking prevalence for Tanzania as being 15.35% and showed low variability across expenditure (income) group. Smoking intensity and per capita consumption were estimated to be 7.08 cigarette and 1.33 cigarette respectively - a relatively low value. "Two part demand equation model was used to estimate various elasticity. For the overall equation the price elasticity of smoking participation, of smoking intensity as well as total elasticity were estimated to be -0.879, -0.853 and -1.732 respectively. Compared to similar results in other developing countries the estimates appear to be quite high. When estimated by expenditure (income) groups, the magnitude of the elasticity appear to be higher among high expenditure groups compared to low expenditure groups. Two simulation exercises were undertaken. First the effect of different excise rates on smoking participation rate, on cigarette consumption, on tax revenue and related responses is estimated and highlighted. The same exercise was undertaken to see the effect of a given increase in cigarette excise tax on various expenditure groups. The overall result suggests that increase in excise tax on cigarettes in Tanzania would reduce cigarette consumption and increase government tax revenue.

PD-979-20 The association between tax structure and cigarette price variability

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Background: Recent studies have shown that more opportunities exist for tax avoidance and brand switching when cigarette excise tax structure departs from a uni-

form specific structure. However, the association between tax structure and cigarette price variability has never been estimated empirically in previous literature.

Objective: This paper aims to examine how cigarette tax structure is associated with price variability. Price variability is measured by price gaps between higher- and lower-priced cigarettes, which also reflect the price distribution.

Methods: We used survey data taken from the International Tobacco Control Policy Evaluation (ITC) Project in 17 countries to conduct the analysis. Cigarette prices were derived using purchase information and aggregated to price gap measures for each surveyed country and year. The excise tax structures studied in this paper include specific, mixed, and ad valorem, which are additionally differentiated by uniform or tiered rates based on prices or other characteristics. Their effects on price gaps were estimated using Generalized Estimating Equation (GEE) after adjusting for the amount of total excise taxes, controls for country attributes, and year fixed effects. We also analyzed how price gaps are influenced by the share of the ad valorem component among total excises and tiered structure, respectively.

Findings: Our study, to the best of our knowledge, provides the first empirical evidence of a relationship between tax structure and cigarette price variability. Compared with a specific uniform tax structure, specific tiered, mixed (uniform and tiered) and ad valorem (uniform and tiered) tax structures are associated with greater price gaps. In addition, a greater share of ad valorem component among total excise taxes is associated with greater price gaps. Moreover, when keeping the share of ad valorem component among total excise taxes constant, a tiered tax structure is associated with greater price gaps. The results suggest that a uniform and specific tax structure is preferred for limiting price gaps and price variability, diminishing opportunities for tax avoidance, and increasing the effectiveness of excise taxes as a mean of reducing cigarette use.

PD-980-20 The heterogeneous effects of cigarette prices on brand choice in China: implications for tobacco control policy

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Background: China, the world's largest consumer of tobacco, has long kept its tobacco taxes below international standards. The Chinese government has commonly cited as two rationales against tax reform the unfair burden it places on low-income smokers and the ability of consumers to undo a tax's health effects by switching to cheaper brands. No studies have examined both arguments simul-

taneously by examining differences in brand switching by socioeconomic status (SES) in China. This study examines how different socioeconomic subgroups of Chinese smokers switch brands in response to cigarette price changes.

Design/Methods: We model smokers' choice of cigarette tier as a function of tier-specific prices. We run separate models for different income and education subgroups to understand the heterogeneous responses to prices. We estimate mixed logit models that allow for random variation in smokers' preferences. We use data from three waves of the longitudinal ITC China Survey, collected in six large Chinese cities in 2006, 2007-2008, and 2009.

Results: Low-income and less educated smokers are considerably more likely to switch tiers in response to price changes than are their high-SES counterparts. Among low-SES groups, those who initially purchased cigarettes in the second-to-lowest tier (retail price range ¥2.65 to ¥5.15 per pack) are most responsive to prices: a ¥1 rise in prices increases the likelihood of switching tiers by 5.6% points for low-income smokers and 7.2% points for less educated smokers, compared to 1.6% and 3.0% points for the corresponding high-SES groups. Across all models, low-SES groups are more likely to trade down whereas a substantial proportion of high-SES smokers trade up.

Conclusion: Our results indicate that only a small percentage of low-SES Chinese smokers switched to cheaper brands in response to price increases. Thus, brand switching does not appear to be a valid pretext for China to delay tobacco tax reform. We further discuss the implications of brand switching for tobacco tax policy in China.

PD-981-20 The importance of tax structure and affordability on the impact of tobacco taxation policies

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Background: Extensive research demonstrates the effectiveness of increased tobacco taxes in reducing tobacco use and its health and economic consequences. In recent years, the importance of tax structure and affordability in impacting the effectiveness of higher taxes has become increasingly apparent.

Design/Methods: Data from the ITC and GAT Surveys in 20+ countries are used to examine the impact of tobacco tax structure on tobacco product prices, affordability across countries and over time, and tobacco use.

Results: Tobacco tax structure significantly affects the variability in tobacco product prices, with relatively simple tax structures that place more emphasis on specific (per unit) taxes generally leading to higher and less variable prices than ad valorem tax structures and/or tiered tax structures. The greater variability in prices makes it easier for tobacco users to switch down to less expensive

brands when taxes and prices are increased, reducing the effectiveness of tobacco taxes in reducing tobacco use. Similarly, more complex tax structures can contribute to increased affordability of tobacco products (or to smaller reductions in affordability) over time. In general, affordability of tobacco products has been falling in high income countries while increasing in many low and middle-income countries, with the exception of those that have significantly increased tobacco taxes over time.

Conclusion: Data from the ITC and GAT surveys confirm the importance of tobacco tax and price increases in reducing tobacco use, while highlighting the roles of tax structure and affordability in maximizing the effectiveness of tobacco taxation for tobacco control. Relatively simple tax structures that rely on specific excise taxes and that include regular increases in taxes that reduce affordability of tobacco products will have the greatest impact on tobacco use and its consequences.

PD-982-20 The Use of legal, illegal, and roll-you-own cigarettes to increasing tobacco excise taxes and comprehensive tobacco control policies

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Background: Little research has been done to study how smokers switch between cigarette forms in response to a change in their relative price. This is particularly important to Uruguay where the most feasible way of tax avoidance may be switching to roll-you-own (RYO) cigarettes and mixed evidence has been found on the influx of illegal cigarettes after the implementation of a comprehensive set of tobacco control policies including raising tobacco excise taxes.

Objective: In this paper, we explored how relative prices between three cigarette forms (manufactured legal, manufactured illegal, and RYO cigarettes) are associated with the choice of one over another after controlling for covariates including demographic and socioeconomic characteristics, smokers' exposure to anti-smoking messaging, health warning labels, and tobacco marketing.

Methods: Generalized estimating equations (GEE) were employed to analyze the association between price ratio of two different cigarette forms and the usage of one form over the other. Additionally, the choice among three cigarette forms was studied using a multinomial model while adjusting for the correlation between same individuals over years in the survey.

Findings: A 10% increase in the relative price ratio of legal to RYO cigarettes is associated with 2.4% increase in the probability of consuming RYO over legal cigarettes ($P \leq 0.05$). In addition, more exposure to anti-smoking messaging is associated with lower odds of choosing RYO over legal and illegal manufactured cigarettes (odds ratio=0.916, $P \leq 0.01$) while more exposure to tobacco marketing is associated with higher odds (odds ratio=1.088, $P \leq 0.01$). Our results from a multinomial model suggest that, when keeping prices of other cigarette forms constant, a higher price of illegal cigarettes is associated with a lower probability of consuming illegal over legal cigarettes ($P \leq 0.1$) and a higher price of RYO is associated with a lower probability of consuming RYO over legal cigarettes ($P \leq 0.1$). In order to improve the effectiveness of increased taxes and prices in reducing smoking, policy makers need to narrow price variability and price gaps in a tobacco market in addition to raising tobacco taxes. Moreover, our findings indicate that increasing the coverage of anti-smoking messaging and reducing tobacco marketing will also reduce tax avoidance in the form of switching into cheaper RYO cigarettes in Uruguay.

PD-1366-20 Trend of the cigarette brand preferences before and after the implementation of minimum price regulation in Malaysia: findings from the ITC Malaysia

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Background: The Malaysian Government has introduced minimum price regulation in order to counter discounts

and other promotion offered by tobacco companies. In 2010, a pack of 20 sticks cigarettes has set a minimum price of RM6.40 and it was increased to RM7.00 in 2011. The aims of this study were to examine the trend of cigarette brand preference and its compliance before and after the implementation of minimum price regulation and to determine the factors of the brand choices.

Design/Methods: In this survey, five consecutive waves of the Malaysia ITC Survey (2005-2012) were collected using a stratified multi-stage cluster sampling design. Total number of respondents including replenished respondents who participated in each of the wave was 2006 (Wave 1), 1651 (Wave 2), 1975 (Wave 3), 2067 (Wave 4) and 2007 (Wave 5). Respondents were asked about their cigarette brand last purchased, amount paid for their cigarettes and reason for choosing the brand of cigarettes.

Results: Recently, White cigarettes have increased their dominance for the Malaysian market, from 70.2% before to 76% after the implementation of the minimum price regulation, compared to Non-white cigarettes (19.5% before to 9.1% after) and Kreteks (10.2% before to 8.9% after). The reasons given for using White cigarettes and Kreteks were because of taste and it was consistent throughout five waves. However for Non-white cigarettes, before implementation of this regulation (Wave 1-Wave 4), most gave taste as the reason but after the implementation, it switched to being mainly for price. Throughout the five waves, the average price (pack 20) paid for White cigarettes were from RM5.47 to RM9.48, Non-white (RM3.00-RM4.00) and Kretek (RM3.58-RM5.10). The result shows, in contrast to Non-whites and Kreteks, most White cigarettes are purchased by smokers at the minimum price or higher.

Conclusion: Even though the minimum price legislation may have been less complied with by sellers of Non-white cigarettes, they have lost market share to the more expensive White cigarettes. Therefore, the Malaysian government should re-look at the minimum price policy and instead consider increasing excise tax as suggested by the FCTC, as the move to White cigarettes indicates there is clear scope for price increases.

34. CESSATION MODELS AND PARTNERSHIPS

PD-983-20 Attitudes of cardiac nurses to smoking cessation support services for patients at a major metropolitan hospital in Melbourne

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Background: Smoking relapse amongst patients who become abstinent during hospitalisation for coronary heart disease is high and is strongly associated with an increase in mortality. Best practice for smoking cessation support is described as the 5A's (ask, advise, assess, assist, arrange). The purpose of this study was to understand cardiac nurses' attitudes to smoking cessation support for patients at a major metropolitan hospital in Melbourne. It also assessed the impact of attendance at training for health professionals provided by Quit Victoria in May 2014.

Design/Methods: A cross sectional survey was conducted amongst all nurses working on the cardiac wards at the study hospital in the two weeks following the delivery of a half hour smoking cessation training. A self-administered questionnaire was used to collect data on nurses' experiences of providing smoking cessation support for hospitalised cardiac patients.

Results: A total of 54 cardiac nurses completed the survey (response rate 68%). Mean age was 29 years and 94% were female. Nine out of ten (90%) nurses felt it was 'very important' to address smoking cessation for cardiac inpatients. One third (34%) of nurses agreed that providing smoking cessation advice is a high priority during a normal nursing shift. However, time constraints were cited by many nurses (54%) as preventing them from providing education. Furthermore, patients are often resistant (60% of nurses agreed) and few nurses (13%) felt 'very confident' about educating patients. Two thirds (67%) of nurses

rated hospital smoking cessation support as 'fair', 'poor' or 'very poor'. Nurses who attended the training (n=10) were more likely to be aware of referral to specialist services, such as Outline (80% vs 45%, $p<0.05$). In terms of the 5A's, nurses were more consistent on ask, advise and assess, but less so on assist and arrange follow-up. Nurses who attended the education session were more likely to ask patients how much they smoke (100% vs 81%, $p<0.05$) and more likely to assess their patients' readiness to quit (100% vs 64%, $p<0.05$).

Conclusion: This small pilot study suggests that smoking cessation support for cardiac patients could be improved by initiating further education sessions for nurses with an emphasis on assisting patients by asking the medical officer to prescribe pharmacological support and encouraging nurses to arrange follow-up by writing a referral to Quitline.

Percentage of nurses always/usually providing smoking cessation support behaviours to cardiac patients					
5As	Behaviour	Total n=54 n (%)	Attended Quitline Education		p value
			Yes n=10 n (%)	No n=44 n (%)	
ASK	Ask a patient's smoking status when you are admitting them	47 (90)	10 (100)	37 (88)	0.25
ASK	Ask patients who smoke how many cigarettes they smoke per day	44 (85)	10 (100)	34 (81)	0.03*
ADVISE	Educate a patient about the benefits of quitting smoking on their cardiovascular health	39 (75)	9 (90)	30 (71)	0.22
ADVISE	Give patients Quitline or Heart Foundation brochures about smoking	27 (52)	6 (60)	21 (50)	0.57
ASSESS	Ask a patient who smokes if they are considering giving up smoking	37 (71)	10 (100)	27 (64)	0.03*
ASSIST	Ask the resident medical officer to chart nicotine patches when you are looking after a smoker	20 (38)	6 (60)	14 (33)	0.12
ASSIST	Suggest to a patient who smokes that they contact Quitline	16 (31)	5 (50)	11 (26)	0.57
ARRANGE	Fax or email a patient referral to Quitline	0 (0)	0 (0)	0 (0)	n/a

Base: All nurses, excluding don't knows. *Note: p values <0.05

PD-984-20 Efficacy of an interactive decision-aid smartphone smoking cessation app on quit rates: a double-blind automated randomised control trial

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Background In a previous cross-country study exploring the feasibility of a smoking cessation app, we found that about 77% of the respondents from three countries were ready to quit in the next 30 days without significant differences between countries in terms of age and number of quitting attempts.⁽¹⁾ However, the efficacy of smartphone apps for smoking cessation has not yet been established. This study tests the efficacy of a smartphone smoking-cessation decision-aid app compared to an app that contains only smoking-cessation information. **Methods** This is an automated, double-blind, randomised, controlled trial of a smoking cessation app that contains eligibility requirements and a baseline questionnaire and

will randomise the participants into one of the two sub-apps (the intervention and the control). Participants will be recruited directly from the Apple app stores in Australia, Singapore, the United Kingdom and the United States. Daily smokers aged 18 and above will be randomised into one of the sub-apps after completing the baseline questionnaire. The targeted sample is 672 participants, and estimated to be completed by mid-August 2014. Abstinence rates will be measured at 10 days, one month, three months, and six months.

Results: Until 16 July 2014, 326 participants have been randomised (35%UK, 30%AU, 28%US, and 7% SG) (Mean age 29, and 52% Female). As we have used stratified block randomisation, there were no differences between the two arms in terms of age, gender, and country. 151 participants from both groups have met the 10-day-follow-up time; 143 (94%) completed the follow-up; and the abstinence rate was 22.8% in the intervention group and 8.2% in the control group (RR 2.03 95%CI: 1.0-4.1). Three months of follow-up data for the full sample will be presented.

Conclusion The preliminary analysis has shown promising efficacy results. This is one of the first studies that have explored the feasibility of recruiting RCT participants directly via the Apple app store, investigating the cross-country efficacy of a smartphone app for smoking cessation. It also provides a new method of conducting a cross-country, automated, randomised, controlled trial with no human intervention by utilising smartphone capabilities.

Reference: 1. BinDhim NF, McGeechan K, Trevena L. Who uses smoking cessation apps? A feasibility study across three countries via smartphones. *JMIR mHealth uHealth* 2014; 2:e4

PD-985-20 Ex-smokers baseline parameters pattern recognition, in a one year smoking cessation study by fuzzy model

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Background: The purpose of this study was to evaluate baseline ex-smokers parameters, in the first year of smoking cessation, using fuzzy model, to recognize patterns and validate the model.

Design/Methods: This study evaluated fifty eight voluntary smokers from Rio de Janeiro State University (Pulmonology Department Smoking Cessation Program). Forty one female and seventeen male smokers, with chronic obstructive pulmonary disease (COPD) by spirometry, both of sex, ages 40-75. The voluntaries were studied at baseline, in the first year of smoking cessation. Parameters such: spimometric values (FEV1(Forced Expiratory Capacity in 1 second) and FEV1%(percentage of the predicted); FVC(Forced Expiratory Capacity in 1 second) and FVC% (percentage of the predicted); FEV1/FVC ratio(Tiffenau-Pinelli index); FEF 25-75(Forced expiratory flow between 25 and 75% of FVC) and FEF 25/75% (percentage of the predicted)), smoking years, pack-years and cigarettes per day consumption, initial smoking age, cigarette yields (tar, nicotine and carbon monoxide), Fagerström test score and exhaled carbon monoxide level, were enrolled.

Results: There were sex differences regarding variability contributive parameters. In the female group, the spirometric parameters: FEV1, FEV1%, FVC, FVC%, FEV1/FVC ratio, FEF 25-75 and FEF 25/75%, were the most contributing parameters. In the male group, yields contents (tar, nicotine and carbon monoxide) were the most important parameters contributing. The male and female group most important parameters contributing were used to determine volunteers' pertinence, by fuzzy model. Fuzzy model discriminated groups between smokers in mild, moderate and severe category. The model validate parameters disagreement results, between both sex groups, can be justified, for while, by sample size.

Conclusion: Fuzzy model allowed recognize pattern groups and discriminated contributing parameters, in

baseline smokers' evaluation. This and following data, at final one year's study, may contribute to smoking cessation treatment strategies, enhancing abstinence rates, better understanding of the patterns of smokers' behaviour groups since very early stages of evaluation.

PD-986-20 Expansion of smoking cessation treatment network as the action of the national tobacco control programme in Brazil

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Background: The Programme for Tobacco Control in Brazil started in 1989 under the responsibility of the National Cancer Institute José Alencar Gomes da Silva - INCA, a Ministry of Health program consists of prevention, treatment, and law communication. Research shows that implementation of these actions have resulted in concomitant disincentive to initiating the use and reduction of prevalence, from 34.8% (PNSN-1989) to 17.8% (PETab 2008). In 2013 a further element was added to the treatment actions by the Ministry of Health of Brazil, with the option of treating the smoker, through adherence to the program Improving Access and Quality in Primary Care - PMAQ, which is an incentive program, and Have gradual compensation to municipalities according to qualification evaluation of care in order to increase the number of health facilities in primary care to develop treatment scales, since this is the gateway to more effective and solving the health system country. Present the evolution and expansion of the treatment program in Brazil is the goal of this work.

Design/Methods: training network with coordinators of state and local control of smoking, training courses for professionals, providing medication and technical material for therapeutic management, adherence to PMAQ to establish commitment of municipal managers to implement the treatment.

Results: The provision of smoking cessation treatment in Brazil has been growing consistently since its inception. At the end of 2005 there were 76 districts that met 17,489 smokers. In 2013, before the new measure of adherence, 604 municipalities attended 154,207 smokers. With encouragement in 2013, about 3,183 municipalities and their healthcare teams joined the program, increasing the number of professionals and health facilities that will treat 496,142 smokers in 2014, projecting impact in reducing the number of smokers.

Conclusion: The positive response of municipalities showed that another phase of the program was achieved, a program that is dynamic and that periodically needs new strategies for tobacco control. Present challenges for maintaining the standard of quality of care, training, supplies and medication costs.

PD-987-20 Evaluation of 10-year national smoking cessation programme in Taiwan: documenting the unexpected benefits

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Background and challenges to implementation: Cessation support such as cessation clinics is important but generally viewed as one of the least cost effective measures among tobacco control policies. The impact from a national smoking cessation program, particularly the unexpected, has rarely been described.

Intervention or response: Since 2004, Taiwan has mounted a nation-wide program creating thousands of cessation clinics in hospitals, communities and pharmacies. With the collection of tobacco tax, labeled as health surcharge, financial subsidies for smokers visiting cessation clinics were made. Doctors, dentists, nurses, pharmacists and other health care professionals were recruited, either in the delivery of smoking cessation or in making referrals to the clinics.

Results and lessons learnt: Thousands of cessation clinics were created and medication and counseling services were subsidized, with each visit requiring minimal co-pay. These clinics were supplemented by the campaign for smoke-free hospitals, where professionals and staffs participated and spent efforts in meeting the standards for smoke-free hospitals. Nearly every health care professional was involved in cessation part of tobacco control. While the recorded number of smokers quit was proportionate to the direct effort of the cessation clinics, the largest impact was realized from massive mobilization of health care professionals. Smoking became the talk of the hospitals and clinics. Ultimately, such mobilization of health care professionals led to reduction of smoking rates and the favorable change in smoking culture in the society, viewing smoking as socially unacceptable.

Conclusions and key recommendations: A large number of health care professionals mobilized in national cessation program, not only offered cessation counseling to smokers visiting different clinics, but many of them converted to strong advocates for tobacco control. Such a mobilization changed and transformed the culture of smoking in the hospitals and in the society, facilitating the change in social norm where smoking is becoming less and less acceptable. A favorable change in tobacco control occurred from the unexpected benefits of national cessation program, most notably the positive attitudes of health care professionals.

PD-988-20 Effectiveness evaluation of a pilot study on quitline in China

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Background: In order to better practice the MPOWER policy series, Chinese Center for Disease Control and Prevention developed a smoking cessation protocol. The researcher conducted a pilot study via 12320 national health helpline in four cities. This study is to evaluate the effectiveness of interventions and to explore its application prospect in China.

Methods: Constructive questionnaire was conducted among 137 quitline users through telephone interview during 11-12 2012.

Results: The quitting rate for over one month was 54.7%. Daily smoking cigarettes among the failers reduced from 19.4 to 13.8, the change was significant ($Z=4.807$, $P<0.05$). Heaviness of smoking index (HSI) among the failers declined from 2.3 to 1.6, the change was significant ($Z=8.148$, $P<0.05$). Nicotine dependence is a crucial factor for quitting successfully or not ($\chi^2=8.810$, $P<0.05$). Having support for quitting is a factor for making quitting attempts ($OR=4.304$, $P<0.05$); Home-banned for smoking also influenced the attempts to quit ($OR=4.183$, $P<0.05$). Of the surveyed individuals 48.5% believed the quitline to be helpful, including 14.9% finding it very helpful; 76.2% of the surveyed were satisfied with the quitline services, including 66.2% finding them very satisfactory.

Conclusion: The telephone counseling protocol for smoking cessation applied in the study was proved to be effective. Offering telephone counseling for smoking cessation through 12320 health helpline is feasible.

PD-989-20 Building evidence to introduce tobacco treatment services at primary health care settings in India

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Background and challenges to implementation: India faces unique challenges in controlling the tobacco epidemic with high rates of smokeless tobacco use and a uniquely diverse array of tobacco products. The rising cancer patterns in the country reveal predominantly tobacco related cancers, which could be detected at early stages through primary prevention.

Intervention or response: Since Oct 2013, the service has been initiated in collaboration with the Municipal Corporation, and a trained cessation counselor is posted (full-time) at the urban health posts in Navi Mumbai. Overall, 47 healthcare providers were trained on ill-effects of tobacco, benefits of quitting and promoting prompt referrals to the professional counselor at the health post. As per the protocol, 6 follow up sessions over 6 months were provided by the counselor, either in person or over the phone at 7, 15, 30, 60, 120 and 180 days after enrolment.

Results and lessons learnt: Among the 13,800 OPD patients, only 2570 (19%) could be contacted by the counselor. Of these, only 4% were referred by health providers. Of those contacted, 31% were identified as tobacco users (70% were males, 80% were smokeless users). Those who were willing to join the cessation service (84%) were provided brief advice and a detailed counselling session. Repeat patients are 15% of the total OPD attendance. Of the enrolled patients, only 46% could be followed up (6% in-person, 40% on phone) by the counselor. 40% were lost to follow up due to unavailability or changes in phone numbers. At 6 month follow up, 33% of tobacco users had quit, and 11% had reduced tobacco use. Data for other follow ups that were recorded were 20% quit on 7th day, 23% on 30th day, 33% on 60th day and 25% on 120th day of follow up.

Conclusions and key recommendations: It is feasible to integrate tobacco cessation services within existing primary healthcare settings. However, it is important to have healthcare providers (physicians, pharmacists, nurses) ask patients about tobacco use each time they visit the health center, provide appropriate advice on quitting, and refer users to counselors to maximize reach of the tobacco treatment services at healthcare settings. Refresher trainings could reinforce referral linkages and accountability among providers.

PD-990-20 Establishment of tobacco cessation services at PHC (Primary Health Centre) level in Delhi, India

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Background and challenges to implementation: Under National Tobacco Control Programme (NTCP) 2 tobacco cessation centres (TCC) were to be established in 2 districts/ tertiary care hospitals in New Delhi & East Delhi districts, but could be operationalized for 3 to 4 years because these hospitals failed to provide space. Moreover, these hospitals offer tobacco cessation services through medicine/chest departments. Doctors hence show no interest in tobacco cessation centres (TCC) under NTCP, but TCCs at these hospitals are not manned by qualified psychologists in all hospitals, hence no quality is assured. Moreover, only complicated cases of tobacco users reach here & large no of beginner, early phase & noncomplicated tobacco users do not reach these hospitals as these hospitals are few & are located at very far distance and heavy rush of patients demotivate tobacco users in going to these places unless complicated. Two districts -New Delhi & East District were selected for target population.

Intervention or response Tobacco cessation services started in 6 PHCs (Primary Health Centres) through TCCs in 2 districts in early 2014. To take care of constraints of manpower (NTCP allocate one psychologist per district), twice a week TCC were established in 6 PHCs with the help of two psychologists to cover larger part of districts. General public and other PHCs were instructed to refer

the cases to the dedicated 6 PHCs. TCCs at PHCs were close to the residence of tobacco users hence more convenient to reach.

Results and lessons learnt: TCCs established at 6 PHCs. 242 tobacco users reported for cessation in 4 months. 44 tobacco users with complications were referred to higher centres. 6 have stopped using tobacco & are under regular follow up. 58 out of 242 reported directly to psychologists for cessation which shows increasing awareness among community & others were referred by the health facility doctors. It also proves that only very small proportion 18% (44 out of 242) requires support of higher centres & majority of cessation cases can be handled at PHC level only. Bringing TCCs close to residence of tobacco users increases compliance among tobacco users for repeated reporting for counselling.

Conclusions and key recommendations: Establishing Tobacco cessation centres at Primary Health Centres (Dispensary) level is more tobacco user friendly and majority of cases can be successfully handled at this level. National Tobacco Control Programme of India should consider establishing more such centres at PHC level.

PD-991-20 Effect of worksite-based tobacco cessation intervention on employees with nicotine dependence: a study from an Indian industry

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Background: Employers are becoming more sensitive to the health and safety of their employees. Tobacco control and cessation continue to be of greater importance at workplace in India. Implementation of tobacco free work place policies can increase productivity and reduce health care expenditure and benefits the individual to a greater extent. Present study aims to understand the effect of work site based tobacco cessation intervention on tobacco users working in a manufacturing industry.

Design/Methods: Employees (n=851) working in needle manufacturing industries were screened for tobacco dependence using a semi structured interview schedule and The Fagerström Test for Nicotine Dependence following education program on cancer prevention. 117 employees (Aged 20 to 56 years, education 11.08 (M)) identified to be the users of tobacco and they were offered tobacco cessation intervention which included motivational counseling, nicotine replacement therapy and pharmacological intervention with their consent. A telephonic follow up was conducted on a monthly basis for six months. Quit status was assessed at 6 months, one year and 3 years. Data was analyzed using descriptive statistics.

Results: Results indicated that 40.8% of the employees reported at the preparation stage and 25% at action and 5% at maintenance stage. 60% of the employees found to be smokers, 26.1% chewers whereas 13.9% used both.

While 27.2 % of the tobacco users abstained at one year follow up 25% reduced the usage. Of the employees (31.7 %) responded at three year follow up, 21.4 % abstained completely. Employees reported at preparation and action stage reported high quit rate compare to other stages (p .006).

Conclusion: More than half of the tobacco users in the industry were smokers and one third of the employees used tobacco are prepared to quit the habit. Work site based tobacco cessation intervention is effective in nicotine de addiction. Tobacco users reported at the preparation and action stage demonstrated high quit rate.

PD-992-20 Effectiveness of cessation programmes on quitting behaviour among male smokers in Malaysia: findings from the ITC Malaysia Survey

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Background: Since the ratification of the FCTC in November 2005, Malaysia has implemented several of its provisions including Article 14- cessation services such as quit-clinic, info-line and medications. Following this ratification, we embarked into studying impact of Malaysia tobacco control policies through the International Tobacco Control (ITC) Policy Evaluation Project. This paper examines the impact of Malaysia cessation programs, and explores its impact on quit attempt among its male smokers.

Design/Methods: This paper presents result from the ITC Wave 5 Survey conducted in 2012 involving 2,007 adult smokers. Of these, 1,985 male smokers were chosen. The survey was part of a larger prospective longitudinal cohort survey that used household stratified multi-stage cluster sampling technique. Respondents were asked about smoking cessation assistance they had received from doctors/health professionals, telephone information services, NRT, including quitting attempts.

Results: Only 15.4% of adult smokers have used NRT in the last inter-survey interval (about 18 months). As for smoking cessation programs, 12.3% have visited doctors/health professionals in the last year. The reported outcomes are: (1) advice to quit (6.6%), (2) additional help or referral to other services (3.2%), (3) pamphlets or brochures to quit (5.0%). On the other hand, 16.0% have received advice about quitting smoking through local stop-smoking services and 3.8% from telephone information services. Overall, the percentage who received assistant from doctor/health professional reported slightly decreased com-

pare to the baseline survey. Multivariate analyses revealed those who have used NRT (OR=6.20; 95%CI=2.93-13.11, p=0.001) and received assistance from doctors/health professionals (OR=4.67; 95%CI=2.09-9.54, p=0.03) were significantly more likely to attempt quitting.

Conclusion: Not many Malaysian smokers were aware of smoking cessation programs including NRT and assistance from doctors/health professionals. The government must take appropriate steps to intensify the dissemination of smoking cessation programs, as this has been proven effective to both motivate smokers to quit and to increase success rates of attempts.

PD-993-20 Empowerment of village health volunteers in giving brief advice for smoking cessation in Thai communities

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Background: Out of the 13 million smokers in Thailand, 9 million live in rural areas. The prevalence of smoking is 20.3% in the urban and 25.9% in rural areas. There is a need to strengthen tobacco control, in particular smoking cessation in rural settings. Thailand has a total of 1,400,000 village health volunteers (VHV) under the supervision of district hospital doctors and nurses. Each volunteer receives about 20 USD per month to cover their costs. Each is responsible for 10 households, to do home visits giving advice on healthy life styles and long term care for those with chronic NCDs as identified by community doctors. On average, 4 of 10 households have at least one smoker.

Intervention: Training for the trainer on brief advice for smoking cessation was conducted for 883 VHV, who then provided training for another 6,300 village volunteers. They were also trained to promote smoke free homes during their home visits. A tool kit specifically designed for VHV on brief advice for smoking cessation was provided to each volunteer. Smoke free home stickers and other campaign material were also provided for distribution. Each VHV agreed to set a target of assisting at least one smoker to quit per year.

Results: By the end of the first 6 months of the project, a total of 19,460 households had been declared smoke free, including 5,285 households with smokers. Altogether, 30 districts and 102 sub-districts were declared smoke free (upheld public place prohibition by law). The total number of smokers who quit smoking was 694.

Conclusion: VHV can be trained to promote a smoke free culture and provide brief advice for smoking cessation while doing home visits with patients with chronic NCDs who continue to smoke. There should be a systematic effort to train all VHV nationwide to promote smoke free homes and provide smoking cessation advice for smokers with chronic NCD conditions. Expanding this activity would produce significant health improvements in rural communities.

35. ENGAGING NEW PARTNERS

PD-994-20 Media advocacy on tobacco control: personal experience

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Background and challenges to implementation: Promote tobacco control into media (Television, Radio, Newspaper, online portal/blogs etc) is no-cost activities. It is also one of best way to reach number of people at a time. Tobacco control activists working to promote tobacco control agenda into media. But Tobacco Industries (TI) is also interfering through media. So, it is often difficult to get proper reports perspective of tobacco control. I am tobacco control activist and freelance journalist. Playing role as executive editor of Swamaswar (Combined Voice), quarterly anti tobacco newsletter published by Bangladesh Anti Tobacco Alliance (BATA). I am developing script & anchoring talk show on Biggan o Poribesh (Science & Environment) on-aired twice in a month at Bangladesh Betar (government owned national radio). I am regular columnist of national dailies & online news portals & maintaining social media accounts & moderator of BATA Facebook page.

Intervention or response: I use to write articles on tobacco control issues i.e.; tobacco control law implementation, TI interference, tobacco control law amendment, FCTC article 5.3, Tobacco cultivation, tobacco tax, World No Tobacco Day & National No Tobacco Day (Bangladesh celebrate on 9 Oct.) etc. I also write always couple of world days related to tobacco control like Cancer Day (4 Feb.), Women's Day (8 March), Water Day (22 March), TB Day (24 Mar.), Health Day (7 April), Hypertension Day (17 May), Biodiversity Day (22 May), Environment Day (5 June), Against Child Labor Day (12 June), Youth Day (12 August), Heart Day (29 Sept.), Food Day (16 Oct.), Diabetes Day (14 Nov.) etc. I related all these days with tobacco issue, for example, tobacco is causes for cancer on Cancer Day & tobacco effects health on Health Day etc. I also promote mentioned issue to Television, Radio, blogs & social media. I organized Radio talkshow on World No Tobacco Day.

Results and lessons learnt: From January to July 2014, 15 radio programs on-aired & about 3 million listener of Radio. My 30 articles published through these 5 million readers. My interview (live & part of news) on-aired on TV channels, 15 episodes & reached about 5 million audiences.

Conclusions and key recommendations: Any individual can play very active role for media advocacy on tobacco control in any countries in world. This idea can be implement any countries in world which will make tobacco control activist more active on media advocacy for tobacco control.

PD-995-20 Gender transformative tobacco control

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Background and challenges to implementation: Trends and patterns in tobacco use and second-hand smoke exposure across populations and countries reflect gender and economic inequities. While the Framework Convention on Tobacco Control (FCTC) requires gender analysis, uptake by tobacco control research, programs and policies has been uneven or lacking. Similarly, attention to social inequities in tobacco use and exposure has been sparse.

Intervention or response: Through a review and critique of current tobacco control initiatives, we argue that existing approaches are largely gender blind, and when gender is included, it is often used in stereotyped ways to achieve tobacco control objectives. Using gender theory and a critical public health perspective, we identify what is needed to not only reduce tobacco use and exposure but also gender and social inequities.

Results and lessons learnt: Numerous examples of tobacco control initiatives exist reflecting the continuum from gender blind to gender transformative. Gender transformative tobacco control is recommended for researchers, policy and program developers with the dual aim of improving gender relations and reducing inequities along with tobacco reduction. Examples include: initiatives to improve economic and household empowerment for women and children to respond to SHS; delinking tobacco use from masculinity, avoiding exploiting or reinforcing gender stereotypes in tobacco initiatives and messages, and focusing on shifting gender norms to improve health and autonomy via tobacco control.

Conclusions: Tobacco control can be used as a tool for shifting gender and social inequities. However, for gains to be made, the FCTC direction on incorporating gender analysis in tobacco control needs to be consistently implemented and measured. In addition, critical assessments of tobacco control initiatives are required to transform gender inequities along with reducing tobacco use in initiatives and campaigns. A critical gender analysis needs to be integrated at all levels of knowledge development, translation and programming, including peer review publishing, funding, conference organization and policy making. These changes could further the contribution of tobacco control in improving both health and gendered inequities for all women and men.

PD-996-20 In-school prevention of tobacco use through life skills development: The super army model

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Background Tobacco is the single largest preventable cause of death in the world today[1]. In India, approximately 14.6% of youth (13-15 years) use tobacco products. Some children start using before the age of 10[2]. In response to India's tobacco epidemic, Salaam Bombay Foundation has developed the Super Army School Leadership Programme to prevent tobacco use and build advocacy skills among children and youth. **Intervention** The Super Army School Leadership Programme uses a life skills development model in schools for the 7th-9th grades. The Super Army includes two modules – Awareness (tobacco and its health effects) and Advocacy (community-based advocacy). Through the modules, the programme develops life skills including leadership, communication and self-empowerment. The program uses a variety of teaching methods, including arts and theatre, to develop students' knowledge and skills. In the 8th-9th grade, students conduct advocacy with local stakeholders (including education and police officials) on tobacco control, learn about government and tools to enact social change.

Results / Lessons Learned In 2010, researchers from the Harvard School of Public Health conducted an evaluation of the Super Army. They found that Super Army students were half as likely to report tobacco use - 4.1% of 8th standard Super Army student, compared to 8.7% of control school students (OR = 0.51) [3]. Super Army students were also significantly more knowledgeable about tobacco and related legislation and had stronger life skills [4].

Conclusions The Super Army is an effective model for low-cost tobacco prevention and life skills development in schools in low- and middle-income countries.

[1] World Health Organization. Tobacco Factsheet. World Health Organization; 2011; Available from: <http://www.who.int/mediacentre/factsheets/fs339/en/index.html>.

[2] GYTS 2009

[3] Sorensen, G. et al (2012) Promoting Life Skills and Preventing Tobacco Use among Youth: Effects of Salaam Bombay Foundation **Intervention**. PlosOne. April 16, 2012.

[4] Sorensen, G. et al (2012) Promoting Life Skills and Preventing Tobacco Use among Youth: Effects of Salaam Bombay Foundation **Intervention**. PlosOne. April 16, 2012.

PD-997-20 In-school cessation in low-income schools in Mumbai, India

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Background Tobacco is a significant public health concern for youth in India. According to the Global Youth Tobacco Survey for India, 14.6% of youth use tobacco in India (2009). The rate of tobacco use is higher among low-

income youth. Betel nut, known as supari, is a chewed product used by up to 25% of Mumbai youth. Supari is designated as carcinogenic and may be a gateway product for smokeless tobacco use. Due to high rates of tobacco use among youth, cessations programmes are urgently needed.

Objectives for the school-based tobacco cessation program are:

- Sensitize students about ill effects of supari and tobacco
- Encourage and motivate to consider quitting
- Prevent the transition from supari consumption to tobacco consumption

Methods: The program was conducted in eight municipal and government-aided schools of Salaam Bombay Foundation's Super Army program. Students from standard 5th - 10th in the age group of 11-18 years who have consumed tobacco or supari in the last 6 months were registered voluntarily. Interactive group sessions were conducted by trained counsellors, over six months, in their local language. Content included health effects, peer influence, coping mechanism, team building and refusal skills.

Results: Over 4,000 students across eight schools in Mumbai were oriented, of which 312 voluntarily registered. Of these, 241 (77%) consumed only supari, 15 (5%) consumed only tobacco and 56 (18%) consumed both. At the 6th session, 210 (87%) of those consuming only supari, 11 (73%) consuming only tobacco and 41 (73%) consuming both, had stopped consuming the product. Team members observed students sharing their experience of tobacco use and refusals, amongst themselves, also offering support and reminders in fulfilling their pledge to stay away from tobacco.

Conclusions: Consumption of areca nut far exceeds tobacco consumption. Positive peer influence and nurturing refusal skills are instrumental in creating a milieu that encourages the young to be tobacco-free.

PD-998-20 Enforcement and compliance of tobacco control law in a medical college in Delhi, India

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Background and challenges to implementation: To counter the pandemic of tobacco, even before and parallel to WHO Framework Convention on Tobacco Control (FCTC), the Government of India notified a comprehensive tobacco control law known as Cigarettes and Other Tobacco Products Act (COTPA) in 2003. As recommended by WHO and guidelines to article 8 of FCTC, 100% smoke free environment is imperative to address the problem of second hand smoking. Section 4 of COTPA prohibited smoking in indoor public places. However, enforcement of the provisions under the law is still a matter of concern. Our aim is to assess the compliance to section 4 of COTPA in a leading medical college in the city of Delhi

as smoke-free health care facility demonstrates commitment to good health and sends a pro-healthy signal to the community.

Intervention or response: A cross-sectional study was conducted at 50 different venues viz. Health facility, educational facility, offices, market place, recreation parks, cafeteria, residential places etc. within a leading medical college in the city of Delhi. An observational checklist containing variables to assess compliance in this study includes active smoking in public places, display of signages, evidence of recent smoking like cigarette butts and smoking aids.

Results and lessons learnt: Evidence of active smoking was observed in 82% (41 out of 50) venues. Signages displaying health warnings were either inadequate or absent at 37.2% (22 out of 35) entrance gates, 17.0% (6 out of 35) lifts & 40% (20 out of 50) staircases of public buildings in the campus. The name of the reporting officer was also absent in 92% signages. Moreover, the size as per the specification given under COTPA was also significantly inadequate at majority of places.

Conclusions and key recommendations: Our study clearly suggests a weak enforcement of provisions of COTPA. Recognizing the urgent need to curb the tobacco epidemic and to strengthen enforcement of COTPA, sensitization workshops are to be planned by all stakeholders.

PD-1000-20 Engaging young candidates in dentistry against tobacco

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Background and challenges to implementation: Dentistry against Tobacco was founded in 1992 and has contributed to the advance in tobacco control in Sweden. To engage young members in Dentistry against Tobacco (TmT) and to supplement the lack of tobacco related education the core curricula of Dentist, Dental Hygienist and Dental Nurse schools

Intervention or response: An invitation was sent to student organisations within Dentistry, Dental Hygienist Schools and Dental Nurses schools in all communities in Sweden. 60 students took part in a two-day "Tobacco School" with training in tobacco control. TmT supported travel, meals and ten experienced presenters (for example professors in medicine and other tobacco control specialists)

Results and lessons learnt: The majority of students representing a variety of regions in Sweden demonstrated interest to become involved in tobacco control and in TmT. The event was covered in Dental magazines. Students were inspired to spread the information they learned via social media. Most importantly, young candidates wish to specialize in tobacco control and many participated in additional training and have plans for future activities such as advocating at exhibitions and other events in the future.

Conclusions and key recommendations: Students not only gained knowledge on how to approach patients about

tobacco use, but also how to work politically via trade organisations to develop supportive tobacco control policies. Dentistry against Tobacco gathered information as to how tobacco control is covered in the curriculum and understood that there are potential for further development

PD-1001-20 Implementation of a peer-mediated health education model in the United Arab Emirates; understanding risky behaviours among expatriate teens

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Background: Tobacco use amongst young people is on the rise in the United Arab Emirates (UAE). The UAE is also ranked 15th in the world for incidence of type II diabetes. Even with new legislation targeted towards halting increased tobacco consumption and widespread unhealthy lifestyle choices, there have been few interventions to directly address the risky behaviors that youth engage in, which lead to chronic, unhealthy habits.

Design/Methods: To test if an educational intervention would be effective in this cultural setting, we designed two peer-to-peer health workshops: one on tobacco use and another on nutrition/physical activity (N/PA). A pre-workshop survey was used to provide a baseline on the current attitudes, knowledge, perceptions and behaviors of our cohort with regard to tobacco use, physical activity and nutrition. We randomly assigned each classroom either a N/PA or tobacco workshop and used a post-workshop survey to assess the effect of the workshops on the student's beliefs for each health topic. The N/PA workshop acted as a control group for tobacco related questions and vice versa.

Results: Our results provide a summary on the current risky behaviors of ninth grade expatriates in the UAE, including dokha and shisha use and nutritional and physical activity patterns. Moreover, we concluded that the tobacco workshop positively affected knowledge, attitudes, and perceptions of tobacco use, with noticeable spillover effects on perceptions of nutrition and physical activity as well. The N/PA workshop was only able to affect teenagers' level of satisfaction with their physical activity. Overall, our peer-mediated model was popular amongst teenagers.

Conclusion: In conclusion, this study provides evidence to support a national adoption of a peer-to-peer health education model as a tobacco use intervention. Further studies are needed to confirm if this model can be used to address other health topics.

PD-1102-20 I “like” MPOWER: using Facebook, online ads and new media to mobilise tobacco control communities: evidence and Senegal case study

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Background: New media campaigns hold great potential to grow public awareness about the dangers of tobacco use and advance tobacco control policies, including in low-income and middle-income countries, which have shared in a decade of explosive growth in mobile and internet penetration. New media must be harnessed both as an advocacy tool to promote social mobilisation and to build public support for FCTC/MPOWER policies. However, evidence and best practice on new media is only just emerging and represents a significant challenge to practitioners. This presentation will examine emerging best practice on the role of new media, drawing from both peer-reviewed evidence and from World Lung Foundation’s (WLF) own work in the field. The strategic approach will be illustrated with a case study of WLF’s 2013 campaign in Senegal, where new media advocacy contributed significantly to the passage of a tobacco control bill.

Intervention: In Senegal in the summer of 2013, WLF partnered with LISTAB, a local tobacco control advocacy organization, to mount a new-media powered advocacy campaign consisting of Facebook ads, an online petition and a Facebook community page. This effort was coordinated with offline Public Relations and synchronized to a Ministry of Health television campaign on the harms of tobacco. WLF analyzed Facebook ad performance, web site visits, spot surveys of petition signers, Facebook community metrics and an online survey of community members to document campaign performance.

Results: With a budget of just a few thousand US dollars, the campaign gathered over 8000 signatures to an online petition calling for the passage of tobacco control legislation and built a Facebook community of more than 9000 members in just over 8 weeks. This burst of advocacy was also leveraged into mainstream media stories in major newspapers. Ultimately, new media activity was a significant factor in the passage of legislation in late fall and left TC advocates.

Conclusions: Emerging evidence and practice clearly suggest certain strategies for the use of social media: as a mobilization tool for supporters rather than a persuasive device. Also, WLF found mixed results with different messaging types and approaches, including online ads and generating organic viral reach through Facebook. This presentation will summarize emerging best practice, approaches to integration, and articulate a model that could be adapted by tobacco control campaigners in other countries and contexts.

PD-1003-20 From tobacco control Activist to archivist and back again: how museum exhibitions on tobacco are helping to educate a new generation

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Background: The University of Alabama Center for the Study of Tobacco and Society was founded in 1998 as a repository for the comprehensive collection amassed over 30 years by the author and fellow tobacco control activists in DOC (Doctors Ought to Care) of original print, photographic, audio, video, and internet materials documenting the history of tobacco marketing, the influence of the tobacco industry, and the rise of the anti-smoking movement in the 20th century. The mission of the Center is to explore, investigate, compare, and contrast the historical and contemporary aspects of the tobacco issue through interdisciplinary collaboration. The Center serves researchers, legislators, students, journalists, public health professionals, physicians, and the general public alike via a growing website and a vast trove of over 1 million items divided into more than 100 subject categories (eg, Philip Morris; tobacco and sports; the targeting of minorities; the history of smoking cessation; electronic cigarettes).

Design/Methods: A key work product of the Center is exhibitions on compelling, humorous, and often controversial aspects of the tobacco pandemic. A dozen of these exhibitions have been displayed at museums, libraries, medical schools, universities, hospitals, and conferences.

Results: For the 50th anniversary of the US Surgeon General’s landmark report on smoking and health in 2014, the Center created “The Surgeon General vs. The Marlboro Man: Who Really Won?” comprising over 130 original items. The exhibition has traveled to several venues including the Lyndon Baines Johnson Presidential Library, where it was viewed by thousands of schoolchildren. Other exhibitions include “When More Doctors Smoked Camels: A Century of Health Claims in Cigarette Advertising”; “Canaries in the Mine: The Flight Attendants’ Battle for Smokefree Airlines”; “Smoking in the Balcony Only: When Movie Stars Sold Cigarettes”; “Your Drug Store and Cancer Center”; “The World’s Anti-Smoking Postage Stamps”; and “Cartoonists Take Up Smoking,” an overview of the history of tobacco control by newspaper editorial cartoonists, which was shown at the National Museum of Health and Medicine and in 12 US cities.

Conclusion: This illustrated presentation highlights several of these exhibitions, traveling versions of which are available for display to health agencies, tobacco control organizations, universities, and museums. Online versions are also being created and will be available to all.

PD-1104-20 Evidence-based online face-to-face tele-health stop smoking service to reduce health inequality

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Background and challenges to implementation: The challenge is to be able to deliver low cost & innovative ways to help people to quit smoking from the comfort of their home or workplace, who are unable to access regular stop smoking clinics through live face to face video consultation being delivered using an evidence based model. This appeals to people from all background particular those who are disabled, housebound and require support in multiple languages including support in Sign Language for deaf or hard of hearing. In these cases traditional telephone quitline support has not been possible.

Intervention or response: We have developed a unique digital platform through which service users can actually see & talk to a healthcare provider from the comfort of their homes, making the conversation feel very personal. The provider is able to review the patient's clinical information, discuss symptoms, diagnose, & prescribe medications as appropriate, for anything from common illnesses such as colds, flu, and sinus infections to chronic care management, smoking cessation, behavioural health or nutrition. At the end of the consultation, the user can share a full record of the conversation with his or her primary care physician, maintaining continuity of care.

Results and lessons learnt: This is currently being rolled out to a geographical region of approx. 6 million people in Cities & Towns in England. Today we believe the use of online health services will grow quickly in the targeted sections of the population. With social networking & media at double digit growth rates, video chat will become a normal way of communicating between service providers & customers - The platform has been created to take advantage of this trend & reach out to more sections of society to improve health inequalities & deliver more personable & effective health services.

Conclusions and key recommendations: Having demonstrated this in the UK, we are keen to replicate this in other Countries, and help reduce the cost of smoking cessation intervention and at the same time appeal to a wider target population group. This solution will provide support in many different languages, including sign language.

PD-1005-20 Independent association between parental smoking and non-authoritative parenting style as reported by Chinese adolescents in Hong Kong

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Background: Both parental smoking and non-authoritative parenting style predict adolescent smoking, but the association between the two risk factors was seldom studied. We investigated this association in Chinese parents of adolescents in Hong Kong, where smoking is socially undesirable, especially in females.

Design/Methods: In the Hong Kong Student Obesity Surveillance project 2006/07, 33692 adolescents aged 11-18 (44.9% boys, mean age 14.8, SD 1.9 years) from 42 randomly selected schools reported smoking status (yes vs no) and the level (frequent/sometimes as high; seldom/none as low) of care and control of each parent. Parenting style (dependent variable) was defined as authoritative for high care and high control, and non-authoritative otherwise. Logistic regression was used to compute adjusted odds ratio (AOR) of (i) parental care (low vs high), (ii) parental control (low vs high), and (iii) non-authoritative parenting (vs authoritative) for parental smoking (study factor) in separate models and for each parent, adjusting for perceived family affluence, the parent's age and education level, the other parent's smoking status, and school clustering.

Results: Smoking was reported in 39.6% of fathers and 10.3% of mothers. In fathers, smokers were more likely than non-smokers to be classified as low care (26.3% vs 20.9%), low control (38.8% vs 35.3%) and non-authoritative (51.3% vs 45.1%) (all $P < 0.001$), with AORs (95% CI) of 1.23 (1.15-1.32) for low care, 1.15 (1.08-1.23) for low control and 1.23 (1.14-1.31) for non-authoritative parenting. Similarly, in mothers, smokers were more likely than non-smokers to be classified as low care (24.3% vs 12.8%), low control (34.1% vs 24.4%) and non-authoritative (46.6% vs 31.9%) (all $P < 0.001$), with AORs (95% CI) of 2.08 (1.86-2.32), 1.59 (1.45-1.74) and 1.81 (1.64-2.00), respectively. Stronger associations were observed in mothers than fathers (all $P < 0.001$).

Conclusion: In both fathers and mothers, smoking was associated with low levels of care and control, and non-authoritative parenting style independent of socio-demographic characteristics. Smoking, as a negative role-modeling behaviour, might undermine parenting functions especially in smoking mothers in Hong Kong.

36. OLD AND NEW TOBACCO INDUSTRY TACTICS

PD-1006-20 Tobacco content in top grossing movies in Mexico and Argentina, from 2004-2012

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Background: Studies in 13 different countries have shown that exposure to tobacco in movies is associated with initiation of youth smoking. Public health advocacy appears to have lowered tobacco content in US-produced films over the past decade. Monitoring of tobacco content in other developed film industries, as in Argentina and Mexico, are necessary in order to determine the need for policy development in those countries.

Objective: To examine and compare time trends in tobacco content in top grossing US and nationally produced movies in Argentina and Mexico

Design/Methods: The sample was drawn from the top 100 grossing movies in Mexico and Argentina for each year from 2004-2009. The sample included 82 Argentine produced, 92 Mexican produced, and 559 US-produced films that were popular in both countries. A reliable methodology for content coding tobacco appearances was used that involved timing onscreen duration of tobacco use and recording appearances of tobacco brands. The prevalence of films that portrayed any tobacco use and any tobacco brands, and mean seconds of use for films containing tobacco were calculated and compared within each rating category by year and country of production.

Results: Overall 80% of Mexican produced and 86% of Argentine produced movies contained tobacco. The percentage of US-produced movies popular in Mexico and Argentina that contained tobacco was lower than nationally produced films at 47%. For US films the percentage of movies with tobacco decreased from 2004 to 2010, yet this percentage began to increase again from 2011 to 2012. Percentage of films with tobacco decreased over time in Mexican produced films, while for Argentine produced films there was no change. Over the entire period the mean seconds of tobacco use for films containing tobacco was 156 in Mexican films, 201 in Argentine films, and 126 in US films popular in Argentina and Mexico. For movies produced in all three countries there has been an increase in the mean

number of seconds tobacco use in films containing tobacco in the most recent years. Both Mexican and Argentine films had higher percentages of tobacco brand appearances (24% in Mexico, 14 % in Argentina) compared to the 5% of US films popular in Mexico and Argentina.

Conclusion: Films produced in Mexico and Argentina were more likely to contain tobacco compared to US-produced films, which suggests these countries need more public health advocacy efforts to address tobacco in films

PD-1007-20 Fast cars and cigarettes: Lamborghini brand sharing and cigarette advertising in the Republic of Korea

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Background: Licensing and brand sharing was a relatively common strategic consideration by tobacco firms during the 1980s and 1990s (e.g., Harley-Davidson cigarettes in the U.S.), but our study points to a recent example, with South Korea, the world's eighth largest cigarette market, as the setting. Korean Tomorrow and Global (KT&G), which held a 62% market share during 2012 and is Korea's largest tobacco firm, launched a new cigarette brand, Tonino Lamborghini, on 18 April 2012, despite implementation of the WHO FCTC, which is legally binding and has been ratified by 178 Parties to date, including the Republic of Korea. A key objective of our study is to introduce licensing as a marketing and advertising strategy and to illustrate the Tonino Lamborghini cigarette brand's rich symbolism despite being a newly introduced product.

Design/Methods: A semiotic analysis of marketing communication for Tonino Lamborghini cigarettes is provided. Semiotics refers to the theory of signs, and offers an interpretive approach to study signs and produced meanings.

Results: The licensing and brand sharing of Lamborghini to KT&G has facilitated the tobacco company's new offering of cigarettes to possess an immediate and proven brand identity, which consists of rich symbolism and lifestyle imagery pertaining to masculinity, assertiveness, power, prestige, luxury, excitement, and technology. Key obligations of the WHO FCTC are not being fulfilled in the Republic of Korea, despite the country's ratification of the WHO FCTC, effective 6 May 2005. For example, Article 13 stipulates that each Party shall have a comprehensive ban on tobacco advertising and promotion (and "brand sharing" or licensing is explicitly recognized in Article 13 guidelines as a form of tobacco advertising and promotion), in accordance with its constitutional principles, within five years of ratification. Nevertheless, Tonino Lamborghini cigarettes were introduced to the Korean market on 18 April 2012 and tobacco advertising and promotion persists (e.g., in magazines and through point-of-sale displays and signage).

Conclusion: There appears to be an urgent need for the Korean government to implement further policy measures that serve to meet WHO FCTC obligations and for Lam-borghini to publicly respond to their willingness to associate their valuable brand with tobacco, given the product's addictive properties and deadly health consequences.

PD-1008-20 How the tobacco industry uses e-mail and internet for marketing their products despite a tobacco advertising ban on the internet: a German case study

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Background: The European Tobacco Advertising Directive (2003/33/EC) bans advertising and sponsorship of tobacco products in "information society services" which includes the internet. The directive was implemented in Germany in January 2007. Aim of the presented study was to find out whether tobacco advertising on the internet was taking place or not and which kind of marketing is used.

Design/Methods: Observation study monitoring the internet sites of the ten most popular cigarette brands in Germany as well as ten cigarette and tobacco brands with special features i.e. slim cigarettes, additive free cigarettes and rolling tobacco. The study also observed their presence on Facebook, Twitter and YouTube and was conducted between December 2013 and April 2014.

Results: Despite an internet advertising ban the tobacco industry runs internet sites for six of the ten most popular cigarette brands. The brands that do not have internet presence are the brands on the bottom of the list for which the tobacco industry was at the time not running ad campaigns in other media like billboard ads. The tobacco companies "recruit" new people to sign up to their websites and then they contact them via e-mail and grant access to their websites. All websites attract a younger audience and offer competitions and give away prizes. They all offer free packs of cigarettes from time to time and without exception they all have "tell-a-friend"-features to recruit new "members". This way, the tobacco industry collects thousands and thousands of contacts of smokers and potential smokers who want to be "members" as well. People are also recruited at music festivals, at university campus parties and in discotheques and at other events that cater to young people. The internet sites contain product information and offer attractive games and raffles, download options of popular music, consumer blogs as well as advertising for ongoing tobacco promotion in clubs and at open air music festivals, event videos etc.

Conclusion: The tobacco advertising ban on the internet does not work. The tobacco industry uses the internet as a new communication platform for marketing so that regulatory authority must intervene on the basis of existing legislation, which is strong enough. It is a case for strong implementation and control.

PD-1009-20 Tobacco industry targeting of rural masses tactfully exposed and prevented

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Background and challenges to implementation: Section 5 of COTPA, the Indian tobacco control law, prohibits all forms of direct or indirect advertisement of tobacco products. Despite this ban, beedi (Indian cigarette filled with tobacco flake and wrapped in tendu leaf tied with string) manufacturers continue to market their products vide open advertisements vide wall writings on compound walls, electric posts and public places. In India Beedis smoking is very common specifically among the poor and rural masses. Beedi industry in Tamilnadu is one of the major hubs in India. Beedi companies target the rural consumers through lucrative and luring advertisements.

Intervention/Response: Through a field investigation Pasumai Thaayagam Foundation collected evidences of violations in five districts by checking the presence of advertising, collection of information on types of medium used, and details of persons responsible. After documenting patterns of violations, petitions were filed under Right to Information Act and the enforcers were challenged.

Results: The result revealed that Beedi advertisement was rampant in the rural areas. They were very lucrative and the displayed areas were very conspicuous places that could easily attract the attention of every passer-by, including children. Advertisements of various brands were identified on public walls and public places including bus terminus, school compound walls, railway bridges and electric posts. Along with evidences complaints were sent to the enforcers. Pressurized by the interventions a team of officials were entrusted with the task of removing the advertisements in each district. These officials caused the removal of the Beedi advertisements and fined the violators. In all the five districts the beedi advertisements were either removed or smeared with paints.

Conclusions and key recommendations: Beedi companies have developed sophisticated campaigns targeting the poor and rural consumers. Many of these strategies circumvent the Indian tobacco advertising ban. Tapping and exposing these strategies is critical for achieving successful tobacco control.

PD-1010-20 Perceptions of plain packaging: a cross-sectional study of Irish teenagers

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Background: The impact of plain (standardized) packaging can be traced back as early as 1990. However, in response to and in conjunction with changing tobacco control policies over the past decade, the number of studies focusing on plain packaging and the implications of

their findings has grown substantially. As Ireland moves to become the first European country to implement plain packaging legislation, a study on the perceptions of these packs among Irish youth is of critical importance. The 'Youth Perceptions of Plain Packaging Study' is the first Irish-based study of young people's attitudes towards standardized packs.

Design/ Methods: A cross-sectional, nationally representative sample of 1,384 secondary school students responded to a discrete-choice task in which participants were asked to choose between cigarette packs, modified by brand and level of standardization set out in the planned Irish Legislation. Packs were evaluated on the basis of attractiveness, perceived health risk, perceived taste, and characteristics of a typical smoker of the cigarettes therein.

Results: In all instances, chi-squared tests found that standardized packs were perceived as significantly less attractive, less healthy, and less tasty ($p < .001$). They also were associated with negative smoker traits (less popular, less glamorous) ($p < .001$). When given a choice between all packs included in the survey or no pack, 54.2% chose a branded pack, 17.0% chose a standardized pack, and 28.8% chose no pack. Among respondents who selected a pack, 80.1% selected a branded pack.

Conclusion: In line with international literature, young people perceive branded cigarette packs to be more attractive, more tasteful, healthier, and more socially desirable than standardized packs. This underscores the potential for packaging to market desirable product characteristics to buyers, particularly to young people under the age of 18.

PD-1011-20 Impact of trans-pacific partnership agreement on tobacco control in ASEAN member states: a case study of Thailand

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Background: This study analyzed the impact of Trans-Pacific Partnership Agreement (TPPA) on tobacco control in ASEAN member states.

Design/Methods: Reviewing of documents and analysis of results on international trade were employed.

Results: The impact of TPPA on tobacco control in ASEAN region would increase the incidence of tobacco smoking, with member states risking the freedom of regulating, in order to protect foreign investment. Many free trade agreements covered the obligation in protecting intellectual property more than the basic standard indicated in Trade Related Intellectual Properties (TRIPS). Rules on packaging and information often had limitation on trademarks and future impacts. International investment agreement (IIAs) offered opportunities for foreign investors to demand how their investments should be treated. These demands could be processed under international laws, before being brought to considerations by arbitration committee.

Conclusion: In theory, according to the TPPA on investment, there might be recommendation on protection standard for investors, which covered more than what was already agreed upon in Thailand at present. In practice however, investors could lay business structure such that they could demand according to guidelines indicated in the agreement at present, for example, investment through ASEAN members group. For Thailand, which had not entered into TPP agreement yet, once it entered into the agreement, it would be a follower of what already had been negotiated and agreed upon. Since GDP of Thailand is lower than many members of TPP, it has lower bargaining power than other countries in the negotiation. However, details of many on-going negotiating agenda in TPP are not available for public opinion process and scrutiny, which make it very difficult to evaluate all the risks involved.

PD-1012-20 Morphing packs to escape descriptor ban in Malaysia

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Background: The enactment of the Control of Tobacco Product (Amendment) Regulations (CTPR) 2008 prohibits use of misleading information or terms on cigarette packages effective from 1 January 2009. This paper focus on how tobacco industry has exploited loopholes, challenges the boundary of this regulation and action taken by the government to curb the industry.

Design/Methods: Routine monitoring and surveillance of selected point-of-sales was conducted to track new promotional tactics and innovations in packaging designs of popular cigarette brands in the market. Cigarette packs with novelty packaging and new product designs of flagship brands from the three major tobacco companies in Malaysia (British American Tobacco, Philip Morris and Japan Tobacco International) were purchased and examined.

Results: With the ban in use of words such as 'light', 'ultra light', 'mild', 'cool', 'slim' the industry has adapted quickly to the policy change by introducing new words with brand names and creative pack designs. The industry uses different color-coding to characterize a product such as red for regular cigarettes, blue for light and green for menthol including flavored cigarettes. They also introduced new descriptors (Smooth, Satisfy, Pleasure, Class A, Fresh Mint, American Blend) or graphics (British flag) and promotional terms (Ice Blast, Fusion (Mint & Menthol)); fanciful terms (Wrapped Re-Functional Charcoal Filter (WRC Filter Technology), Silver Neo, Blue Futura, White Infina, Nanotek, Mintek); promotional statements ("Created By Our Blenders From Tobaccos of Exceptional Quality To Be The World's Finest Cigarette") and slogans ("Perfectionists in Tobacco") that reflect the quality or supremacy of its products with the aim to promote and market their products. In response to these aggressive strategies used

by the industry, the Malaysian government has strengthened the regulation on the ban on descriptors through the passing of the Control of Tobacco Products (Amendment) Regulations, 2013.

Conclusion: It is evident that tobacco industry continues to circumvent the loopholes despite stringent tobacco control measures. The most effective measure for Malaysia would be to implement plain packaging which eliminates remaining brand design elements, including tobacco company logos, brand imagery colors and promotional text to make it less appealing to smokers and youth.

PD-1014-20 How U.S. adults describe various tobacco products and marijuana: the successes and failures of tobacco industry marketing and public health

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Background: Use rates of alternative tobacco products and marijuana have increased, as have marketing efforts to alter perceptions and ultimately promote use. Thus, we examined the extent to which positive, negative, and neutral descriptors were associated with various tobacco products and marijuana among adults in the U.S.

Design/Methods: In 2013, we conducted a cross-sectional survey among 2,500 U.S. adults recruited through an online survey panel. We assessed tobacco and marijuana use and which of 24 positive, negative, and neutral descriptive words participants associated with tobacco products and marijuana. We conducted descriptive, bivariate, and multivariate analyses to examine prevalence and correlates of these perceptions.

Results: In the past month, 36.7% used cigarettes, 5.7% large cigars, 6.6% little cigars, 4.9% cigarillos, 3.5% hookah, 7.6% e-cigarettes, 3.7% chew, and 9.9% marijuana. We identified the two descriptors most commonly associated with each product: cigarettes - addictive (70.5%) and smelly (60.0%); cigars - smelly (53.8%) and risky (45.7%); hookah - unattractive (34.3%) and risky (36.9%); e-cigarettes - unattractive (32.0%) and risky (26.5%); chew - gross (56.3%) and unattractive (55.0%); and marijuana - smelly (47.2%) and risky (53.9%). We also examined which product was most commonly associated with each descriptor: cigarettes - addictive (70.5%); social (24.7%); stressed out (33.7%); depressed (21.8%); glamorous (4.8%); smelly (60.0%); and risky (54.1%); cigars - sophisticated (9.9%); macho (14.3%); and mature (12.1%); hookah - sexy (5.6%); worldly (13.5%); and exotic (18.1%); e-cigarettes - safe (18.6%) and trendy or hip (13.0%); chew - rugged (15.7%); gross (56.3%); dirty (53.3%); and unattractive (55.0%); and marijuana - rebellious (33.9%); youthful (17.5%); party (39.7%); cool (9.8%); and intriguing (9.4%).

Conclusion: The attributes assigned to these products align with strategies attempting to promote these products.

However, these products are generally perceived negatively, indicating that there are ample opportunities to leverage the negative perceptions of tobacco and marijuana toward the prevention of use. This information could inform counter-marketing efforts.

PD-1013-20 Did the tobacco industry know that smoking caused cystic fibrosis-like lung disease before the scientific community?

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Background: Chronic obstructive lung disease (COPD), mainly caused by smoking, disables millions of people around the world. The mechanisms causing the disease have been extensively researched. However, in the recent few years, a scientific breakthrough showed that tobacco causes a change in the cells of smokers similar to the cystic fibrosis. Cystic fibrosis (CF) is the most common genetic disease of caucasians caused by mutations in the gene for the protein cystic fibrosis transmembrane regulator (CFTR) that regulates ion transport across the cell membrane. Smoking is recently discovered to impair the CFTR activity. The aim of the study is to find out whether smoking and CFTR relationship was known to the industry previously.

Design and methods: Tobacco industry documents from legacy tobacco documents library were searched for "ion transport" and 3889 documents were found. The content of the documents were investigated according to the relation to COPD and CF.

Results: The investigation of the documents revealed that there had been a grant application to the Council for Tobacco Research in 1982. The previous work of the researcher was precisely described as the recent finding, that cigarette smoke inhibits ion transport. The documents show that the researcher had been granted but the studies took a different path than effects of smoking. The literature survey also showed that the researcher never published the preliminary findings.

Conclusion: The Council for Tobacco Research created by the tobacco industry to find alternative reasons why tobacco smokers got lung cancer may have done the same for chronic obstructive lung disease. The research findings kept unpublished caused a delay in scientific progress for at least three decades.

PD-1015-20 Do consumers perceive a difference between regular and nicotine-free cigarettes?**M Cummings,¹ M Cornelius,¹ B Heckman,¹ G Nagelhout,² S Heijndijk,³ T Agar,⁴ G Fong,⁴ R Borland^{4,5}**

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Background: The Netherlands has been identified as a test market for a very low nicotine cigarette called Gold Magic. In anticipation of the launch of this product we undertook a survey to assess consumer attitudes and beliefs about nicotine free cigarettes as well as other tobacco products. This study examines perceptions of regular and nicotine-free cigarettes among current, former, and never smokers and how these perceptions predict willingness to try either product.

Methods: Data come from the ITC Netherlands Tobacco and Nicotine Products Survey, which included 3,200 smokers and non-smokers surveyed online in March 2014. The outcomes of interest included possibility of trying factory-made and nicotine-free cigarettes. Participants were asked to rate products based on 11 different adjectives. Factor analysis using these adjective ratings classified responses into two groups reflective of positive and negative expectancies. Positive expectancies included tastes good, satisfying, clean, healthy, fun, affordable and relaxing. Negative expectancies included dangerous, smelly, addictive, causes cancer, and hard to quit.

Results: There was little difference in the overall mean positive and negative expectancies for regular and nicotine free cigarettes. Predictably, both positive and negative expectancies were related to smoking status with current smokers perceiving more positive and fewer negative values compared to nonsmokers. Willingness to try regular cigarettes and nicotine free cigarettes was correlated with positive expectancies but not negative expectancies. Of the various positive product attributes assessed, expectancy about taste was the strongest individual product attribute associated with willingness to try either a regular cigarette or nicotine free cigarette. Surprisingly, there was little difference in the perception of the addictiveness of regular compared to nicotine free cigarettes.

Conclusion: Consumers in the Netherlands do not perceive much difference in regular and nicotine free cigarettes. Most are poorly informed about the importance of nicotine to the smoking experience. While marketing and consumer experience with the nicotine free cigarette may in change, for now it appears creating a niche for the nicotine free cigarette will be challenging without competing with regular cigarettes on product affordability.

PD-1016-20 Technology terminology and imagery on tobacco packaging across 14 countries**L Kroart,¹ J Cohen,¹ C Washington,¹ J Brown,¹ K Smith^{1,2}**

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Background: With the increasing successes of graphic health warning requirements and policies prohibiting misleading descriptors, innovative tobacco pack designs and appeals are becoming more widely used marketing tools to promote tobacco products. Our team sought to examine technology-related marketing that may appeal to youth and circumvent regulations concerning misleading descriptors.

Methods: In 2013, we established TPackSS, a tobacco packaging surveillance system, to track global trends in tobacco packaging innovation and compliance with health warning requirements. We collected 3,358 tobacco packages from low, middle, and high income neighbourhoods in three cities in each of 14 countries: Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Pakistan, the Philippines, the Russian Federation, Thailand, Turkey, Ukraine and Viet Nam. We systematically assessed and coded packs for presence of any technology-related terminology and imagery.

Results: Technology-related terminology was present on packages purchased in all 14 countries, and technology-related imagery was present on packs purchased in 11 countries. Phrases found on tobacco packages include examples such as "Nano-cut," "Odor Reduction Technology," and "HD: High Definition." Images found on packages included "play" or "volume" buttons that may denote a more technologically advanced cigarette, and "activate" or "switch" buttons that are often used to mark a cigarette that can be "turned-on" to release flavor. Images of buttons commonly seen on electronic devices were found on 44 packs across 11 brand families, with 18 of the packs purchased in Mexico. The most common brand families to use button imagery were Pall Mall (17 packs) and Kent (11 packs).

Conclusion: Technology-related terminology and imagery is being used on cigarette packages in low- and middle-income countries. Use of such appeals may be attractive to youth and may falsely imply a safer cigarette. With some countries such as Brazil having restrictions to prevent the sale of toys that resemble tobacco products, one could argue that tobacco packages, with the use of button features, resemble electronic toys. Findings from this study can inform and assist advocacy efforts in moving towards stricter regulations concerning misleading descriptors and appeals to youth.

PD-1017-20 An assessment of cigarette brand variants in the Russian Federation**C Washington,¹ J Cohen,^{1,2} J Brown,¹ L Kroart,¹ K Smith²**¹Institute for Global Tobacco Control, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States of America, ²Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States of America. e-mail: cwashin8@jhu.edu

Background: The tobacco industry has used market segmentation and the introduction of brand variants for over 40 years to promote their products and drive sales. The Russian Federation has one of the largest cigarette markets in the world, and more than one third of the population smokes. We conducted a systematic collection of cigarette packages in the Russian Federation and assessed the number of brands of cigarettes available, along with brand variants within each brand family.

Design/Methods: In September 2013, we systematically purchased cigarette packs from three cities in the Russian Federation based on population size and cultural, geographic, and linguistic diversity: Moscow, St. Petersburg, and Kazan. One of every unique cigarette pack was purchased from vendors in low, middle, and high socioeconomic areas in each city. A brand family was defined based on the primary brand name on the pack. Brand variants were identified based on the presence of unique design elements including color, and printed descriptors and imagery within a brand family.

Results: Data gathering resulted in a collection of 526 unique tobacco packs from the Russian Federation. The collection included 136 unique brand families, and 81.6% of the brand families had at least two brand variants. Twelve brand families (8% of the brand family sample) had 12 or more brand variants. Camel and Kent brands had the largest number of brand variants (18 and 17, respectively). Within the Camel brand family several brand variants had sub-brand variants – the 100 Year Anniversary brand variant had 7 different unique packages.

Conclusion: These findings provide information on the extent to which the tobacco industry is offering both many brand families, and multiple brand variants within most of those brand families, in the Russian Federation. Our findings can inform discussions on the value of limiting the number of variants within a brand. Repeating the pack collection protocol following the June 1, 2014 implementation of a total display ban in the Russian Federation would be useful in assessing the impact of the ban on the number of brand families and brand variants on the market.

PD-1018-20 Snus product advertising and perceptions: a mixed methods study**A Kaufman,¹ M Grady,¹ E Grenen,² B Leyva,³ R Ferrer⁴**¹Tobacco Control Research Branch, National Cancer Institute, Rockville, Maryland, United States of America, ²Behavioral Research Program, National Cancer Institute, Rockville, Maryland, United States of America, ³The Warren Alpert Medical School, Brown University, Providence, Rhode Island, United States of America, ⁴Basic Biobehavioral and Psychological Sciences Branch, National Cancer Institute, Rockville, Maryland, United States of America. e-mail: kaufmana@mail.nih.gov

Background: In an effort to renew the smokeless tobacco market in the United States (U.S), industry introduced a smokeless tobacco product called snus. Companies producing and marketing snus in the U.S. are prohibited from making claims that these products pose less risk or are less addictive than cigarettes. Article 13 of the Framework Convention on Tobacco Control prohibits advertising that is misleading or deceptive. However, some advertisements for snus seem to have made such claims. Thus, it is important to understand how smokers may be interpreting advertising messages about snus.

Design/Methods: A mixed-methods design combined eye-tracking methodology with structured interviews. Participants were 22 male smokers age 18-29 ($M=26.64$, $SD=2.92$). Tobii Studio TX300 was used to display 5 snus advertisements (branding removed, images randomized, warning label standardized) for 20 seconds each and track eye movements. After each advertisement, participants responded to questions about harm and addiction. Structured interviews were conducted after being shown all advertisements. For each advertisement, descriptive statistics were calculated and regression analyses predicted harm and addiction from eye tracking areas of interest (e.g. graphic, warning label) controlling for baseline harm and addiction perceptions. QSR NVivo 10 was used to conduct qualitative data analysis of the interview data.

Results: On average, participants' time to first fixation on the warning label was 6.14 ($SD=2.56$) seconds and they fixated on the warning label for 1.60 ($SD=.086$) seconds across all advertisements. Regression analyses revealed that fixation count on the warning label was significantly positively associated with harm and addiction perceptions for three advertisements. Fixation count on a heading on one advertisement read, "Reach For Snus," was significantly negatively associated with harm and addiction perceptions. Qualitative analyses will be discussed as they relate to perceptions of harm and addiction.

Conclusion: This study indicates that for some advertisements, attention on certain areas (as measured through eye tracking) is associated with harm and addiction perceptions among young male smokers. Understanding how smokers' perceive and understand products after viewing advertisements may inform regulations regarding claims about product harm and addiction. Our results may guide public health efforts to educate smokers on the risks of emerging products.

37. TAX: IMPACTS ON AFFORDABILITY AND CONSUMPTION

PD-1019-20 Increasing prices and taxes and reducing the affordability of cigarettes in Brazil

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Background: Increase prices and taxes on tobacco products is considered by the World Health Organization and the World Bank as the most cost effective measure to reduce smoking. Studies indicate that this increase immediately affects purchase behavior and consumption among young and low-income population.

Intervention: From 2007, the Brazilian Federal Revenue Office has instituted successive increases in taxes on tobacco products and in 2011 has reformulated the tax system, establishing a minimum price policy on cigarettes, which is R\$ 4.50 (USD 2.00) in 2015. The cigarette manufacturer can choose between two systems of federal taxation: the first is calculated using an ad valorem rate of 45% and the second is the sum of ad valorem and specific rates, based on the type of packaging. In this regime, the ad valorem tax rate can reach 60% in 2015.

Results: Two analyzes evaluated the effectiveness of Brazilian tax policy through the affordability index to cigarettes, which refers to the amount of funds (or income) required to purchase a daily amount of cigarettes. The International Tobacco Control Policy Evaluation Survey (ITC), held in three Brazilian cities with 1,200 smokers and 600 nonsmokers in 2009 (Wave 1) and in 2012-2013 (Wave 2), has considered price paid in the most recent cigarette purchase, number of cigarettes smoked per day, household income and number of adults in the household to establish the affordability index. A negative affordability index means that the cost of daily amount of cigarettes would require a higher proportion of one's daily income. The results showed that the cigarettes become less affordable between the Waves 1 and 2, with an average annual decrease in the affordability index of approximately 2.0%. Another analyze elaborated by the economist Roberto Iglesias has considered the historical series of Brazilian taxation on cigarettes between 2000 and 2013, showing that this affordability index reached the highest level in 2013 (2,3%), contributing to reduce cigarette smoking among adults from 812 units/year in 2006 to 500 units/year in 2013.

Conclusions: Successive tax measures adopted by Brazil over the past few years have been responsible for a real increase in cigarette prices and strongly contributed to reduce smoking prevalence from 15.6% to 11.6% during this period. It was also responsible to reduce in 10% the

consumption in low income population between 2011 and 2012.

PD-1020-20 Raising taxes on cigarettes in Brazil: the decline in prevalence is the most important result, with no proved evidence of increase in illicit trade

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Background and challenges to implementation: In 2011 was implemented by the Secretariat of Federal Revenue one of the measures of the Framework Convention for Tobacco Control/WHO more cost-effective: Article 6, which deals with the rising prices and taxes on tobacco products to reduce demand, under strong opposition pressure by the tobacco industry, that disseminates statistics on the increasing behavior of illicit cigarette trade without showing the modeling data. Government periodically monitors the status of smoking in Brazil, considering the consumption of cigarettes, regardless of its source, seeking the prevalence of smoking among adolescents and adults. The present study shows a decline in prevalence as the main result coming from higher prices and taxes of cigarettes in Brazil between the years 2006 and 2013.

Intervention or response: Qualitative secondary data analysis confronting the illicit cigarette trade data submitted by the tobacco industry and prevalence rates found in VIGITEL and PeNSE surveys.

Results and lessons learnt: According to tobacco industry, the illicit cigarette trade in 2006 was close to 41 billion cigarettes and dropped to 35 billion in 2013, so in absolute numbers, the market profile varied -14% between this years. Proportionally, in relation to the amount of legal cigarettes produced that had decreased, the illicit cigarette trade share in 2006 was estimated at 41% and went to 48% of the cigarette market in 2013. The prevalence rate of smoking for both genders found by the Surveillance of Risk and Protective Factors for Chronic Diseases Telephone Survey (Vigitel), taken in 27 Brazilian capitals, with individuals above 18 years, indicates that the percentage dropped from 15.7% in 2006 to 11.3% in 2013. Among adolescents of both sexes, the National Health Survey of School (PeNSE) identified that the percentage of young people attending 9th grade in elementary school, who tried smoking, dropped from 24.2% in 2009 to 19.6% in 2012. None of the surveys distinguishes between legal or illegal consumption of cigarettes during the investigations.

Conclusions and key recommendations: The rising prices and taxes on cigarettes in Brazil represented a strong

action to reduce the consumption of cigarettes in the country. Thus, we can say that the decrease in the prevalence of smokers found by the surveys, that don't consider the origin of the cigarette, were the most important result from this measure that requires ongoing attention.



PD-1021-20 Duty-free tobacco sales: international update and the case for action CANCELLED

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Background: Higher tobacco taxes and prices are a well-established means of reducing tobacco use. However, government decisions to allow duty-free tobacco sales and import allowances undermine the benefits of a high tobacco tax strategy. A growing number of national governments are taking action on to curb duty-free tobacco, consistent with Article 6.2 of the WHO Framework Convention on Tobacco Control (FCTC).

Intervention: This presentation will provide an update on progress on the duty-free issue and will further make the case for banning duty-free tobacco sales and for banning/restricting duty-free personal import allowances Duty-free tobacco sales:

- Result in less expensive tobacco
- Increase social acceptability of tobacco
- Associate tobacco with international travel, and with a luxurious lifestyle
- Provide a tax break available only to those who travel internationally
- Provide an unfair privilege to some retailers to the detriment of other retailers
- Reduce government revenue
- Contribute (in some parts of the world) to illicit trade

Results: Two countries have banned duty-free sales to departing travellers -- Nepal and Romania. In 1999, the European Union banned duty-free sales to individuals travelling within the EU. In Canada, the federal tobacco tax applies to sales in "duty free" stores.

Although a duty-free import allowance for travelers of 200 cigarettes is common in many countries, more countries are reducing the allowance, including recent changes in Australia, New Zealand and India.

Here are the rankings for the lowest duty-free import allowances for cigarettes:

- 0 Barbados
- 0 Singapore
- 0 Sri Lanka
- 19 Hong Kong
- 40 various EU countries (mainly at land borders)

- 50 Australia
- 50 New Zealand
- 80 Guatemala
- 100 India

Proposed bans on duty-free tobacco sales have been strongly opposed by the tobacco industry – the industry's "scream test" has been passed.

Conclusions and Key Recommendations Intentionally reducing tobacco taxes and hence the price of tobacco products through duty-free undermines public health and public revenue. Governments should ban duty-free tobacco sales to travellers (including on airplanes and ships), and should eliminate/restrict duty-free import allowances.

PD-1022-20 Behavioural trend of Malaysian smokers with respect to purchasing cigarettes: findings from the ITC Malaysia Survey

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Background: The Government of Malaysia has taken various tobacco control measures aimed at reducing tobacco consumption. This paper describes the behavioural trend of Malaysian smokers with respect to purchasing cigarettes over six waves (2005 – 2014).

Design/Methods: Study data were collected from the six waves of the ITC Malaysia Survey from 2005 to 2014 using a stratified multistage cluster sampling design. The study involved adult smokers: 2,006 (Wave 1: Jan - Mar 2005), 1,651 (Wave 2: Aug 2006 - Mar 2007), 1,975 (Wave 3: Mar - Sept 2008), 2,067 (Wave 4: Jul - Dec 2009), 2,007 (Wave 5: May 2011 - Apr 2012) and 2,000 (Wave 6: May 2013 - Jan 2014). Their purchasing behaviours were measured and cross-sectional descriptive statistics were applied on the weighted data.

Results: Overall, across the six waves, most adult smokers used factory-made cigarettes. Approximately 70% of them used white cigarettes in 2005 and increased to 80% in 2014. The used of non-white cigarettes and kreteks showed a declining trend over the six waves (20% in 2005 to 10% in 2014 and 10% in 2005 to 7% in 2014 respectively). The average price for a pack of 20 was RM4.98 in 2005 and increased to RM9.00 in 2014. The percentage of smokers who smoked 16 or more cigarettes a day declined with a resultant increase in those who smoked 11 to 15 cigarettes. In Sabah and Sarawak, approximately 30%-46% of smokers across the five waves bought their

cigarettes less than RM3.00 per pack of 20. The percentage of smokers consumed lower-priced cigarettes however, dropped to 16% in Wave 6. In contrast, the smokers in Peninsular Malaysia were not in favour of buying lower-priced cigarettes. Whilst the consumption of higher priced cigarettes (more than RM7.00 for pack of 20) increased over the six waves in Peninsular Malaysia, Sabah and Sarawak. By Wave 6, more than 90% of the smokers in Peninsular Malaysia purchased higher-priced cigarette than smokers from Sabah and Sarawak (72%).

Conclusion: White cigarettes remain the most popular brand throughout the six waves. Malaysian smokers were willing to purchase higher-priced cigarettes especially in Peninsular Malaysia. The banning of pack less than 20 sticks (kiddie pack) and the introduction of minimum price of RM7.00 before Waves 5 and 6 might influence the value-to-buy purchasing behaviour. Malaysian smokers have switched to smoking higher-priced cigarettes.

PD-1023-20 Self-reported price of cigarettes, consumption, and compensatory behaviours pre- and post-tax increase: findings from the ITC Mauritius Survey

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Background: The government of Mauritius has been using excise tax on cigarettes as a major instrument for tobacco control. The tax rate which was Mauritian rupees (MUR) 2,200 per thousand cigarette sticks in 2008 went up by 25% in November 2010 to MUR 2,750. The present study aims at assessing the impact of this tax increase on cigarette price, consumption, and behaviour of Mauritian smokers.

Design/Methods: Data were analysed from three waves of the International Tobacco Control Policy Evaluation Project Survey in Mauritius conducted on a nationally representative cohort sample of 600 adult smokers. Wave 1 (2009) and Wave 2 (2010) were conducted before the 2010 tax increase was implemented; Wave 3 (2011) was conducted after the tax increase. The analyses are based on 534 smokers who participated at all three waves. Survey logistic procedures were used to test the differences in price, consumption and compensatory behaviours of smokers pre-and post-tax increase.

Results: The tax increase resulted in an overall increase of 17.8% over the pre-tax price ($p < 0.001$). Daily cigarette consumption went down from 9.6 to 9.1 sticks per day, i.e. a decline of 5.2% ($p = 0.073$). Reductions in consumption were more likely among light smokers, those who were aged 55+ and those who were unemployed. In addition, 5.3% of smokers reported having quit smoking at post-tax follow-up survey at Wave 3. The vast majority of smokers (97.8%) did not offset price increases by switching from higher-priced brands to lower-priced brands despite the

large price gaps between different brands. No other price minimisation behaviours like buying cigarettes from low or untaxed sources were observed among smokers. Also, no significant differences were noted in the perceptions of affordability of cigarette among smokers after the upward revision of the tax rate.

Conclusion: The increase in taxes significantly reduced cigarette consumption. Furthermore, the results also indicate an absence of brand switching and other compensatory behavior. More significant increases in tobacco taxes are required in the future so as to make cigarette less affordable and gradually increase the share of the excise tax in the retail price from 55% to 70%.

PD-1024-20 Impact of tobacco tax policy in Panama, 2000-2013

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Background: The Tobacco Tax Policy has shown effectiveness to increase revenue, reduce consumption and in reducing cases of acute myocardial infarction (AMI) after selective tax increase on cigarettes and other products derived from tobacco (ISC).

Design/Methods: The Tool Kit No 3 of the World Bank was used to estimate the econometric model of demand elasticities with which short and long term for the construction of the Laffer curve is obtained and set the threshold increase of ISC. In addition, data from the Panama GATS 2013 were used to establish the relationship of economy and consumption. Finally, the relative risk of AMI data from 16 national hospitals for the period 2006-2010 was estimated (with 2588 cases) using a Poisson model.

Results: The Laffer curve calculated from the price elasticity of $|-1.04|$ long term showed that with the increase in ISC 100%, revenue increased from USD 12.4 million in 2009 to USD 23.6 million in 2012 and USD 29.8 million to 2013. The prevalence (of smoking and non-smoking tobacco) according to the GATS was 6.4%, while the estimated relative risk of AMI was 0.88.

Conclusion: The prevalence of consumption of 6.4% indicates the proximity to the end game of Fiscal Policy and the market has not expanded, implying therefore that illegal sales has only been relativized against the legal sale. The effects on health have also been significant.

PD-1025-20 Estimating the health impacts of tobacco taxation in the Philippines

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Background: After battling for decades against the tobacco lobby, Republic Act No. 10351 or the Sin Tax Reform Act was finally enacted on December 2012. The two

main features of the Law include (i) removal of the price/brand classification freeze; and (ii) gradual shift to a unitary taxation. The reform in the excise taxes has significantly curbed cigarette consumption especially among the young and the poor. Action for Economic Reforms (AER) was at the forefront of the advocacy to have the tobacco tax reform passed, from which lessons learned gained global significance.

Methodology: The paper established a baseline data for a longitudinal study on the law's impact on smokers using a survey on tobacco demand and a multi-stage stratified or multi-stage quota and systematic sampling for Metro Manila, Mega Manila and Metro Cebu. Using a two-stage least squares method, the paper likewise estimated a unique model of tobacco demand that employs daily stick consumption as the dependent variable and price per stick as one of the explanatory variables. Given the prevalence of per-stick consumption especially among the young and the poor in the Philippines, a per-stick consumption was a more fitting dependent variable than the commonly studied per-pack analysis. The survey obtained unique data on the attributes and behavior of smokers. Lastly, a simulation was conducted using the elasticity coefficient to assess the ex-ante impact of the law on the drop in smoking prevalence and number of lives that will be saved due to quitting.

Results: All things held equal, the study showed that a 10 percent increase in the price of a cigarette stick results in a 2.85 percent decrease in consumption, lower compared with previous estimates. Using the elasticity estimate generated from the study, the Department of Finance was able to project incremental revenue of PHP43 billion, close to the actual PHP42 billion collected in 2013. The results of the health impact simulation are summarized as follows: (i) an increase in the tax burden of 58.92 percent (from 39.81 percent in 2012 to 63.27 percent in 2013); (ii) a drop in the smoking prevalence by 2.1 percentage points in 2013 (from 28.6 to 26.2 percent); (iii) a reduction in the number of smokers by 1.225 million (from 16.87 million to 15.64 million); and (iv) 36,748 number of lives saved due to quitting.

PD-1026-20 Price and income elasticities of demand in Uganda

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Background: Tobacco consumption is projected to increase in Africa in the current century driven by favourable economic conditions. On the other hand, African governments are reluctant to enact tobacco control policies in the absence of local evidence that such policies work. This study estimates price and income elasticities of demand for Uganda with a view to building the evidence base for tobacco control.

Design/Methods: I use the method pioneered by Deaton (1988, 1989) which exploits the empirical fact that prices vary spatially in most developing countries to isolate the

impact of price on demand. I also correct my estimates for measurement error and quality effects associated with self-reported prices.

Results: I find that the price elasticity of demand for tobacco products in Uganda is -0.53 implying that tobacco products are price inelastic. This finding is in line with international literature. Further, I find that cigarettes are more price inelastic and "other tobacco" is price elastic. I also find that other tobacco is an inferior good in the sense that demand declines as income rises. On the other hand, the demand for cigarettes increases with income likely as a result of two effects: cigarettes smokers buy more and smokers of "other tobacco" switch to cigarettes.

Conclusion: The government can realise public health and tax revenue gains by increasing taxes on tobacco products in Uganda. Taxation of cigarettes should be more aggressive given the high inelastic nature of demand as well as to prevent switching from "other tobacco" as incomes rise.

PD-1027-20 Evaluation of the Mathata Thitha concept: in relation to price and non-price factors of cigarettes

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Background: The use of tobacco has caused over 50 million deaths in the last decade. With such alarming numbers, importance and recognition given to combatting the harmful effects of tobacco through the Framework Convention of Tobacco Control (FCTC); Sri Lanka also took on the task to address the cause in 2003. The concept of Mathata Thitha was brought in with political backing and the National Authority for Tobacco and Alcohol Act No 27 of 2006 was passed to showcase Sri Lanka's active step to reduce tobacco and alcohol. This study focus on how cigarette prices were adjusted in relation to income and price of other goods to evaluate if it is in line with the requirement of the Mathata Thitha concept of reducing cigarette consumption. Non-price factors are also examined to observe the perception of individuals who smoke and those who have quit, and its likely implications on policy formulation.

Design/Methods: Price factors were examined through secondary data by computing indexes while non-price factors were evaluated through a survey analysed by descriptive statistics and a chi-square test.

Results: The findings reveal that the current arbitrary pricing of cigarette in Sri Lanka has not shown adequate adjustment in pricing on relation to income – in turn making cigarette prices more affordable. Non-price factors reveal there is a significant impact from friends and peers on the habit of smoking and concludes with identifying that the current health warnings are insufficient.

Conclusion: The study was able to bridge the information gap that looks at data from the time after the Mathata Thitha concept was brought in which was not explored

and identify recommendations that are likely to improve the current form of pricing and health warnings.

PD-1028-20 An impact of taxation measure on smoking behavior in Thailand

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Background: In Thailand, during 1992 to 2011, ten times of tax increase were used as an effective measure for increasing government revenues and decreasing smoking rate. In 2011, the excise tax of manufactured cigarettes has been increased for 5% from 80% to 85% of ex-factory price and 9.7% quitted smoking. In August, 2012, cigarette tax was increased for 2% from 85% to 87% of ex-factory price and loose tobacco tax was increased from 1 Baht per kg. to 10 Baht per kg.

Objective: To assess the impact of excise tax increase in 2012 on smoking behavior of current smokers.

Method: This longitudinal study was performed in current smokers aged 15 years and over, from Global Adults Tobacco Survey (GATS) in 2011. The 2,799 current smokers were randomized selection and then collected data by telephone interview after tax increase for three rounds; after for a month (September, 2012), for 3 months (November, 2012), and for 6 months (February, 2013). Descriptive statistic was use to analyze the data.

Results: Around 93% of samples were male, nearly eight in ten were in aged 25-59 years and around six in ten lived in municipal areas. After cigarette tax increased 2%, 2.3% of current smoker quitted smoking after tax increase for a month and only 0.3% quitted with the reason of price and tax. For the manufactured cigarette smokers, some decreased the number of sticks and some shifted to smoke only hand-rolled cigarette or mix both manufactured and hand-rolled cigarette. For both type of cigarette used, they also changed smoking behavior like as the manufactured cigarette smokers. The number of cigarette use was reduced significantly. ($p < 0.001$) However, the results showed the decreasing use of premium cigarette brands while conversely the increasing use of cheap brands either legal or illegal cigarette.

Conclusion: Cigarette tax increase was beneficial for government revenue but the low increase was not sufficient effect on smoking behavior. Therefore, using taxation

measure for tobacco control need to study tax structure and tax rate that have impact on smoking behavior. And for more effectiveness, taxation measure should parallel do with the other tobacco control measures.

PD-1029-20 Tax, price and tobacco use among Chinese young people

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Background: In May 2014 the Chinese Center for Disease Control and Prevention (CDC) released the 2013 Global Youth Tobacco Survey (GYTS) China survey.

Results: showed that 9.4 million junior high school students (19.9% of the population aged 13-15) have attempted to smoke. Among them, about 1/3 (6.9% of this age group) are current smokers. The report also indicated that 80% of these smokers have bought cigarettes at stores in the past 30 days even though they are less than age 18 and should not have been able to purchase cigarettes. Cigarette price should be a key factor to deter Chinese youth from purchasing cigarettes. The purpose of this study is to estimate the impact of raising tobacco tax on the smoking behavior of Chinese youth smoking behavior.

Design/Methods: Estimated price elasticity of demand for cigarettes among Chinese youth is used to simulate the impact of cigarette price increase through tax increase on the smoking behaviors of Chinese youth, including initiating smoking and quitting smoking. The simulation data are from the 2008 China CDC National Youth Survey and 2013 China GYTS.

Results: Chinese youth are more sensitive to price changes (-0.26) than adult smokers (-0.05 -- -0.15). It is estimated that a 10% increase in cigarette price increase would result in 400,000 youth not starting to smoke and at least 150,000 youth smokers quitting smoking.

Conclusion: China has a wide range in the price of cigarette brands, from US \$0.50 (3 RMB) to US \$15 (90 RMB) per pack. Most Chinese youth bought cigarette brands in the low price range. Raising the price of cigarettes through tax increase is one of the most effective policies to reduce the smoking prevalence rate of Chinese youth.

38. TOBACCO ALTERNATIVES AND DISINCENTIVES

PD-1030-20 Promoting FCTC and alternative livelihoods to tobacco farmers in Brazil through radio communication strategies

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Background: Brazil is the first exporter and the third tobacco leaves producer in the world. Tobacco industry has been using tobacco farmers as front groups to fight against tobacco control measures in order to defend their economic interests. The industry persuades farmers to spread lies, for instance, that FCTC will put an end to tobacco crops and tobacco farmers will lose their business. The industry makes many communication efforts alongside the local media to approach them and undermine FCTC measures. FCTC's article 17 recommends provisions of support to make alternative activities for tobacco growers economically feasible. Many tobacco growers' families want to stop growing tobacco but they don't know how to do that or even have technical and financial conditions to do that.

Intervention Radio is the best media channel to reach tobacco growers in rural areas. In 2013, the NGO ACT led a project aimed to supply information to tobacco farmers families who want to stop tobacco growing and change their livelihoods, about FCTC propositions and governmental programs created to support them technically and financially. ACT built partnerships with Community Radio Associations at the states where tobacco production is concentrated. There were produced seven-minute radio programs that presented specialists interviews about tobacco control measures, public policies, alternative livelihoods and other tobacco growers' testimonials who have changed to other livelihoods.

Results: Researches with focus groups made up of local media professionals showed that the information these professionals receive is originally based on arguments of the tobacco industry. Therefore, 40 interview radio programs were produced and public health experts were interviewed to counter such TI approaches. 200 community radio stations broadcast the program in their grid. The community radio stations were delighted with those programs and reported that they appreciated having such quality programs in their grid since they provided their audience with useful and relevant information.

Conclusions: Tobacco growers have been used by the tobacco industry as front groups, which is one of their strategies to mislead people about FCTC guidelines. Radios are an excellent way to counter tobacco industries' arguments and provide access to reliable information about FCTC and alternative livelihoods to tobacco farmers. Radio's partnerships should be strengthened and expanded onto other mass media channels.

PD-1031-20 Does the tobacco industry's diversification intend to reduce tobacco or expand business?

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Background: The WHO's Framework Convention on Tobacco Control (FCTC) provides Article 15, 16 & 17 for supply reduction measures in tobacco control. The articles cover illicit trade, sale to and by minors and promotion of economically viable alternatives for tobacco growers, workers and individual sellers. A key supply reduction measure should be committing tobacco industries to diversify to alternate business and gradually reducing tobacco production. Many tobacco industries have been diversifying in recent times giving the impression that they have been moving away from tobacco business gradually. Therefore, the current study aims to understand the status of diversification and tobacco reduction policies of tobacco industries in India.

Design/Methods: Top 10 ranking tobacco industries in India were identified based on their annual turnover. Information on their tobacco reduction policy, cultivation, revenue, product diversification, violations, and references to 'FCTC' and 'Cigarettes and other tobacco products act (COTPA)' was gathered from their website (in July, 2014). The data extracted was qualitatively analyzed and observations are discussed.

Results: Of the 10, eight industries (3 smoking and 5 smokeless) had websites and their data is discussed. Seven industries continue to promote their tobacco products and eulogize their brand. All the industries have introduced new tobacco brands and products after ratifying FCTC. Though 6 industries have diversified into packaged foods and water, confectionary, hospitality, real estate, chemicals, packaging, etc; their tobacco revenues (available for 3 industries) have increased in the last decade, ranging from 75% to 190%. Supported by the government instituted Tobacco Board, industries continue to enhance tobacco cultivation and leaf quality, and increase farming and encouraging farmers. No industry had any mention about FCTC, COTPA or any tobacco reduction policies.

Conclusion: Indian tobacco industries have diversified with the intention to expand their businesses and not to reduce tobacco production. Despite being a key stakeholder, FCTC excluded tobacco industry from any supply reduction measures while including growers, workers and individual sellers. Policies need to be clearly stipulated to ensure tobacco industry commits to reduce tobacco production with a set timeline to protect public from tobacco related mortality and morbidity.

PD-1032-20 Socio-economic status and perception towards alternative livelihood of workers involved in Bidi rolling industry of Andhra Pradesh, India

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Introduction: Providing economically sustainable alternative livelihood support though is important, it is a challenge for the government due to involvement of a large number of farmers and workers engaged in growing, processing and manufacturing of tobacco products. We studied the socio-economic conditions of the tobacco workforce in bidi rolling and their perceptions and preferences towards alternative employment.

Methods: A mixed method approach was adopted to study the SES and perception of workers in the Karim Nagar district of Andhra Pradesh state, India. This study was done during the period of November, 2012 to April, 2013 in Karim Nagar. A three stage stratified cluster sampling method was used to select the households based on probability proportionate to size method. In the first stage, district was stratified to rural, urban and semi-urban region based on the census division; second stage, the blocks were selected based on the number of bidi rolling units; third stage, the households were selected from the blocks which has at least one worker involved in bidi rolling. We used structured questionnaire to assess the SES and conducted FGDs to study the perception of alternative livelihood.

Results: We selected 1260 households (urban-360, rural-390 and semi-urban-510) with majority of them belonging to Hinduism (96.8%) and other backward caste (75%). Illiteracy was high among women in comparison to men (42% to 20%) and more in the age group of 15-34(22%). Most of the household (82%) were landless. Among all the workers females constituted 53% of the total workforce with work participation rate (WPR) of 59% and the highest WPR in the age group of 35-44 years (99%). Bidi rolling involved 41% of the total working days in a year and generated 27% of the income, with 99% of both employment and income is from females. In the FGD the women mentioned that they prefer rolling since it could be done at home and it had pother benefits like PF, pension, scholarship for children to study, home loan entitlement and guaranteed work throughout the year. But 56% of the HH mentioned that they are ready to shift to other employment opportunities provided they are home based. Al most all participants mentioned that they would not allow their children to get involved in bidi rolling.

Conclusions Majority of the workers are women hence training and creating alternative livelihood should focus on home based employment with involvement of SHGs, who are very active in the state.

PD-1033-20 Do the smokers comprehend pictorial warning printed on the smoking products in India?

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Background: Pictorial Health Warnings on the tobacco products are reported to one of the key demand reduction measures, and the newer warning is in effect from 2011 in India. Diseased lung is the picture commonly printed on the cigarette packets. The impact of this picture in reducing the demand is debated. The current study aims to assess the impact of this pictorial warning among smokers.

Methods: Smokers (n=81, age range: 17-56) from two southern states of India (Tamil Nadu and Telungana) were shown the warning picture printed on the cigarette packet and were asked three questions. They were 1. What is this? 2. What do you mean by this? 3. Do you think this will motivate the smokers to quit? The responses were analyzed using frequency statistics.

Results: The words used by smokers to describe the diseased lung picture were lung (32.1%), and a few described the lung as black, dark and affected, warning picture, skull, liver, chest, heart, mouth, etc. A few (5%) were unsure about the picture. When the smokers were asked about the meaning of the picture, they responded as smoking causes health problems (49.7%), it is the threatening message to the smokers not to smoke (47.6%) and 2.7% were unsure about the meaning. When they were asked about the impact of this warning on smokers in motivating them to quit, 74% said that this message will motivate the smokers to quit and 26% said that it will not motivate the users and a few said only the ban on tobacco would help.

Conclusion: The current pictorial warning printed on the cigarette packet is not comprehensive; however it indicated some health message. Though, the smokers identified the message and reported that the pictorial warning would motivate the users, none of the interviewed smokers had either reduced or quit smoking. The newer warnings needs to be field tested before implementation to increase the impact on users in reducing the demand.

PD-1034-20 Turkish experience on economically sustainable alternatives to tobacco growing

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Background: Turkey is currently the 11th largest tobacco producer country in the world. In 2001, the Agricultural Reform Implementation Project (ARIP) was launched and implemented under the auspices of The World Bank (2002 through 2007). Its main objective was to bring about a move towards a more market-oriented agricultural

policy, through the abolition of the administered output price and the elimination of input subsidies, including credit; the restructuring of state-owned enterprises; and the introduction of direct income support (DIS) supporting farmer transition program to alternative crops.

Intervention or response: The alternative crop activities for tobacco have been implemented by Ministry of Food Agriculture and Livestock (MFAL) aiming to decrease the production in 11 provinces in Turkey. Tobacco farmers who voluntarily gave up tobacco were eligible to receive one time cash grant payment of \$/ha 800 each year. Alternative crops included wheat, feed crops, pulses, fruits and vegetables, greenhouse and organic production. These activities continued in the 2008-2011 period and were then funded by the national budget. Regular training has been given to farmers by MFAL. New crops and technologies have been continuously introduced to tobacco growers by demonstrations and visual or print materials. Civil society has been also informed on alternative crops. Farmers received \$600 each year during 2008-2011. As a result 46.267 farmers have shifted to alternative crops and around \$ 30.000.000 was paid.

Results and lessons learnt: Alternative livelihood project in Turkey has been considered successful while the number of tobacco farmers declined from 318.504 to 69.343 since 2003.

Some of the lessons learned from the alternative livelihood activities are as given below:

- most of the farmers did not own the land;
- licensed quotas were few;
- fear of losing quota rights in the future;
- storage and marketing difficulties of alternative crops;
- delayed payments to tobacco farmers.

Conclusions: Through the implementation of successful tobacco control activities in Turkey, smoking prevalence has significantly decreased from 31% to 27% since 2008 and this declining trend will certainly continue. Therefore, a special emphasis has been given to tobacco farmers who want quit tobacco farming in National Tobacco Control Program 2014-2018 of Turkey with the plans to support the development of economically sustainable alternative livelihoods for tobacco farmers.

PD-1035-20 A comparative analysis of supply-side policy approaches: what kinds of negative incentives can phase-out tobacco industry?

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Background: Demand-side tobacco control dominates the international policy framework, given the very limited inclusion of supply-side measures in Framework Convention on Tobacco Control (FCTC). However, tobacco control advocates stress the still-high number of smokers in advanced countries, despite the falling smoking prevalence. They also draw attention to the shift of tobacco epi-

demio to low-and middle-income countries via trade and investment liberalization under the auspices of the IMF, WB and WTO. By stressing the insufficiency of the focus on smokers' behaviors, these authors started to develop endgame proposals that concentrate on tobacco industry activities. These supply-side approaches question the very existence of tobacco industry on the basis of ethical, moral and humane perspectives. This paper explores supply-side focused endgame tobacco control approaches. On the basis of a critical evaluation of existing approaches, it addresses negative incentives that could be utilized to extinguish the commercial viability of this deadly industry.

Design/Methods: Drawing on the literature on endgame proposals, supply-side policies are classified and discussed in terms of their goals, potential outcomes and feasibilities. For a comparative analysis, the paper develops a new method by considering all stages in capital accumulation process in tobacco sector: tobacco cultivation, manufacturing, trade and consumption are simultaneously considered in the exploration of distinguishing characteristics and effectiveness of various endgame proposals.

Results: There is an increasing interest in supply-side interventions among scholars. Those approaches have different foci of intervention in terms of which stage of capital accumulation in tobacco industry they target. The comparative analysis suggests that most of the new supply-side approaches may have a very limited effect as they do not consider tobacco industry as a whole from the cultivation of tobacco to its manufacturing, trade and consumption.

Conclusion: The limited inclusion of supply-side measures in the FCTC is far from to be sufficient for an end of tobacco epidemic. International regulatory framework needs to be redesigned by also targeting trade and manufacturing of tobacco products. Therefore, it would be very timely to think about various negative incentives to reduce the attractiveness of highly profitable tobacco business towards the ultimate goal of its gradual phasing-out.

PD-1036-20 Alternative livelihoods: a solution for tobacco farmers

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Background: In 2009, Tanzania was number four in Africa in tobacco production with a leaf output of 58,700 tons. However, since 2010, the tobacco industry has intensified its activities and, to-date, Tanzania has jumped to number two overtaking Zimbabwe and Mozambique. In 2011 alone, Tanzania produced 130,000 tons of leaf tobacco. Most of the current production is in new areas, where farmers have no idea of the health, environmental and socio-economic consequences of tobacco. However, in majority of the areas where tobacco production has a long history and where sensitisation of tobacco farmers has been going on, there is

substantial uptake of alternative crops, accompanied with reduced tobacco production.

Design/Methods: Tanzania Tobacco Control Forum (TTCF) has been sensitising tobacco farmers of Namtumbo District, southern Tanzania since 2006; by educating them on the hazards of tobacco farming and the need for adoption of alternative crops. Study areas were randomly selected and surveys conducted by use of structured questionnaires.

Results: From 2006 to-date, Namtumbo District has registered substantial increase of production of alternative crops; including rice which increased by more than 70%, sesame more than 600% and groundnuts more than 300%; other crops including maize, millet, soya beans and pigeon peas also registered increased production of different levels. Increased production has also translated into improved livelihood security within families. While at the 15th WCTOH, a three minute video clip of tobacco farmers lamenting over miseries due to tobacco farming was presented, today we present a three minute video clip of farmers celebrating their success stories.

Conclusion: There is need of intensifying sensitisation campaigns, especially in new areas where tobacco farming is spreading like wildfire, to be able to rescue tobacco farmers from the devastating health, social, economic and environmental consequences of tobacco.

PD-1037-20 Banning filters that don't work and are an environmental hazard

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Background and challenges to implementation: The cellulose acetate filter has been promoted for the last 60 years as a marketing gimmick to ease smoker's concerns about the health risks of smoking. Unfortunately, the filters on cigarettes turned out to be more an illusion than a harm reduction tool. New evidence shows that lung cancer and COPD risks have increased since the time that filters were introduced and adopted by smokers. Another problem is that filters are non-biodegradable plastic, and thus are a toxic waste product that may pose an environmental risk to humans and wildlife.

Intervention or response: We have determined that banning the sales of filtered cigarettes may be an important product regulatory approach that could change attitudes towards quitting and initiation, thereby reducing cigarette consumption and the environmental waste due to discarded cigarettes. Based on toxicity studies of cigarette butt leachates, on evidence from environmental cleanups,

and on the evidence for filter ineffectiveness provided in the 2014 US Surgeon General's Report and the 2001 National Cancer Institute Monograph 13, we have proposed policies that include banning the sales of filtered cigarettes. Legislation has been considered by the California State Legislature to enact such a ban in that State. We analyzed national and state regulatory authority to ban the sales of filtered cigarettes and worked with environmental and the major tobacco voluntary groups in support of this legislation.

Results and lessons learnt: Although the US Food and Drug Administration has legislative authority over tobacco product manufacture, we determined that California had complete authority at the State level to regulate out the sales of filtered cigarettes. Due to the persistent belief by many that filters provide health benefits, we also conducted pilot clinical studies on the effects of a filter ban on carcinogen exposure and behavior change among smokers after switching to unfiltered cigarettes.

Conclusions and key recommendations: Banning the sale of filtered cigarettes is a potentially important policy approach in tobacco control at state and national levels. It may reduce consumption and the health consequences of smoking while protecting the environment from tobacco waste hazards

PD-1038-20 From cultivation to production: a farmer-based research on the political economy of tobacco in Argentina

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Background: Argentina is the second largest tobacco grower in Latin America, after Brazil, and one of the leading tobacco leaf exports in the world. Cigarette makers and leaf buyers obstruct national and global tobacco control regulations by making claims that tobacco-related health policies will harm farmers' livelihoods in Argentina. Voices and experiences of small farmers have been relatively absent in Argentina.

Design/Methods: In 2013-4, semi-structured interviews were conducted with 20 farmers and other key stakeholders in Salta and Corrientes, Argentina. Information on growing requirements, labor issues and possibilities for alternative livelihoods were analyzed and key themes were identified based on case studies.

Results: A public health perspective on tobacco growing in Argentina revealed that small farmers are 'trapped' through complex contract requirements and social insurance provided through the tobacco subsidy. Each season, industry representatives offer inputs such as seeds and fertilizers at rates that appear reasonable but in actual practice are inflated and hidden by payments for a farm-

ers' crop. Tobacco cooperatives are the primary means by which small farmers remain tied to tobacco growing. Cooperatives acting as intermediaries between small farmers and global companies offer services and supplies to farmers that are oftentimes inflated. In turn, cooperatives purchase tobacco leaf from farmers at prices that do not cover costs of production. Social insurance available to farmers through a tobacco subsidy is an incentive for farmers to continue growing tobacco, otherwise farmers risk losing access to low-cost health care. Evidence of child labor in tobacco farming was collected, demonstrating social conditions at the farm level that restrict educational opportunities and future livelihoods of child laborers. Virtually all of the farmers in the study are interested in alternative livelihoods.

Conclusion: Farmers shared actual social and economic problems associated with tobacco growing as well as opportunities to improve livelihoods of farmers and develop strategies to exit tobacco growing. This work was supported by the Fogarty International Center of the National Institutes of Health under Award Number R01TW009288. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

PD-1039-20 Tobacco farmers, contract arrangements and alternative livelihoods in Malawi

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Background: Youth as young as five years old pick tobacco and are denied an education and basic food requirements in Malawi's tobacco growing sector. Adult workers remain impoverished through tobacco company practices such as collusion over leaf a prices, contract arrangements that keep people indebted to tobacco companies, and corporate manipulation of transfer prices to minimize tax responsibilities and shift wealth out of Malawi to more affluent countries.

Design/Methods: Forty individuals who cultivate tobacco were selected using purposive and snowball sampling techniques. A structured questionnaire was administered for health, social, economic and alternative livelihoods information. Data collection and analysis were completed in 2012-14.

Results: Global leaf buying companies and cigarette manufacturers that purchase leaf from farmers in Malawi achieve millions of dollars in profits as adult and child laborers in Malawi and elsewhere receive little or no money for their harvest. These findings emerged from our study with 25 male and 15 female tobacco farmers in Malawi. Virtually all of the farmers reported that they send their children ages 14 and younger to fields instead of schools

in order to meet requirements of contracts. More than two-thirds of the farmers stated that rates of interest on loans are extremely high and earnings that they receive are insufficient to cover costs of production and meet basic nutritional needs. Most of the farmers reported that they prefer to grow a mix of crops instead of tobacco but lack appropriate finances to exit tobacco farming. Only a few reported that they received training for pesticides applications or received protective equipment such as gloves or masks to reduce exposure to agricultural chemicals and green tobacco sickness (nicotine poisoning through the skin).

Conclusion: Results indicate that the tobacco industry through labor contracts pay poverty earnings and low leaf prices, contributing to malnutrition and debt servitude of farmers in Malawi. Farmer- and farm worker-led solutions are required to improve labor law compliance and fair market practices among tobacco leaf buyers and cigarette makers. Tobacco families in partnership with labor rights activists and tobacco control researchers support established unions of agricultural workers to advocate for their rights, engage with government representatives to improve health and labor laws, and promote alternative livelihoods for farmers and workers.

PD-1040-20 Results of the baseline survey on alternative livelihood in the eastern region of Zambia

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Background and challenges to implementation: Zambia is a major tobacco producer and is the seventh largest producer of tobacco leaf globally. The Eastern Region of Zambia is the nation's highest producing region of Virginia tobacco leaf in the country, producing about 3760 of the Total Nations Virginia leaf production of 7060.

Intervention or response: Tobacco companies determine the grading system and prices of tobacco produced by farmers including the cost of the loaned farm inputs such as seeds, cash, and fertilizers, and extension services. During the 2014 farming season market fall, tobacco farmers were left stranded as they did not have anywhere to sell their produce. Tobacco farmers spent weeks and even nights at the tobacco marketing floors. The situation attracted attention from the media houses, politicians, civil society and the general stakeholders and we intervened as a way of intensifying our efforts in line with FCTC article 17 & 18.

Results and lessons learnt: We organised a consultative meeting with tobacco farmers and various stakeholders. Six farmers instantly quit tobacco farming following learning how the tobacco companies extort them through bias contractual binding, how mathematically tobacco farming does not financially make sense, the intensity, and effort and time it consumes. Besides farming, the government has put in measures for local Zambians to do business easily and that includes; lessen documenta-

tion and preferential procurement system prioritising local contractors. This opportunity has broadened efforts to achieve our objective of the FCTC Articles 17 and 18. The farmers learned how unprofitable, intensive, dangerous and harming the environment tobacco cultivation can be. This situation served as opportunity to convince and communicate the tobacco farmers on the importance of switching to alternative crops.

Conclusions and key recommendations: The main barriers cited include: tobacco leaves pay more money than

other crops; lack of money to begin farming other crops; lack of seeds, tools, and labour; switching is too risky; and paying back tobacco farming-related loans. The Government should allocate more resources to economically assist tobacco farmers who are considering switching from farming tobacco to other alternative crops or livelihoods. Forms of assistance could include finding ready markets for alternative crops, and providing the seeds, tools, and labour costs for farming alternative crops.

39. PERCEPTIONS AND RISKS OF WATERPIPE, HOOKAH, SHISHA AND GUTKHA

PD-1041-20 Post gutkha ban tobacco industries fight back for survival in India

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Background: There are 207 million smokeless tobacco users in India who use a large variety of smokeless tobacco products which includes khaini, gutkha, zarda, mishri, gudakhu, kimam and mawa etc. In 2012, Indian states banned production, supply and sale of gutkha (a mix of betel nut, tobacco leaves, lime and flavourings) under Food Safety Standard Act; however none of the manufacturing units were shut down in any part of the country. Loopholes in the rules and incomplete notification permitted tobacco companies to carry out their business as usual. The present study was carried by the investigators to know the industries strategy to continue business after the ban.

Design/Methods: The investigators did a formative research on internet, visited the websites of selected 10 gutkha manufacturers. A market survey using a paper based checklist was also carried out across randomly selected 286 tobacco vendors in Shimla city in India in April-May 2014.

Results: Seven manufacturers still displaying the banned product Gutkha in their websites. Besides this, all the 10 websites displayed pan masala (a mix of betel nut and flavourings) and zarda (raw tobacco) of same brand name and package design. Five manufacturers introduced premium packages of existing brands and advertising it with taglines as "The World's Most Expensive Pan Masala" World's No. 1 Pan Masala" etc. One gutkha manufacturer has now entered into bidi manufacturing with same brand name. Gutkha was not found in any of the shop in the market; however, pan masala and zarda of same brand

name and package design as seen in the websites were available in the market; 223 (78%) shops had at least one brand. Pan masala and zarda are marketed and sold together as replacement for gutkha. Users are encouraged to mix the pan masala and zarda and consume as a single dose. Three companies offered zarda free of cost or at discounted prices with the pan masala. Most manufacturers printed a line "this product does not come under Food Safety Act" on retail packages to deceive law enforcers and users.

Conclusion: Gutkha ban is a half way measure for curbing the smokeless tobacco use in India. Tobacco industry has strategically diverted their business into production and marketing of pan masala and zarda which are still legal product under the Act. There is an urgent need to put a blanket ban all forms of smokeless tobacco products in India.

PD-1042-20 Prevalence of hookah consumption in Tehran

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Background: Not much information is available in the literature regarding the prevalence and pattern of hookah consumption in eastern Mediterranean region especially in Iran. But studies conducted in a few Arabic countries in the region indicated the increasing trend of hookah smoking. This present study evaluated the pattern of hookah consumption among males and females residing in Tehran.

Design/Methods: This study was performed during summer of 2011. A total of 1,500 subjects were randomly questioned in 20 main squares of Tehran using a standard questionnaire for hookah consumption. Knowledge of people about the hazards of hookah smoking, hookah consumption by close friends and cigarette smoking were among the questions asked.

Results: Of the understudy subjects, 446 (29.7%) reported hookah smoking and 1,052 (70.1%) did not. The mean age of subjects who mentioned hookah smoking was 25.54 ± 7.9 yrs. Places of hookah consumption were reported to be in ethnic restaurants by 196 (43.9%), home by 126 (28.3%), and parks by 122 (27.4%). In case of prohibition of hookah consumption in public places, 217 (48.7%) stated that they are going to do it at home, 166 (37.2%) said that they would no longer do it. In general, 238 (53.4%) subjects stated that they would decrease their consumption in case of placing a ban on hookah smoking in public places. Pleasure was reported as the reason for hookah smoking by 348 (78%) individuals. The mean monthly expense for hookah consumption was 18 dollars.

Conclusion: Despite the present ban on tobacco consumption in public places, highest rate of hookah smoking still occurs in ethnic restaurants which clearly shows lack of law enforcement.

PD-1043-20 Waterpipe use and risk of smoking susceptibility among never-cigarette smoking youth

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Background: Susceptibility to cigarette smoking, defined as lack of a firm decision to not initiate smoking, predicts youth smoking initiation and experimentation, and is a first step in the transition to regular smoking. In this study, using a cross-sectional study design of adolescents tobacco use in Jordan, we investigated whether waterpipe use, an increasingly prevalent form of alternate tobacco use among Arab adolescents, was associated with increased susceptibility to cigarette smoking.

Design/Methods: Data on tobacco use for never-smoking Jordanian youth were obtained using the 2009 Jordan Global Youth Tobacco Survey. Smoking susceptibility was ascertained using a validated algorithm, and waterpipe use was determined using self-reported measures. Gender-wise weighted logistic regression was conducted to estimate the association of waterpipe use with smoking susceptibility, adjusting for potential confounders including age, and paternal and maternal tobacco use.

Results: A total of 1,476 youth representing a total of 166,593 never-smoking Jordanian youth were included. Approximately 19% and 12% of male and female youth used waterpipe. Approximately 40% and 29% of male and female youth were susceptible to cigarette smoking in aforementioned groups. Never-smoking Jordanian male (adjusted Odds Ratio (OR) = 1.49, 95% Confidence Interval (CI) = 1.41-1.54) and female (adjusted OR 1.95, 95% CI = 1.83-2.04) youth who used waterpipe had increased relative odds of smoking susceptibility than those who never used.

Conclusion: This is the first study to report that waterpipe use may increase youth susceptibility to initiate cigarette smoking. Study findings help identify novel risk factors for smoking initiation and help develop interventions and policies around waterpipe use to protect never-smoking youth from smoking their first cigarette.

PD-1044-20 Sheesha smoking status, knowledge, perceptions about health risks associated with sheesha smoking with university setting

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Background: The prevalence of smoking among Malaysian adults aged 15 and above has increased from 21% in 1985 to 31% in 2000, 49% of all adult males and 5% of all adult females are smokers currently. Annually about 10,000 deaths are attributed to smoking related diseases in Malaysia. Most of the research is focused on hazards of cigarette smoking, however increased use of sheesha is not receiving same attention. Sheesha smoking has become a fashionable activity, which is widely available across the country at a cheaper price compared to cigarettes. With an increased influx of Middle Eastern students the prevalence of sheesha consumption is set to increase, especially among university students. The authors aim to study the sheesha smoking status, perceptions, knowledge and awareness about the associated health risks with sheesha smoking in a Malaysian university setting.

Design/Methods: A validated questionnaire was administered to 37 subjects who agreed to participate in the study. Subjects were explained about the purpose of the study and informed consent was taken from the subjects who agreed to participate in the study. Simple quantitative analysis was done

Results: Out of 37 subjects which included staff and students of the university, 25 were females and 12 were males. Among the subjects, 24.3% were using sheesha regularly, whereas 33.3 % were occasional users. Among those who smoked sheesha regularly 66% were doing so for the past 7.67 years (average). All regular users, smoked with friends for sessions which extended for 1-3 hours. They also shared the smoking tube with their friends. Many of the participants in the study were aware of the harmful effects of sheesha on oral health(75.7%), lung and respiratory health(100%) and cardiovascular health(81%). Around 40% were unaware of the fact that sheesha smoke also contains charcoal smoke and carbon monoxide. Majority (54.5%) agreed the government should make regulatory laws about sheesha smoking in public places.

Conclusion: In this pilot study a sizable section of the university students were sheesha smokers. A worrying fact was unawareness of presence of charcoal smoke and carbon monoxide in the sheesha smoke. Studies with larger sample size could be used as evidence while framing anti-tobacco laws against consumption of sheesha and unregulated sale of sheesha.

PD-1045-20 Shisha smoking centers in Kuala Lumpur: an observational study

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Background: The World Health Organization in 2010 had concluded that shisha smoking and second hand smoke from shisha is not safe for both the smokers and non-smokers. Shisha smoking has become a rage in Malaysian restaurants, mindless of the ban imposed on the sale and consumption of shisha by the country's religious council. Presently the anti-tobacco laws in the country do not address the sale and consumption of shisha. This has led to mushrooming of shisha lounges/bars especially around the educational institutions. This study aims to determine the environment, culture and usage in shisha lounges/bars and possible reasons for sudden popularity of shisha smoking in Malaysia.

Design/Methods: Observers visited 41 restaurants providing shisha smoking services for their customers. Observations on operating times of shisha, number of units available for rent, rental price, seating capacity, ventilation facilities, reasons behind offering shisha rental services and age group of customers utilizing the services were recorded.

Results: Most of the shops were having a seating capacity range from 61-100 seats. Restaurants own 4-30 units of shisha for rental and most of them offer shisha from 8.00 pm to 2.00 am. Rental for each unit is charged as cheap as 1.9 to 6.3 USD. Most of the restaurants have added these as an additional business while some are offering it as their main business. Most of the restaurants offer shisha services in semi closed/high roof or open air while few were in closed places with no additional ventilation system to extract smoke. Most of the shops used online social media to advertise their shisha lounges/bars and young students were utilizing these services.

Conclusion: The existing restaurants are including shisha in their menu list, not be left behind by their competitors and were operated more around the universities, targeting students. The shisha shops are open more in the evening time and marketed aggressively on social media.

PD-1046-20 Pattern and factors associated with waterpipe use among Qassim University students

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Background: Waterpipe (Shisha) smoking is a popular practice amongst young adults in the Middle East countries including the kingdom of Saudi Arabia. The purpose

of this study was to determine the rate, pattern and associated factors of water pipe smoking among Qassim University Students.

Design/Methods: A cross – sectional study was conducted among Qassim University Students both male & female during 2013 (n = 323). Survey monkey was used for administering questionnaire and data analysis.

Results: Current smoker constituted 19.20 % and ex-smokers represented 8.36 %. The rate of current waterpipe use was 16.7% and 14.24% were ex-users. Of the regular waterpipe smokers, 49.35% smoked it on daily basis, 15.58% weekly, 9.09% every two weeks, and 25.97% monthly. Of the total students, 29.05% stated that waterpipe smoking is less harmful than cigarettes, 56.67% (is less addictive than cigarette smoking) and 88.57% believed that harmful substances were purified through water filtration. Attitudes associated with Waterpipe smoking include; water pipe use is accepted by the society compared to cigarettes (50.95%), smoking of waterpipe can relieve stress & tensions (34.3%) and Waterpipe smoking is a sign of maturity (6.2%).

Conclusion: This study identified the rate, pattern and the factors associated with waterpipe use among students in Qassim University. The perceived social acceptability and the law knowledge about its health effects are among such factors that encourage the use of waterpipe (shisha) among university students.

PD-1047-20 Waterpipe tobacco smoking among university students in the Western Cape Province of South Africa

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Background: The aim of this study was to determine the prevalence rates of current and ever waterpipe use and to investigate the associated correlates, in particular perceptions and beliefs about waterpipe's adverse health and its social acceptability. Where appropriate, the study compares waterpipe use with cigarette smoking.

Design/Methods: An online, anonymous, cross-sectional survey was administered via email to all students at the four residential universities within the Western Cape Province of South Africa during September 2013. 4578 students completed the survey (4.3% response rate).

Results: 10.6% [n=484/4578] of the sample were current waterpipe users (used waterpipe in the past 30 days) whilst 67.1% [n=3101] were ever waterpipe users. 61.1% of current smokers smoked waterpipe to socialize. Less than 1% of waterpipe smokers smoked alone. The majority of waterpipe smokers thought waterpipe use was less harmful, less addictive and more accessible than cigarette smoking. 96.1% [n=465/484] of current users felt waterpipe was socially acceptable compared to 69.9% [n=1862] of non-smokers. Factors significantly associated with increased odds of being a current waterpipe smoker were: mixed-race ethnicity, increased quantity of alcohol drunk

per drinking day, increased frequency of binge drinking and the perception that waterpipe was not difficult to quit. More than half of current waterpipe smokers were not current cigarette users [n=273/484].

Conclusion: Waterpipe smoking is widely used among students of both genders, all ages, all physical activity levels and all socio-economic backgrounds, more than cigarette smoking. This is probably due to the lack of knowledge about the health risks of waterpipe, the taste of the flavoured sweetened tobacco and the social acceptability of waterpipe. Waterpipe use, much more than cigarette smoking, is perceived as a social activity. Whilst there is some overlap between current cigarette and waterpipe users, waterpipe users are distinct from cigarette users.

PD-1048-20 Public campaign against waterpipe tobacco smoking in Turkey

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Background and challenges to implementation: In Turkey, the prevalence of tobacco consumption as narghile (water-pipe) smoking has significantly increased especially among young people recently. In 2014 April, Turkey has launched an public ad campaign against waterpipe tobacco smoking. The purpose of the campaign is to create awareness about the risks and health effects of waterpipe smoking.

Intervention or response: Prior to the ad campaign, two surveys were carried out: a qualitative survey aiming to test and develop the public ad concepts (each ad concept focusing on a different aspect of waterpipe smoking – sharing, flavor and myths about waterpipe smoking) and a pre-campaign quantitative survey aiming to understand the perception toward waterpipe smoking and to measure the attitude about the key messages of the campaign. Qualitative survey was conducted in March 2013; six focus groups among women and men, aged between 18-44, were held in Istanbul.

Pre-campaign quantitative survey was conducted in-person household survey method to reach samples of “frequent – 2 times or more frequently in a month- water-pipe smokers”, “cigarette smokers” and “tobacco non-users” in Turkey aged 18 – 64 years (Total sample size= 1,282). The campaign messages and materials have been developed based on quantitative ad qualitative survey results. All campaign ads are tested using focus groups. We developed 4 TV and Radio spots and outdoor materials. We have started to air our first ad in April 2014. After airing all ads we will conduct a post campaign evaluation to measure impact of the campaign. (The original campaign materials are Turkish but we also produced English, Arabic and French version of the TV spots. Since it is a growing public health issue globally, we want to share our materials with other countries without expecting copy write fees.)

Results and lessons learnt: The results of pre-campaign quantitative survey mainly showed that the awareness about the health effects of waterpipe smoking is not as

high as those of cigarette smoking. The awareness about the negative health effects of smoking waterpipe is low. At least one third of people believe at the myths about smoking waterpipe.

Conclusions and key recommendations: To protect the public from the potential dangers of the growing waterpipe trend, the tobacco control community must work to correct the current misperceptions about the health risks of waterpipe smoking.

PD-1049-20 National prevalence of waterpipe tobacco smoking in the United States

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Background: Waterpipe tobacco smoking (WTS) is a growing trend that has been shown to have harmful health effects similar to cigarettes. The objective of this study was to report prevalence and correlates of WTS use among U.S. adults.

Design/Methods: Data from the 2009-2010 National Adult Tobacco Survey, a nationally representative sample of U.S. adults. National estimates of WTS ever and current use were reported overall, and by sex, age, race/ethnicity, educational attainment, annual household income, sexual orientation, and cigarette smoking status. State-level prevalence rates of ever WTS use were reported using choropleth thematic maps for the overall population and by sex.

Results: The national prevalence of WTS ever use was 9.8% (state range: 3.0%-17.3%) and 1.5% for current use. WTS ever use was more prevalent among those who are male, 18-24 years old compared to older adults, non-Hispanic White compared to non-Hispanic Black, with some college education compared to no high school diploma, and reporting sexual minority status compared to heterosexuals. The highest prevalence rates were reported in the District of Columbia (17.3%), Nevada (15.8%), California (15.5%), Colorado (14.0%), and New Mexico (13.4%).

Conclusion: WTS use appears to be rising and highest in US regions where cigarette smoking prevalence is lowest and smoke-free policies have a longer history. To reduce its use, WTS should be included in smoke-free regulations and state and federal regulators should consider policy development in other areas, including taxes, labeling and distribution.

PD-1050-20 Using internet query surveillance to track the popularity of waterpipe tobacco smoking in the United States

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Background: Waterpipe tobacco smoking (WTS), a traditional tobacco consumption practice in the Middle East, is gaining popularity worldwide. Estimates of population-level interest in WTS over time are not documented. We assessed the popularity of WTS using World Wide Web search query results across four English-speaking countries.

Design/Methods: We analyzed trends in Google search queries related to WTS, comparing these trends with those for electronic cigarettes between 2004 and 2013 in Australia, Canada, the United Kingdom, and the United States. Weekly search volumes were reported as percentages relative to the week with the highest volume of searches.

Results: Web-based searches for WTS have increased steadily since 2004 in all four countries. Search volume for WTS was higher than for e-cigarettes in three of the four nations, with the highest volume in the US. Online searches were primarily targeted at WTS products for home use, followed by searches for WTS cafés/lounges.

Conclusion: Online demand for information on WTS-related products and venues is large and increasing. Given the rise in WTS popularity, increasing evidence of exposure-related harms, and relatively lax government regulation, WTS is a serious public health concern and could reach epidemic levels in Western societies.

PD-1051-20 Customers eat and smoke -They kill two birds with one stone: business operators perceptions of the economic environment and health effects of hookah

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Background: Hookah service businesses such as restaurants and cafes provide ready to use hookah directly to consumers. They are widespread in the Middle East and growing in NYC. Yet the operations and economics of these businesses are poorly understood. We conducted a qualitative study to describe the economic environment of the hookah businesses and attitudes regarding hookah related health effects expressed by operators in New York City, Abu Dhabi, and Dubai.

Design/Methods: We identified hookah bars using Yelp and Google Places. We approached a random sample of businesses identified, as well additional businesses noted nearby businesses visited. We approached 128 businesses but 31 declined to be interviewed, with the most common reason for refusal being too busy. Interviews were conducted with owners or managers and each interview lasted 15-30 minutes. We included questions on the business model, regulatory environment, and health effects. Interviews were recorded and transcribed. Interview transcripts and field notes were coded and analyzed for themes using Dedoose software.

Results: We completed interviews with 97 businesses (NYC 32, Abu Dhabi 33, Dubai 32). Owners and managers saw hookah primarily generating patronage or profits for their business (“If no shisha, no revenue because shisha is low cost.”). In NYC, violations of age restrictions and product regulation were reported. (“I know some places let in under 18 costumers and charge a per head fee to smoke.”). In Abu Dhabi and Dubai, operators had difficulty describing their regulatory obligations and reported violations of licensing requirements secondary to high cost (“Um, there’s no regulation regarding Shisha, just the location and time.”). Operators’ views on addiction and health risks showed stark contrast with operators reporting effects comparable to cigarettes or reporting little harm at all (“No real harm if it is not smoked in excess.”). Operators consistently minimized concern over second hand smoke exposure. (“Air vent system prevents smoke in room, so not concerned.”)

Conclusion: Many operators see hookah playing an important role in their business. Within NYC, better enforcement of the age restriction and the nicotine free requirement are needed. Within Abu Dhabi and Dubai, the adherence to current and coming hookah regulations may be impacted by regulatory complexity and poor knowledge among operators. Operators minimize the health risks associated with hookah use.

PD-1052-20 Perceptions of harm from cigarette and shisha smoking among youth in the Gulf Cooperation Council countries

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Background Smoking tobacco from shisha has increased among youth in the Gulf Cooperation Council (GCC) countries in recent years. Research suggests that perceptions of harm from tobacco use are related to youth choice of tobacco products. This study investigates how perceptions of harm differ for cigarettes and shisha and how that may help explain differences in smoking cigarette and shisha smoking among youth in five GCC countries: Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates.

Design/Methods: We used nationally representative data from the Global Youth Tobacco Survey (GYTS) for students aged 13 to 15 in five GCC countries. For each coun-

try, we analyzed publicly available data from the most recent survey year with information about cigarette and shisha use. GYTS asks youth whether they think cigarette and shisha smoking are harmful to health with possible responses of “definitely yes,” “probably yes,” “probably not,” or “definitely not.” We defined two harm perception binary variables to indicate that youth believed that smoking cigarettes/shisha was probably or definitely not harmful. Current cigarette and shisha smoking are defined as smoking on at least 1 of the past 30 days. We then constructed three binary outcomes for smoking cigarettes only, smoking shisha only, and smoking both. We estimated country-level prevalence of cigarette and shisha smoking and perceptions of harm. We used pooled data for the five countries and applied three logistic regression models (one model for each outcome) to examine the association between each outcome and perceptions of harm. The models controlled for individual-level age, gender, and tobacco exposure from parents and for country-level fixed effects.

Results: The prevalence estimates of youth shisha smoking in the five GCC countries ranged from 1.5% to 11.8% and were close to the prevalence estimates of cigarette smoking (1.8% to 12.2%). Except in Oman, greater percentage of youth perceived that smoking shisha is not harmful compared to the percentage of youth who thought so about cigarette smoking. Regression results show that youth that think shisha smoking is not harmful, are 9 times more likely to smoke both shisha and cigarettes than youth who don't think so.

Conclusion: Misperceptions of harm for shisha use can contribute to increasing shisha use among youth who

smoke cigarettes in the GCC countries. This suggests that those youth may be more addicted, and suffer more harm from tobacco use.

PD-1053-20 Risk of shisha smoking: hard hitting and yet highly effective campaign

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Background and challenges to implementation:

Throughout England, smoking the water pipe shisha has become a trendy pursuit for the young. It is usually shared between friends and is seen to be an enjoyable and relaxing experience. However, many are unaware of the amount of smoke inhaled during a typical one-hour shisha session

Intervention or response: Developed a series of simple posters & leaflets. This campaign based on a simple, but powerful message ‘Are you a 100-a-day smoker’ was launched across key Towns and Cities in the UK to a target audience of 3 million (Berkshire, Buckinghamshire, Cumbria, West Sussex, South London and Portsmouth)

Results and lessons learnt: The poster featured a simple design of a shisha pipe in the shape of 100 cigarettes. Highly positive response, undertook feedback based on interviewing approx. 700 users. 85% were unaware of the risks of using shisha

Conclusions and key recommendations: This campaign has been proven to be highly effective and can be used in other countries, we are happy to share the posters as best practice with any area.

40. SUSTAINABLE FUNDING: NEEDS AND MECHANISMS

PD-1054-20 A union's approach to supporting members to quit smoking: the challenges and lessons learned from a pilot programme

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Background and challenges to implementation: Compared to other industries, workers in the electrical industry are at a greater risk of poor health, due to high rates of smoking, obesity, alcohol intake and psychological distress. Implementing health and wellbeing programs in the workplace provides many benefits. These include a reduction in chronic illness and premature deaths; improved morale and relationships; increased productivity and work fulfilment; reduced presenteeism, absenteeism and compensation claims. The challenges however are engaging members to view their health and wellbeing as a

priority and motivating them to take action to improve their health.

Intervention or response: With very high smoking rates within the industry, and with 20,000 members across Victoria, a partnership was formed with the Electrical Trades Union (ETU) Victoria. As a pilot, two quit smoking workshops were offered to raise awareness and encourage members to quit. As a gesture of support, the ETU offered the workshops free of charge, after hours and with refreshments. To encourage participation, the sessions were promoted on Facebook and in the ETU's magazine. Information included understanding smoking behaviour; quitting medications; managing relapse and practical tips.

Results and lessons learnt: Due to a lack of enrolments, the first workshop was cancelled. The second workshop was attended by 2 members, and upon their request, the session proceeded. Despite the small numbers, the workshop was well received. Both participants rated the session as excellent and found the information extremely useful. They provided feedback that they would attend a group program on a weekly basis if it was offered in the future. The workshop presenter surmised a number of reasons

for the lack of interest and surveyed members to understand what their wants and needs are more fully, as well as what health and wellbeing topics in general interest them. Training Shop Stewards as 'Smoking Cessation Champions' was also raised to reinforce the message onsite.

Conclusions and key recommendations: With most risk factors for poor health preventable, wellbeing programs in the workplace provide a significant return on investment. Quitting not only benefits electrical industry employees, but their families, workmates and employers. Having trade union support is the first step in engaging members to address their smoking. Further work is underway to understand this cohort's information and support needs.

PD-1055-20 'No one size fits all': developing a viable funding model for sustainable tobacco control

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Background and challenges: Securing sustainable resources for tobacco control is critical but challenging globally. Fully implementing the WHO FCTC requires a dedicated long term and secure funding base, and accompanying investment in building capacity to undertake tobacco control. This is particularly challenging for low to middle income countries, and while international and philanthropic funding has helped to galvanise their tobacco control efforts, more sustainable models for tobacco control are needed. A viable solution for even the poorest of nations is to increase tobacco taxes and apply these funds to tobacco control programs and capacity building initiatives. In a number of countries this has entailed creating a semi-autonomous organisation (often called a foundation) to administer the taxes raised and direct these towards effective tobacco control. There is no 'one size fits all' template to follow however, as such organisations need to take into account a nation's existing tobacco control capacity and adapt to its economic, social and political context. Response: Although foundations vary in name, size, structure and activity, there are common characteristics, challenges and critical success factors that can be distilled. History shows that there are also some common political or tobacco industry impediments but the experiences of other countries in anticipating and countering these offer valuable insights. With increasing global focus on the collective burden of non-communicable diseases (NCDs), some foundations have tackled a broader range of priority health issues alongside tobacco, or derived other revenue from the taxing of alcohol or unhealthy food or beverages.

Lessons learnt: There is a growing global repertoire of variations to a foundation type approach, including an increasing number in low to middle income countries. Reviewing these shared experiences and lessons learnt offers insights for countries wishing to secure a more sustainable base for tobacco control.

Conclusions: Tobacco control activity and effectiveness is vulnerable if financially dependent on short-term grants, be they from government, philanthropic or other sources. Diverting tobacco taxes to establish a dedicated organisation to implement comprehensive tobacco control programs provides a viable long term solution that can be adapted to suit the circumstances of individual countries.

PD-1056-20 Establishing a fund for sustainable tobacco control insights from the Vietnam experience

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Background and challenges: Increasing tobacco taxes to reduce consumption is a widely applied strategy in tobacco control, but the 'double win' comes when the increased tax revenue is channelled into an organisation dedicated to reducing tobacco use and related harms. This double-win has been achieved in Vietnam, with the passage of its first comprehensive tobacco law by the National Assembly in 2012 and the establishment in early 2014 of the Vietnam Tobacco Control Fund (VNTCF). Establishing such an organisation from scratch is a significant task, and while there are examples of successful Health Promotion Foundations around the world, there is no 'one size fits all' model. Vietnam has had to tailor the objectives, structure and funding and operational mechanisms of the VNTCF to the Vietnamese political, cultural, fiscal and geographical context.

Response: There was a tight timeline to get the VNTCF up and running, but also a strong requirement to comply with government protocols. This required developing a raft of supporting regulations, policies, committees and guidelines prior to staff being appointed and funds allocated. Other key start-up tasks included developing a strategic plan for the VNTCF, ensuring that it complements the national tobacco control strategy and the WHO FCTC. This is mirrored by a comprehensive monitoring and evaluation plan – having this in place from the outset is critical for demonstrating the direct and indirect impact of the VNTCF on tobacco control. One of the challenges for developing countries such as Vietnam is how to prioritise the new injection of funds for tobacco control: the VNTCF has been pragmatic in targeting a few priority areas for initial grant funding (with a budget of approx. \$7 million US from tobacco tax revenue till now). The preparatory work to rapidly set up the VNTCF has been undertaken by a small team within the Ministry of Health, with some advisory support provided by The Union. **Lessons learnt:** Many of the experiences, challenges and lessons learnt from Vietnam may be relevant to other countries that are considering ways to direct tobacco taxes into a sustainable model for funding and building tobacco control capacity.

Conclusions: Whilst some of the characteristics of the VNTCF are uniquely tailored to the Vietnamese context,

there is a degree of universality in the broader principles and processes entailed in ensuring that such an organisation reflects and is responsive to local context.

PD-1057-20 Sustainable funding for tobacco control in Bangladesh: implications of recent budgetary measures

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Background and challenges to implementation: The tobacco control program in Bangladesh has been largely dependent on foreign funding with almost no funding from the government's own budget. However, due to continuous advocacy and lobbying by the tobacco control groups, a number of recent developments have created sustainable funding opportunities for implementing tobacco control programs, particularly the tobacco control law, both at the national level and the local level.

Intervention or response: The tobacco control groups in Bangladesh advocated strongly for dedicated government resources for tobacco control, particularly for implementing the tobacco control law, originally enacted in 2005 and improved through amendments in 2013. Advocacies were done with the national government as well as the local governments, which are mainly city corporations or municipalities. A dedicated health tax was demanded in the national budget for funding tobacco control programs. The demand was raised through the Ministry of Health, Parliament Members and renowned economists along with the tobacco control groups. Simultaneously, at the sub-national level, the tobacco control NGOs worked with local governments to adopt smoke-free guidelines in light with the tobacco control law and then to allocate budget for implementing the guidelines. The tobacco control groups also demanded dedicated government resources for the National Tobacco Control Cell, which was dependant solely on donor funding.

Results and lessons learnt: A number of budgetary measures by the central and local governments this year created opportunities for sustainable government funding for tobacco control. 1) The government for the first time has appointed a full time Coordinator of the National Tobacco Control Cell to be salaried by the revenue budget of the government. 2) A 1% health service charge has been imposed for the first time on all tobacco products to fund public health programs including tobacco control. 3) A number of local governments have allocated budget for the first time specifically for implementation of smoke-free guidelines that they adopted earlier.

Conclusions and key recommendations: The recent budgetary measures of the central and local governments of Bangladesh have created excellent opportunities for ensuring sustainable funding for tobacco control. Continued advocacy is the key to ensure that the funding is effectively utilized for tobacco control programs of the country.

PD-1058-20 Multi-sectoral cooperation and collaboration for tobacco control

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Background and challenges to implementation: When the WHO Framework Convention on Tobacco Control (FCTC) was negotiated more than 10 years ago, it was well understood that a whole-of-government approach to tobacco control, involving many ministries besides Health, would be critical to addressing the tobacco epidemic. But establishing effective multi-sectoral coordination for tobacco control has been a challenge.

Intervention or response: To date, only a few governments have succeeded in mobilizing whole-of-government support for tobacco control. Luckily, initial steps have been taken to address this serious gap in FCTC implementation. The FCTC working group on sustainable measures to strengthen implementation of the Convention was established in 2012 to identify new tools to support Parties in implementing Article 5.2 of the WHO FCTC. At the same time, the United Nations Development Programme (UNDP) was mandated to strengthen national capacity, leadership, governance, multi-sectoral action and partnerships to accelerate implementation of the Convention.

Results and lessons learnt: Civil society has proposed a number of options to build whole-of-government support for tobacco control, and pilot projects are being implemented in three Latin American countries. We have also urged the FCTC working group to undertake a mapping exercise to identify best practices in implementing Article 5.2. The UNDP and the FCTC Secretariat are currently undertaking initial steps to map the status of implementation in order to develop practical tools for multi-sectoral action and coordination on tobacco control.

Conclusions and key recommendations: Establishing multi-sectoral cooperation and collaboration for tobacco control is challenging. Further work to develop guidance for Parties on best practices is essential. This guidance will need to be accompanied with sufficient political will and technical assistance from international partners.

PD-1059-20 Strengthening national tobacco control programme to reduce non-communicable diseases (NCDs): Myanmar experience and the way forward

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Background and challenges to implementation: Cardiovascular disease, Diabetes mellitus, Cancer and Chronic Respiratory Disorders are identified as major NCDs in Myanmar. NCDs are estimated to account for 40% of all deaths in Myanmar. National STEP survey (2009) reported that the prevalence of current smokers was 33.6% in males and 6.1% in females and tobacco use is the leading risk factor for NCDs. Comprehensive national policy and plan for the prevention and control of major NCDs has already been developed since 2012.

Intervention or response: The National Tobacco Control Committee was formed in March 2002. Myanmar had signed the WHO FCTC in October 2003 and ratified in April, 2004. The Control of Smoking and Consumption of Tobacco Product Law was adopted on 4th May, 2006. In accordance with new administrative structure, the National Tobacco Control Committee was reformed in January 2011. The Committee set guidelines for the tobacco control measures to be implemented in the country in line with WHO FCTC provisions and comprehensive national policy and plan for the prevention and control of major NCDs.

Results and lessons learnt: Myanmar has already integrated tobacco control activities into all relevant health plans such as National Health Plan (2011-2016) and National Comprehensive Development Plan-Health Sector (2011-2030). A Tobacco Control Section under Public Health Division and tobacco control teams at national and sub-national level have been established. In 2012, Cigarette taxes in Myanmar are levied at 100% (commercial tax) of taxable turnover. The Ministry of Health has already done to amend the Smoke-free regulation ensuring 100% smoke free indoor in March 2014. Measures are underway to enforce regulations for the health warnings to be rotating, pictorial as well as textual and to be displayed taking at least 90% of the front of cigarette packages. Continued support and close collaboration from WHO and other partners are essential in the struggle against the NCD and tobacco epidemic.

Conclusions and key recommendations: Myanmar needs to set in place mechanisms to strengthen the implementation and enforcement of the existing tobacco control law and to develop new regulations that are needed on key tobacco control policies to bring them in line with WHO FCTC provisions and comprehensive national policy and plan for the prevention and control of major NCDs.

PD-1061-20 NIH tobacco or health research and capacity building grant programme review

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Background: Tobacco use represents one of the most significant threats to global health. To meet this challenge, the National Institutes of Health, Fogarty International Center (FIC), and its partnering Institutions at NIH, established the International Tobacco and Health Research and Capacity Building Program (TOBAC). The program has sought to encourage trans-disciplinary research in tobacco control, increase collaborations between investigators in the U.S. and researchers and institutions in low- and middle-income countries (LMICs), and strengthen research capacity for tobacco control research.

Design/Methods: After 10 years of investing in tobacco control projects, FIC conducted a review of the program, and identified outputs, outcomes and impacts. Data for analysis came from NIH databases including: NIH REPORT, eSPA, MEDLINE, SPIRES+, IMPAC II and QVR. Trainee, capacity building, publications, research, collaborations, and policy impact data were extracted from individual annual progress reports and final reports, submitted to NIH between 2002 and 2011.

Results: The review found that the TOBAC program has produced scientific collaborations in tobacco control research in over 30 countries. The projects have resulted in the publication of more than 400 peer-reviewed articles. More than 3,500 individuals have been trained in tobacco control research through long-term mentorship, workshop support and/or short courses. Of those trained more than 100 were PhD and Masters level. TOBAC projects have successfully provided empirical evidence on almost all articles of the Framework Convention on Tobacco Control, the first public health treaty ever negotiated under the auspices of WHO. TOBAC projects have generated evidence that has informed policy in LMICs, such as smoke-free spaces, taxes on tobacco products, cessation interventions and tobacco industry advertising.

Conclusion: The success of the projects funded demonstrates the ability of a relatively small number of research grants to advance tobacco control efforts on an international scale.

PD-1062-20 Framing health inequalities: transnational tobacco companies and the social determinants of health

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Background: Health inequalities are increasingly prominent on national and international policy agendas, with tobacco use making a significant contribution to these

inequalities. We examined how the tobacco industry has engaged with inequalities in smoking and health in different policy contexts.

Methods Analysis of submissions from transnational cigarette producers to public consultation processes in the UK, New Zealand and Australia, including consultations with and without an explicit focus on health inequalities.

Results Tobacco companies typically frame smoking as a matter of individual choice, thus downplaying the role of industry marketing and social norms. In a UK consultation focused on health inequalities, industry submissions appropriated the language of health inequalities and the social determinants of health in order to oppose specific tobacco control interventions including tobacco taxation, denormalisation of smoking and cessation support. In contrast, industry submissions in Australia and New Zealand ignored the social determinants of health and reverted to a familiar neoliberal framing; inequalities were presented as justification for targeted education campaigns and avoidance of measures such as taxation and plain packaging.

Conclusion Tobacco companies use the concept of health inequalities to strategically oppose regulation, adopting different framings of inequalities to fit specific policy contexts. In co-opting and misrepresenting a social determinants model, tobacco companies appropriated a powerful public health discourse in an attempt to create a false dichotomy between the reduction of inequalities and regulation of the tobacco market. This framing is in direct contrast with the industry's historical reliance on neoliberal arguments and employment of marketing strategies that target lower socioeconomic groups.

PD-1063-20 Examining participation in the WHO Framework Convention on Tobacco Control and the strength of national tobacco control policies

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Background: The WHO Framework Convention on Tobacco Control (FCTC) offers an unprecedented opportunity for global health. Advancing tobacco control in developing countries is dependent on resources, which are also needed to enable effective participation in FCTC governance. To explore the significance of levels of participation, this study examines the extent to which this correlates with the strength of national tobacco control policies.

Methods: We examined participation in FCTC governance based on records from the first five meetings of the Conference of the Parties (COP), comparing representation across income levels and WHO regions. Data from the 2011 MPOWER report on the global tobacco epidemic were used to develop three markers of tobacco control strength: taxation level, smoke-free coverage and marketing bans. A composite measure of tobacco control strength, combining taxation, smoke-free coverage and marketing bans, was also developed.

Results: Nations with weaker tobacco control were found to be consistently under-represented within FCTC governing bodies. Countries within this group were more commonly represented by single-person delegations, and constituted the majority of absent parties in all twelve meetings. Conversely, nations with strong implementation were comparatively over-represented within these decision-making fora.

Conclusion: Nations facing the greatest challenges in effectively implementing the FCTC also face significant barriers to effective participation within its governance. Supporting their participation – particularly in the context of declining overall participation – is imperative if the decision-making processes of the FCTC are to be responsive to the most pressing challenges confronting global tobacco control.

41. GROWING AND MOBILISING CIVIL SOCIETY

PD-1064-20 Civil society strategies to promote the regulation of the National Tobacco Control Law in Argentina

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Background and challenges to implementation: In June 2011, Argentina enacted the National Tobacco Control Law. The term granted by the law for its regulation expired in December 2011, an obstacle for its full enforcement and control. The civil society deployed a series of strategies to promote the law's regulation.

Intervention or response: The civil society organizations deployed legal and communication strategies to promote the regulation's approval and to counter the tobacco industry's interference with the National Tobacco Control Law. The legal actions consisted in the submission of nine requests for public information to access the regulation

file, and the presentation of a dictum in accordance with international standards to support 100% smoke-free environments policies, thus responding a dictum filed by National Lottery (the body that regulates games of chance in Argentina) asking for exemptions to the regulation and for the establishment of smoking areas in gambling places. Communication actions in the print and digital media were carried out to give visibility to the process and raise awareness about the need to regulate the law.

Results and lessons learnt: The dictum filed by National Lottery was overruled. In turn, the civil society's dictum was passed, favouring the 100% SFEs law. Communication strategies achieved the publication of over 130 press articles and more than 2000 signatures for the law's regulation. As a result, in May 2013 law's regulation was finally approved. Its main measures are: the creation of a National Committee for Tobacco Control Coordination (with governmental and civil society representatives), measures to monitor law's enforcement, restrictions to marketing actions in points of sale and mechanisms for complaints before breaches to the law.

Conclusions and key recommendations: The implementation of an integral strategy of legal and communication actions by tobacco control organizations was effective to promote the law's regulation. Requests for public access information were useful to monitor the whole process and counter the interference by the tobacco industry and its front groups. Communication actions helped give visibility to the situation, inform the public and sensitize decision makers.

PD-1065-20 Government and civil society collaboration on smoke-free environment: model from Satkhira district

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Background and challenges to implementation: Satkhira is south-west district of Bangladesh, west side is surrounded by boarder area with India and south and south-east side is surrounded by Sundarban's (largest mangrove forest in world) part also placed this district. It is often difficult to ensure central governmental initiatives at district level; including implementation of tobacco control law at district level. Its needs further intervention, public support or people engagement for implementation of the tobacco control law in this district. Manab Kolyan Sangstha (MKS) is member of Bangladesh Anti Tobacco Alliance (BATA) and district task-force for tobacco control law implementation headed by deputy commissioner (DC, head of district administration) and civil surgeon (CS, head of district health department).

Intervention or response: Through this task force, MKS has scope to work with government officials closely and created strong collaboration between government and activist. MKS monitor tobacco control law including smoke free public places and public transports and illegal advertisement, promotions and sponsorship of tobacco products. This monitoring report we also provided to government authority with the request to take action against law violation. At the same time MKS also provided information to government officials for making their offices smoke free. MKS also appreciates government officials for their initiatives on tobacco control law implementation. Providing monitoring report, encouraging and appreciating government officials created a positive atmosphere at this district on tobacco control law implementation.

Results and lessons learnt: As result of government and civil society collaboration, MKS and government continues and combined effort on tobacco control initiatives. Civil surgeon (CS) declared his offices, all government and non-government hospitals, private hospitals and all other offices under his jurisdiction is 100% smoke free. This includes 8 government (8,200 daily visitors) and 5 private hospitals (2000 daily visitors), 214 community (14,000 daily visitors) and 71 private clinics (10500 daily visitors).

Conclusions and key recommendations: Through this success, the lesson is that, government and civil society collaboration would play vital role on tobacco control implementation. This example can use any developing nations in world.

PD-1066-20 ACT work before the judicialisation of TC policies in Brazil

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All public policies for tobacco control (TC) considered effective and in accordance to FCTC are under judicialisation in Brazil by the tobacco industry (TI) and its allies, such as unions. There are six constitutional challenges before the Supreme Court, and several other lawsuits against measures like pictorial health warnings; advertisement ban; addictives ban and local smoke-free laws. Alliance for the Control of Tobacco Use – ACT, a Brazilian non-governmental organization, has been working in the legal field for the defense of the TC policies to contribute to the work of judges and legal practitioners to realize the rights to health, dignity and life. In addition to presenting amicus curiae briefs in lawsuits, ACT encourages entities from the health, consumer and worker protection field to do so. ACT maintains contact with members of the Public Prosecutor (MP) and Government Attorneys (AGU) to provide information and legal publications about the subject, contributing with their legal opinions. ACT has hired renowned jurists for legal opinions about topics under judicialisation, and has coordinated legal publications, such as book about second-hand smoke in workplace, the civil liability of TI, working conditions in tobacco growing and the constitutionality of advertisement ban. ACT issued

a publication translated into Portuguese with the main parts of judge Kessler decision that condemned tobacco companies under the Racketeer Influenced and Corrupt Organizations Act. ACT is one of the co-authors of the publication coordinated by the Brazilian Medical Association that provides tobacco consumption information and guidelines to legal practitioners. ACT maintains a web forum of Law and TC, with more than 50 legal practitioners. Updating and contacting the current and new members is a way to coalition for articles, books, lectures, study groups, focusing to create and strength a legal doctrine on the subject, and disseminating the issue in the legal field. There is no final decision yet regarding validation of TC policies in Brazil. However there are already positive results due to ACT work, such as legal opinions presented in constitutional challenges by MP and AGU in favor of TC policies, and articles published in legal bulletins by partners. Thus, ACT work contributes to create a favorable context for judicial decisions validating TC policies.

PD-1067-20 #dortmundkills: we take down big tobacco, one petition at a time

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Background and challenges to implementation: Tobacco industry uses trade fairs to exchange experiences about cigarette manufacturing, innovation and marketing, and engage in strategic planning which serves to undermine tobacco control. These exhibitions are usually international events and internationally organized (e.g. by companies from Germany or the United Kingdom). One of those trade fairs was the Inter-tabac ASIA 2014 that was organized by the German city of Dortmund and supposed to take place in Bali, Indonesia. The organizers called Asia „tobacco friendly“ and therefore outstanding in terms of market opportunities. But the Inter-tabac ASIA was cancelled in February 2014 because of advocacy by us, the international tobacco control community.

Intervention or response: The #dortmundkills campaign which led to the cancellation of the Inter-tabac ASIA was based on an online petition that was supported by a variety of other actions: advocacy, social media protest, international networking and media awareness in Indonesia and Germany. More than 12,000 people signed the petition that was initiated by two youth activists from Indonesia (Yosef Rabindanata Nugraha) and Germany (Max Vollmer). Yosef Rabindanata Nugraha and other Indonesian tobacco control advocates organized several actions in Jakarta and Bali, such as a press conference with Change.org and National Commission on Tobacco Control, and a demonstration in Bali with Balinese students. A photo petition to the Governor of Bali on Facebook and Twitter was developed by German campaigner Laura Graen and jointly organized by Indonesian, German and US American advocates.

Results and lessons learnt: As a result of the campaign, the Inter-tabac ASIA was cancelled on short notice. In the aftermath, another trade fair – World Tobacco Asia – was first moved from Indonesia to Singapore and then cancelled altogether (advocacy by Singaporeans was key to that, of course). The organizers said: „Asia has become very difficult in which to hold a tobacco exhibition“ [sic!] – a complete change of the „tobacco friendly“ label from before 2014.

Conclusions and key recommendations: International cooperation and social media was key to the success of the #dortmundkills campaign. Other advocates can learn from the #dortmundkills campaign how to engage the power of social media towards tobacco control goals and thereby influence stakeholders that decide regulations in their community or country.

PD-1068-20 Best practices of tobacco control in developing countries

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Background and challenges to implementation: The burden of tobacco use in South-East Asia Region (SEAR) is high and complex due to myriad variety of tobacco products which complicates efforts to implement effective tobacco control initiatives. Despite these challenges, Member countries in WHO SEA region have several innovative ways to combat the tobacco epidemic.

Intervention or response: The best practices used in different part of the region is collected from literature search, meeting presentations and obtained through personal communications with country offices, Ministries and national and international partners involved in tobacco control.

Results and lessons learnt: The best practice measures implemented in SEAR include public health advocacy through Voice of Tobacco Victims mainly in India but expanding to other SEAR countries; bans on production and sale gutka in 30 states and UTs of India, reducing tobacco imagery in movies, increasing taxation on tobacco products at national and subnational levels, formulating smoking ban by local governments and innovative ways of implementation, building capacities at subnational level through multisectoral approach, developing local innovative models of implementation of tobacco control provisions and implementing graphic health warnings on tobacco products with scarce resources and capacities.

Conclusions and key recommendations: Tobacco control can be implemented with low resource but through high level of commitment and multisectoral partnership.

PD-1069-20 Association between cigarette smoking and suicide in psychiatric in-patients

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Background: Cigarette smoking is the single largest preventable cause of death and disability in the industrialized world and it causes at least 85% of lung cancers, chronic bronchitis and emphysema. In addition smokers are at a higher risk from psychiatric co-morbid illness such as depression and completed suicide.

Design/Methods: We conducted a cross-sectional survey in which we targeted all patients with serious mental illness (SMI) who were admitted in Razi mental health Hospital in Tehran, Iran. We recruited 984 participants, who were receiving services from Razi mental health Hospital and hospitalized for at least two days between 21 July to 21 September, 2010. Nine hundred and fifty patients out of this figure were able to participate in our study.

Results: The final study sample (n = 950) consisted of 73.2% males and 26.8% females. The mean age was 45.31 (SD=13.7). A majority of participants (70%) was smoker. A history of never smoking was present for 25.2% of the study sample; while 4.8% qualified as former smokers and 70.0% as occasional or current smokers. Two hundred and nineteen participants had attempted suicide amongst them 102 (46.6%) once, 37 (16.9%) twice, and 80 (36.5%) attempted more than two times in their life time. In regression model, gender, age, and cigarette consumption were associated with previous suicide attempts and entered the model in this order as significant predictors.

Conclusion: There is an association of cigarette smoking and suicide attempt in psychiatric inpatients. Current smoking, a simple clinical assessment, should trigger greater attention by clinicians to potential suicidality and become part of a comprehensive assessment of suicide risk.

PD-1070-20 Co-morbidity and correlates of pattern of cigarette smoking among psychiatric in-patients at two hospitals in Tehran

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Background: This study tried to investigate the co-incidence of psychiatric disorders and cigarette smoking without any conclusion about causative roles of the two on the other. Through it, the frequency of substance abuse was mined among psychiatric patients and psychological cases who were hospitalized at two hospitals in Tehran.

Design/Methods: Through an analytic cross-sectional study, this performance investigated the frequency of

smoking among psychiatric cases hospitalized in two centers in Tehran. Participants were asked to answer a questionnaire about demographics, current life situation, type of smoking and suicide ideation and attempts through their whole lives.

Results: schizophrenia had the most effect on smoking disregarding the type of that.

Results showed also substance-derived psychotic and personality disorders that could blame the manner as the causative and predisposing factor for the disorders. Cognitive disorders, delirium, dementia, schizoaffective disorder, illusion, bipolar disorder, major depression, paranoid, anxiety, obsessive-compulsive disorder as well as panic disorder (with agoraphobia) had no statistical relationship with smoking as the results indicates.

Conclusion: Finding predisposing factors in drug addiction and, vice versa, tendency to smoking between psychiatric cases could help providers in effective management of the two.

PD-1071-20 Civil alliance for chronic non-transmissible diseases driven from the experience on tobacco control

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Background and challenges to implementation: The 26 year experience in tobacco control from a non-profitable organization, such as the Permanent National Commission for tobacco control (COLAT), is the mainstay to coordinate and establish the National Alliance for prevention and control of non-transmissible diseases (NTD - PERU). Intervention or response: By collecting information from the Epidemiology Department of the Peruvian Ministry of Health, as well as publications and reports from the WHO-PHO, that shows that the morbidity and mortality of chronic NTD in Peru, follows the same epidemiologic curve compared to the rest of the countries worldwide. The Alliance NTD-PERU was done through the convocation of highest range leaders on the field involved in the area of NTDs. Advocacy for this Alliance has been done by multiple members of the institutions involved, through publications and interviews on several written and broadcast media, and by crating strategic bridges with the highest levels of our government.

Results and lessons learnt: The Alliance for prevention and control of NTD's now involves: professional academies in the area of health (physicians, nurses, obstetricians, psychologists, odontologists and nutritionists), Peruvian Academy of Medicine, Peruvian Society of Cardiology, Peruvian Society of pneumology and the Peruvian Society of Oncology among others. The Alliance NTD-PERU has contributed to mediate new laws such as: · Law for healthy foods for children · Law for risk prevention and tobacco consumption, achieving public and enclosed workplaces 100% free of tobacco smoke · Law to eliminate tobacco business from the treaty of commerce Asia-Pacific · Strengthen the report from the

WHO about NTDs and their inclusion on the objectives of its sustained development after 2015

Conclusions and key recommendations: Public politics that involve changes in conducts and beliefs, require a very active participation of the community and preferably of academic, scientific as well as non profitable organizations and society in general. The fusion between the government and the civil society in new politics to control and prevent NTDs, is key for the sustained development of this politics.

PD-1072-20 Expanding the reach of the tobacco control and health promotion advocacy through the participatory budget process: the Philippine experience

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In 2012, the Philippine government formalized the participation of civil society organizations (CSO) in the budget preparation process. The policy aims to improve the responsiveness of the government budget to the needs of the people. This reform has brought to light poorly funded programs on tobacco control and health promotion. With the help of the National Tobacco Control Strategy (2011-2016), and in anticipation of the approval of the sin tax bill, CSOs forming part of a network called the Alternative Budget Initiative (ABI) actively engaged the Department of Health (DOH) to increase funding to the aforementioned programs. The paper is based on primary, and interviews from key partners from the DOH, civil society, and individual stakeholders. ABI formed a specific sub-cluster that studied the budget and offices involved in tobacco control and health promotion. Capacity building, dialogue meetings with the government, and media campaigns were some of the identified strategies that proved most effective in maximizing CSO participation in the budget process. These participatory political activities have helped increased the number of ABI members from 3 to more than 12 organizations interested in monitoring the tobacco control and health promotion budget of the DOH. It has also increased individual and group stakeholders the understanding of how and where to find the budget for tobacco control and health promotion programs despite the less than substantial budget increase. Challenges encountered include the lack of political support from within the DOH, the devolved nature of the health system, and absence of sustainable resources to conduct research and network with CSOs from other regions outside Metro Manila. Despite the challenges encountered, the ABI sub-cluster on health promotion was able to improve awareness about the importance of financing tobacco control and health promotion programs to reduce the occurrence of non-communicable diseases in the Philippines. ABI also helped strengthen the cooperation between civil society and the government. Based on the Philippine experience, the creation of multi-sectoral networks like ABI may prove extremely useful in expand-

ing the reach of health promotion and tobacco control advocacy.

PD-1073-20 Defending the smoke-free legislation at the Constitutional Court of Turkey

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Background: Tobacco industry or its allies legally challenge all effective legislation in most countries. When smoke-free legislation was enacted in Turkey in 2008, Turkish NGO community was warned about this possibility by international colleagues. The smoke-free legislation was enacted in hospitality premises in July 2009. In December 2009 Izmir Coffeehouse Owners Chamber challenged the constitutionality of the article which prohibits smoking in restaurants, coffeehouses, bars. Circuit Court of Council of State forwarded the lawsuit to the Constitutional Court with the view of exempting coffee houses from this law. The Constitutional Court decided to review the lawsuit on its merits. Intervention The legal team of Turkish National Coalition on Tobacco or Health, applied to the Council of State for intervention on behalf of Turkish Thoracic Society (TTS) defending the rights of patients. The Court has decided that TTS had no advantage or forfeiture and therefore no standing, and denied the claim for intervention. Turkish National Coalition organized a workshop on "Human Rights and Constitutional Rights" inviting prominent lawyers and academicians. The declaration of the workshop was sent to the Constitutional Court and media. A signature campaign was organized. The petition was signed by 15 thousand people from all over the country. At a press conference a patient with laryngeal and lung cancer mailed these petitions to the Constitutional Court. The legal team once again applied to the Constitutional Court for intervention with legal and medical evidence for the justification of 100 % smoke-free enclosed public spaces.

Results and lessons learnt: The Constitutional Court decided that the implementation of the smoke-free legislation at the coffee-houses was not against the Constitution of Turkish Republic. The report of the court had many references to the said workshop declaration. The NGO community in Turkey learnt that persistence and pleading for intervention and presenting legal and scientific evidence have an impact. Tobacco industry may have different allies in different cultural settings. The industry arguments were echoed by traditional coffee-house owners in Turkey. Conclusion Had the Constitutional Court decided against the legislation, Turkey would have ceased to be smoke-free. Civil society must take the lead to protect tobacco control acts.

PD-1074-20 Compliance to second-hand Tobacco Smoke Exposure Law (Article 8 of FCTC) in Accra, Ghana

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Background: This study intends to measure the extent of pollution caused by tobacco smoke in some selected public places and compare it with pre-legislative era levels of pollution to assess compliance of the tobacco control law in selected public places in Accra Ghana. Ghana's tobacco control law which is a part of the Public Health Act, 2012 (Act 851) prohibits smoking in all indoor and outdoor public places. Since the law was passed and assented to by the president of Ghana in October 2012, there have not been any visibly enforcement programs.

Design/Methods: The Sidepak monitor was used to measure Particulate Matter (PM_{2.5}) in selected smoking public places - places that was previously measured pre-legislation in 2007 - (60 establishments) and nonsmok-

ing public places (10 establishments) and compared. Raw mean PM_{2.5} values were for each establishment (smoking and nonsmoking) were compared, with a Mann-Whitney U-test. Also average smoker density of each location was compared. Mean values of all smoking venues were compared between pre-legislation and post-legislation era. Finally, mean smoking values of establishments that allowed smoking during the pre-legislation era was compared with those that did not allow smoking.

Results: 85% of pre-legislative smoking locations still allowed smoking. However, PM_{2.5} levels were 25% lower than pre-legislative era. Compliance to nonsmoking policy at pre-legislative nonsmoking venues was 100%. Average smoker density was markedly lower in post-legislation era than in pre-legislation era.

Conclusion: Smoking is still allowed at many public places in Accra Ghana. Only enforcement of the Secondhand Tobacco Smoke Exposure Law will prevent the public from the negative health effects of secondhand tobacco smoke. Involvement of the owners and managers is vital in the enforcement of the law.

42. TOBACCO RISKS FOR VULNERABLE POPULATIONS

PD-1075-20 The social patterning of attitudes toward tobacco control in Argentina

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Background: Argentina has enacted important tobacco control initiatives in recent years. Yet little is known about the social patterning of attitudes toward tobacco control. Research is needed to explore what predicts opposition to tobacco control initiatives such as higher taxes on tobacco and the prohibition of tobacco advertising. The aim of this study is to analyze the social patterning of attitudes toward tobacco control in Argentina, in particular, what predicts opposition to tobacco control initiatives such as higher taxes on tobacco and the prohibition of tobacco advertising.

Design/Methods: Secondary analysis of Argentina's Global Adult Tobacco Survey (N = 6,645). Binary logistic regression analysis, examining opposition to raising tobacco taxes and banning tobacco publicity. Models were stratified by current smoking status.

Results: Overall, there is widespread support for these tobacco control measures, with only 15.6% of respondents

opposing increasing taxes on tobacco products and 9.6% opposing banning tobacco advertisements. In contrast to the 25-34 year old reference group, respondents aged 15-24 years are more likely to oppose increasing taxes on tobacco products if they are current smokers (OR = 2.56, 95% CI = 1.42 - 4.60); the effect is not statistically significant for current non-smokers (OR = 1.34, 95% CI = 0.44 - 4.06). Similarly, respondents aged 15-24 years are also more likely to oppose restricting tobacco advertisements if they are current smokers (OR = 3.08, 95% CI = 1.43 - 6.63), with a non-significant effect for non-smokers (OR = 1.83, 95% CI = 0.66 - 5.04). Respondents with low household income are generally more likely to oppose these tobacco control measures, but the effects are only significant among current smokers.

Conclusion: There is general support for tobacco control initiatives in Argentina. Opposition to raising taxes on tobacco products and banning tobacco advertisement appears to be concentrated among young current smokers with low and medium levels of household income.

PD-1077-20 Smoking during pregnancy and implementation of the five A's during prenatal care in Argentina

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Background: The 5As strategy is a best practice approach for smoking cessation during pregnancy. National Guidelines in Argentina recommend the 5A's at every prenatal

care visit. Overall, one in four women of reproductive age in Argentina is a smoker. The aim of this study was to evaluate the smoking patterns and the prevalence of receipt of the 5A's among pregnant women in Argentina.

Design/Methods: As part of a two-arm, parallel cluster randomized-controlled trial of implementation of a smoking cessation intervention in Argentina and Uruguay, baseline data were collected from women who attended one of 10 prenatal clinics and delivered at selected public hospitals in Buenos Aires from October 2011 to May 2012. The validated questionnaire included basic demographic data; tobacco use and cessation behaviors and receipt of the 5As. Self-reported quitting smoking during pregnancy was verified with saliva cotinine cut-point of >10 ng/mL. Due to limited resources, biochemical verification was not conducted among women who reported not smoking prior to pregnancy or who continued to smoke during pregnancy. Analyses were conducted using SAS version 9.3.

Results: Of 1798 postpartum women, 74% were never smokers, 9% quit upon learning of their pregnancy, 4% quit during pregnancy and 13% continued to smoke. Among smokers, 81.0% reported that a healthcare provider asked them about their smoking status, 50.0% reported being told that quitting was the best thing for them and the baby, 18.0% reported they were asked if they wanted to quit, 6.0% reported the provider helped them to quit (e.g. gave printed materials, counselling, a quitline number, etc) and 5.0% reported they were asked to return to talk about their smoking in at least one prenatal care visit. When considering all prenatal care visits, those percentages were 13, 9, 3, 1 and 0,2 respectively.

Conclusion: Health care providers are missing opportunities to help pregnant smokers quit during prenatal care visits in Argentina. Pregnant women should be a priority group for the implementation of effective cessation strategies.

PD-1078-20 Tobacco cessation training for physicians: the current challenge and opportunity for tobacco control in Bangladesh

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Background: Cessation is the only intervention with the potential to reduce tobacco-related mortality. Inadequate training and lack of motivation among the physicians to undertake and deliver smoking cessation activities is an important barrier for implementing tobacco cessation policies. The present study was conducted among physicians in Bangladesh to determine the prevalence of smoking, training in tobacco cessation and their attitude and role in tobacco control.

Design/Methods: A cross sectional study was conducted among physicians working different tiers of hospitals selected from seven divisions of Bangladesh in 2013. One teaching hospital, one district hospital and one upazila (sub district) health complex from each of the seven divi-

sions of Bangladesh were purposely selected for the survey. A self-administered questionnaire was sent to all physicians working in selected hospitals inquiring about their tobacco use habit and knowledge about current tobacco control strategies specially tobacco cessation training.

Results: Questionnaires were sent to 1975 physicians and 1580 (male 1232, female 348) physicians returned completed questionnaires with a response rate of 80.0%. The mean age of the respondent physicians was 34 years. Over all there were 29.2% ever smoker. Among the smoker nearly sixty percent initiate smoking between the ages of 16 to 20 years and one third (33.6%) were not thinking to quit smoking. Among the respondents 96.5% were strongly agree and agree that physicians should serve as role models for their patients and the public and 96.6% were strongly agree and agree that they should set a good example by not smoking. Most of the respondents (98.7%) strongly agree and agree that physicians should routinely ask about their patient's smoking habits and should advise their smoking patients to quit smoking. Among the respondents 93.0% were strongly agree and agree that patient's chances of quit smoking are increased if a physician advises him or her to quit. Among the respondents 91.9% were never trained in tobacco cessation. Among the respondents 96.3% were strongly agree and agree that health professionals should get specific training on cessation techniques.

Conclusion: Inadequate tobacco cessation training among the physicians of Bangladesh is the current challenge and opportunity for tobacco control. Tobacco related training and measures should be taken to train the physicians of Bangladesh.

PD-1079-20 Tobacco control in post 2015 development agenda: greater opportunity of sustainable development

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Background and challenges to implementation: During the last decade, tobacco indeed leads global leaders to recognize its multiple impacts on social, economic and environment beyond singly on health alone. It is a potential source of avoidable Non-Communicable Diseases (NCDs) and poses as found previously strong threats to attainable development goals which is being worked out for post 2015 development agenda. Tobacco acts as catalyst in leading people to drugs as evidence based studies established that 99% drugs users in low and middle income countries start with smoking or other forms of tobacco uses results in perpetual social disorder leading to other social complexities. Tobacco is in fact a greater player slowing down productivity and multiplying per capita spending on cigarettes or tobacco products-the poorest (earning less than \$24/month) are twice as likely to smoke as the wealthiest (earning more than \$118/

month) contributes significantly to sustain poverty in low income countries like Bangladesh. The environment globally enjoys a severe threefold impacts in process of cultivation, production and consumption. Its cultivation needs variety of toxic chemicals, production requires huge fire woods forces to deforestation and consumption leaves huge butts which is equally toxic as tobacco. It is time to heed to issues raised by international tobacco control advocates for inclusion of tobacco control in post development agenda to be attainable as other goals set forth for a better world for the future generation.

Intervention or response: The methodology of intervention includes analyzing international development policies, WHO FCTC, MPOWER and multiple policy papers on tobacco control etc.

Results and lessons learnt: Inclusion of tobacco control in post-2015 development agenda simultaneously addresses some issues and policies related to public health like NCDs, social advancement and environmental development. It will also impose upon the party states of FCTC the responsibility to work to reduce tobacco use to aimed percentage (%) as set in post development agenda. It will also open up a variety of policy integration for greater development in the long run.

Conclusions and key recommendations: As a result of policy integration and active involvement of party states a more comprehensive tobacco control can be ensured to go a way forward to create a tobacco free healthier, greener and peaceful world.

PD-1080-20 Smoking prevalence among students in Brazil in 2009 and 2012

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Background: Brazil has implemented comprehensive policies for tobacco control since 1996 and has ratified the WHO Framework Convention on Tobacco Control in 2005. The smoking prevalence among adults in Brazil decreased in the last years. This study aims to describe the prevalence of smokers among students in the state capital cities and Federal District in Brazil in 2009 and 2012.

Design/Methods: Secondary data from the Pesquisa Nacional de Saude do Escolar (PENSE) were used. The surveys were conducted in the 26 state capital cities and Federal District in Brazil in 2009 and repeated with the same methodology in 2012. Sample was compound of students, enrolled in the ninth grades of secondary education, in public and private schools. Cigarette smoking was defined as to smoke cigarette at least one day in the last 30 days. Comparisons over time were deemed statistically significant when 95% confidence intervals did not overlap.

Results: The majority of students aged 13 -15 years old. In 2009, the estimated smoking prevalence among students in Brazil was 6.3% (95% CI: 6.0;6.7), ranged from 3.8% (95% CI: 2.9;4.7) in Maceio and 9.9% (95% CI: 8.9;11.2)

in Curitiba. In 2012, the estimated smoking prevalence was 5.1% (95% CI: 6.0;6.7), ranged from 3.2% (95% CI: 2.3;4.1) in Salvador and 12.4% (95% CI: 10.6;14.3) in Campo Grande. There was no significant change over time in the prevalence of cigarette use in twenty-five cities. In two capital cities, Florianópolis and Campo Grande, the prevalence of cigarette smoking increased significantly. In Florianópolis the prevalence growth was 59.0% in the period, ranged from 6.1% (95% CI: 5.0;7.1) in 2009 to 9.7% (95% CI: 7.3;12.2) in 2012. In Campo Grande, the prevalence increase was 33.3%, ranged from 9.3% (95% CI: 8.0;10.6) in 2009 to 12.4% (95% CI: 10.6;14.3) in 2012.

Conclusions: Despite the initiatives of the Brazilian tobacco control program, the prevalence of smoking among Brazilian students has not declined between 2009 and 2012. This absence of change presents challenges and requires the efforts of the government, at the central, state and municipal levels, to prevent the onset of smoking among youths.

PD-1081-20 Integrating tobacco control into national development plans

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Background and challenges to implementation: Increased recognition of tobacco control as a development priority is essential to meet the World Health Assembly's target of a 25 percent reduction in premature mortality from NCDs by the year 2025. For tobacco control to receive the domestic and international resources it requires, implementation of the WHO Framework Convention on Tobacco Control (FCTC) must be integrated into national health and development plans.

Intervention or response: At the country level, prioritizing tobacco control within national development plans facilitates its inclusion within the UN's response via articulation within UN Development Assistance Frameworks (UNDAFs). Civil society plays a crucial role in encouraging both governments and international partners to promote tobacco control as a strategy for sustainable development.

Results and lessons learnt: In 2013, the UNDP and the FCTC Secretariat carried out an initial analysis of national development plans and UNDAFs to identify key drivers and challenges associated with integrating the FCTC into these documents. Since then, the Framework Convention Alliance (FCA) and the UNDP have worked hand-in-hand in Africa and Latin America to increase the number of countries that include the FCTC in their UNDAFs.

Conclusions and key recommendations: Additional data are needed on the connection between tobacco control and key development issues such as economic growth, poverty reduction, gender equality, and environmental sustainability. Capacity building among tobacco control advocates is also essential to promote tobacco control

and FCTC implementation among national development plans and strategies.

PD-1082-20 Non-alcoholic fatty liver disease (NAFLD): a new disease associated to tobacco smoking?

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Background: Non alcoholic fatty liver disease (NAFLD) is emerging as the most common cause of chronic liver disease worldwide, probably related to the increased incidence of overweight and obesity. Recent clinical and experimental findings establish that cigarette smoking stimulates lipid accumulation in the liver, produces acute hypoxia, chronic inflammation, causes high oxidative stress and activation of different pathways of hepatocyte death, therefore smoking is considered a high risk factor for NAFLD. The aim of this study was to investigate the prevalence of NAFLD and some metabolic factors associated in a group of smokers.

Design/Methods: We included 47 smokers attending a 10 weeks tobacco cessation treatment, 25 (53.19%) women and 22 (46.8%) men with a mean age of 48.55±10.47 years. They began to smoke at 16±5.62 years, the mean number of years smoked were 34.5±11.89, the number of cigarettes smoked per day 21.19±9.65 and the number of packages per year 35.11±16.35. Physical dependence obtained with the Fagerström test was 6.19±1.91. Exclusion criteria were a current daily alcohol ingestion ≥ than 20 g, viral hepatitis (B and C) and other causes of liver disease. The diagnosis of NAFLD was made by ultrasound, and was classified as mild, moderate and severe according to its echogenicity and visualization of the diaphragm and intrahepatic vessel borders. Blood samples were taken while they were still smoking.

Results: The prevalence of NAFLD found was 77%, comparing with nonsmoker Mexican healthy population the Odds Ratio (OR) obtained was 16.35 (CI 95% 8.03-31.5). NAFLD was diagnosed in 21 from 22 men and in 15 from 25 women. BMI was 26.44±3.62 for women and 22.57±3.63 for men. Glucose concentration was found normal in both sexes, triglycerides were higher than 150 mg/dl in men and HDL-C lower than 40 mg/dl also in men. Mild NAFLD was found in 19 smokers (52.7%), moderate in 14 (38.9%) and severe in 3 (8.3%).

Conclusions: The prevalence of NAFLD found in the smokers was very high (77%) in contrast with the prevalence in "health population" (15%), apparently there is no correlation with the BMI, especially in men. Our results suggest that exposure to heavy smoking during long periods may be a risk factor for the pathogenesis of NAFLD and men are more sensible than women. More clinical research is needed to confirm those findings, nevertheless it is very important to ban smoking in patients with pre-existing risk factors for liver diseases.

PD-1083-20 Is a web-based computer-tailored smoking prevention programme able to prevent smoking among Dutch school children: findings of a RCT at 12 and 25 months

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Background: Smoking prevalence rates among Dutch children increase rapidly after children transit to secondary school. Web-based computer-tailored programs supplemented with prompt messages may be able to empower children to prevent them to start smoking when they transfer to secondary school. The main aim of this study is to evaluate whether computer-tailored feedback letters with and without prompt messages are effective in decreasing children's smoking intentions and smoking behavior after 12 and 25 months of follow-up.

Design/Methods: Data were gathered at baseline (T0), 12 months (T1) and 25 months of follow-up (T2) of a smoking prevention intervention program, called "Fun without Smokes". Schools (n= 162) were randomly allocated to a no intervention control group, an intervention prompt group or an intervention no prompt group. A total of 3213 children (10–12 years) participated in a web-based questionnaire assessing their smoking behavior, smoking intention and socio-cognitive factors (attitude, social influence and self-efficacy) related to smoking. After completion, children in the intervention groups received computer-tailored feedback letters. Only children in the prompt group received prompt messages (email and SMS) to stimulate reuse to an intervention website. Multilevel logistic regression analyses were performed using multiple imputations to assess the program effects on smoking behavior and intention at T1 and T2.

Results: No significant program effects were observed for each intervention group compared to the control group at T1, not in terms of the intention to engage in smoking (prompt: B=0.05, P=.91; no prompt: B=-0.22, P=.65) nor in terms of smoking behavior (prompt: B=0.12, P=.92; no prompt: B=-0.70, P=.57). Similar non-significant program effects were found between each intervention group and the control group at T2 concerning the intention to start smoking (prompt: B=0.18, P=.77; no prompt: B=0.62, P=.29) and smoking behavior (prompt: B=-0.63, P=.42; no prompt: B=0.01, P=.99).

Conclusion: This study showed that the web-based computer-tailored feedback letters with and without prompt messages did not change children's smoking behavior and smoking intention. Future web-based computer-tailored interventions should focus on the use and exposure to the educational content and response to the prompt messages. Furthermore, it is wise to start future smoking prevention programs closer to the age of smoking uptake.

PD-1084-20 Will we be smoke-free by 2025? Smoking prevalence amongst a longitudinal cohort of pacific adults in New Zealand

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Background: Cigarette smoking continues to contribute to the adverse mortality and morbidity rates for Pacific people in New Zealand. Current national census statistics indicate that nearly one in four Pacific adults smoke (23%), and this is markedly higher than the general New Zealand European (15%) and Asian (10%) populations. The aim of this research is to examine the longitudinal prevalence of smoking amongst a cohort of Pacific fathers and mothers from birth up to 14 years after the birth of their child.

Design/Methods: Within the context of broader interviews, 1073 Pacific fathers and 1434 Pacific mothers participating in the longitudinal Pacific Islands Families (PIF) Study were surveyed about their smoking at multiple time-points of the study from 2000 until 2014. Prevalence rates of any and heavy smoking were calculated and analysed.

Results: Maternal prevalence rates showed a sharp decline during pregnancy and immediately postpartum, yet rates then increased gradually to pre-birth levels within one to four years. Prevalence rates for mothers showed little change between 4 and 14 years postpartum, maintaining a steady 32% for mothers. While prevalence rates for fathers show a decline from initial levels (40.3%), they still remain extremely high (37.5%) at 14 years postpartum.

Conclusion: The minimal decline in smoking prevalence amongst this cohort is of alarming concern for these Pacific families and their communities. Given the New Zealand Government's Aotearoa Smokefree 2025 goal, innovative approaches must be implemented to discover effective solutions to help Pacific communities reduce their smoking, and achieve the smokefree 2025 goal.

PD-1085-20 Stated preference for cigarettes among UP Manila students

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ABSTRACT Background: The study assessed the valuation for cigarettes among University of the Philippines-Manila (UP Manila) students aged 18-24.

Design/Methods: The study included students of UP Manila aged 18-24. Direct (iterative bidding) and indirect (discrete choice experiment) stated preference methods

were employed to determine the smokers' Willingness-to-Pay (WTP) and non-smokers' Willingness-to-Accept (WTA). Data was encoded using Microsoft Excel 2010. Median and interquartile range were used in describing WTP and WTA. Fisher's Exact Test and T-test were performed using STATA v12 to determine the association between the identified factors.

Results: Of the 212 respondents, 21 (9.90%) were smokers. The smokers' direct and indirect WTP were 6.00 and 12.43, respectively. There was a significant difference ($p=0.01$) between the results of the two methods suggesting the need to employ more reliable methods such as DCE in obtaining the valuation of consumers for certain products. 40.84% of the non-smokers could be induced to smoke with 0.00 as their WTA. The type of inducement (58.62%, 17 of 29) and the unlikelihood of becoming addicted by smoking a cigarette stick (44.83%, 13 of 29) were the two most common reasons for the willingness to smoke among the non-smokers. On the other hand, awareness of the health hazards of smoking (58.41%, 66 of 113) is the most common reason why 59.16% of the non-smokers can't be induced to smoke. No association was found between the smokers' stated preference and their smoking status and allowance. The WTP of smokers was higher than the December 2013 retail prices of cigarettes.

Conclusions: The average December 2013 retail price of the most expensive and popular cigarette brand, which is 4.65 per stick, is 2.67 times lower than the median WTP of smokers which is 12.43. It is insufficient in making college students in UP Manila stop smoking. 40% of non-smokers could be induced to smoke. Thus further price increase of cigarettes, as well as other tobacco control measures, is recommended.

PD-1086-20 Tobacco control: how far do we reach in Myanmar?

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Smoking prevalence among adult male in Myanmar is skyrocketing from 48.3% in 2007 to 60.3% in 2013. Moreover the evidences of the sentinel prevalence survey in 2013 shows that the prevalence of smokeless tobacco consumption among Myanmar males is the highest in ASEAN which is 41.2% and for female, it is 8.8%. Myanmar started its Tobacco Free Initiative officially in January 2000, formed Tobacco Control Committee in March 2002, signed FCTC in October 2003 and ratified on April 2004. Myanmar has undertaken implementation of FCTC by enacting "The Control of Smoking and Consumption of Tobacco Product Law" in 2006. Recently, Ministry of Health is trying to enact tobacco control regulation and directives on tobacco control based on tobacco control law. Notifications on non-smoking and designated smoking areas was already published on 3rd March 2014 and send to different ministries for implementation. Myanmar is currently partnering with World Health Organi-

zation and Southeast Asian Tobacco Control Alliance for progressive policy development, strengthening national tobacco control working groups and capacity building of stakeholders. There are challenges in implementation of FCTC. On one hand, Myanmar has limited human and financial resources which lead to the delay in implementing tobacco control law. On the other hand, Transnational Tobacco Companies have evaded to Myanmar a decade after exist when the country is opening up for foreign investment. Knowledge and awareness on harmful effects of tobacco use are big issues according to a survey done by the University of Public Health, Yangon. Implementation and compliance of tobacco control law is necessary while capacity building and measures to counter tobacco industries tactics is also essential. National programme to align national tobacco control legislation and further regulations in line with the provisions of WHO FCTC and related protocols, more national level campaigns and media advocacy is needed as well as systems to monitor compliance and enforce the law.

SATURDAY, 21 MARCH 2015, 12:45-13:45 ORAL PRESENTATION SESSIONS

11. POVERTY AND HUMAN RIGHTS

OP-255-21 Systematic review of the link between tobacco and poverty

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Background: Tobacco use has decreased in developed countries, while developing countries have not achieved comparable reductions. In a previous review, we found a strong inverse association between smoking prevalence and income across most geographical areas, for both genders and especially in the younger age group. The main objective of the present study is to update the previous review in order to assess the evolution of differences in smoking prevalence across socioeconomic status categories over the last five years.

Design/Methods: Systematic Review and Meta-analysis of literature from multiple electronic databases, including MEDLINE, EMBASE, CENTRAL, SOCINDEX, AFRICAN INDEX MEDICUS and LILACS. Using a random effect model to accommodate the expected heterogeneity arising from the diversity of included studies. State the setting, methods, desired outcomes, procedures and techniques used to collect and analyse information. Include a description of participants, procedures, measures and appropriate statistical analyses.

Results: Our search yielded 1,226 studies were selected for detailed evaluation. Finally, 201 (n= 33,834,218) met inclusion criteria; 173 cross-sectional (85%), 14 surveillance reports (6.9%), 6 (2.9%) prospective studies, 3 (1.4%) case-control studies, one community – based randomized controlled trial and one qualitative focus group report. Median proportion of males was 44%. Median current smoker rate was 25% (range 6.3 %-73.7%). We included 164 datasets in the meta-analysis of current smoking by income level. Lower income was significantly associated with higher prevalence of current smoking (OR 1.45, 95%CI 1.35 - 1.56). This association persisted in most geographical areas. It was stronger for data retrieved in the 1990s (OR 1,42 95%CI 1.24 – 1.62), the 2000s (OR 1,48 95%CI 1.33 – 1.64) , low mortality countries (OR 1.48 95%CI 1.37 – 1.60) and women (OR 1.59 95%CI 1.30 – 1.93). Studies with lower risk of bias also showed stronger global association (OR 1.60 95%CI 1.42 – 1.80). Present specific findings to date..

Conclusion: The main finding of this update was a robust association between higher prevalence of current smoking and lower income levels. Results from women signaled them as an especially vulnerable group particularly in low mortality countries.

OP-256-21 The effect of tobacco consumption on household budget allocation in Mexico

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Background: According to the WHO, tobacco is a leading cause of impoverishment. Sickness and premature mortality associated with smoking increase health care costs and reduce family income. Spending on tobacco also affects expenditure patterns and thus households' well being. Few studies, however, have analysed into detail whether tobacco spending actually crowds out consumption of necessities. In a pioneer analysis, Efrogmson et al. (2001,2002) showed tobacco consumption exacerbated poverty in India and Bangladesh as even minor diversions of resources affect the nutrition of poor families. More recently, John (2008) showed smoking households in India had lower consumption of milk, education, clean fuels and entertainment; he found similar effects for all income groups. Smoking prevalence rates in Mexico are lower than in these Asian countries but smoking households allocate over 4% of their budget to cigarettes. We seek to provide further evidence of the effects of tobacco consumption on the consumption of other commodities, especially among low-income households.

Methods: The data source for this analysis was the National Household Income and Expenditure Survey, a nationally representative survey that collects detailed information on household expenditures across a wide range of commodities. Data collected in 2008, 2010 and 2012 were pooled resulting in sample of 66,125 households.

Smoking households were defined as those with positive expenditure on cigarettes. Household expenditure items were classified into eleven categories.

The difference in average expenditure shares for each expenditure category between smoking and non-smoking households by residence area was assessed using standard mean-comparison tests, adjusted with Welch's approximation.

A system of equations derived from an Almost Ideal Demand System was also estimated. We assumed that households that share certain characteristics (residence area and socioeconomic status) face the same prices for different goods, and estimated separate models for each group of households so that the equation for commodity j is a linear function of demographics and total expenditure.

Results: 6.5% of the households in the sample were smoking households. Smoking households spend on average MX\$910.1 per quarter on cigarettes, or 4.3% of their budget.

The tests suggested smoking households allocate a lower budget share to food eaten at home and education than non-smoking households, both in rural and urban areas ($p < 0.001$).

The multivariate analysis provided more robust results (table). The poorest smoking households in rural areas allocate significantly lower budget shares to food eaten at home (between 4.9 and 3.5 percentage points less;

$p < 0.001$) and education (between 1.3 and 1.6 percentage points less; $p < 0.05$). High-income smoking households in rural areas allocate less to transport (between 3.7 and 3.9 percentage points less; $p < 0.05$). In urban areas, smoking households of all income groups allocate significantly lower shares to education (between

1.7 and 2.4 percentage points less; $p < 0.001$) and transport (between 0.8 and 2.5 percentage points less; $p < 0.05$).

Conclusions: This analysis shows cigarette expenditure crowds out expenditures on basic needs in Mexico, although the nature of this effect is different among income groups within rural and urban areas. The fact that education is one of the categories most affected by cigarette expenditure, especially among the poorest smoking households, makes clear the implications of cigarette consumption on poverty and shows how non-smoking household members may be affected by tobacco use. Future research may investigate more disaggregated expenditure categories and the interaction of tobacco spending and spending on other products associated with non-communicable diseases such as soft drinks.

OP-257-21 Save our farmer: an evidence-based regional campaign to counter tobacco farming front groups in ASEAN

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Background and challenges to implementation: While tobacco consumption and production have reached alarming proportions in developing nations, the tobacco industry's claims of prosperity from tobacco farming has deliberately obscured its downsides. Across Southeast Asia, the number of farmers employed in tobacco farming is small compared to overall national employment. Declines in tobacco farm productivity, low fetching prices for crop, indebtedness, exposure to health and environmental hazards put tobacco farmers and their families at a clear disadvantage. Many countries are also net importers of tobacco leaf, losing millions of dollars each year in foreign exchange. In the end, only the transnational companies reap the greatest benefits from tobacco at the expense of its consumers.

Intervention or response: The Southeast Asia Tobacco Control Alliance (SEATCA) has mounted several evi-

dence-based regional campaigns to counter efforts of the tobacco industry and front groups in advancing its interests and undermine the implementation of the WHO Framework Convention on Tobacco Control. Through its Resource Center a one-stop-shop of information featuring uptodate researches, country information, and links to related media and references, SEATCA has created web-based tools to counter tobacco industry front groups in the region. In particular, it has launched the Save our Farmer campaign to specifically respond to the International Tobacco Growers Association (ITGA) and other tobacco farming front groups in misleading the public with erroneous information regarding tobacco farming.

Results and lessons learnt: Since launching the campaign, the Resource Center has monitored statements, press releases and other media activities of the tobacco industry and front groups and provided uptodate counter-arguments and evidences to counter the tobacco industry's claims.

Conclusions and key recommendations: SEATCA believes that timely evidence-based information accessible online is critical for tobacco control advocates to remain vigilant in countering the arguments and lies that the tobacco industry and their cohorts continue to spread.

OP-258-21 Analysing and implementing the WHO Framework Convention on Tobacco Control using the Convention on the Rights of the Child at the Regional level in Sweden

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Background: Advancement of the WHO-FCTC has been minimal since Sweden's ratification in 2005. At the same time legislative steps have occurred to harmonize the Convention on the Rights of the Child (CRC) to Swedish law. Tobacco use is commonly depicted by the tobacco industry and even decision-makers as an adult issue. In contrast there are a number of challenges related to tobacco use, future use and exposure to tobacco smoke by children. 31% thirty one percent of girls and 25.4% of boys aged 16 smoke. 4.5% girls and 21% boys of the same age use snus. Marketing of tobacco to children is blatant as seen in stores, on the Internet and via social media. Five percent of children are exposed to tobacco smoke in the home. By using the CRC as a platform, this initiative aims to build argumentation to advance the WHO-FCTC at the Regional level in Sweden.

Response: The process included: conducting an expert work meeting, undergoing an analysis and implementing workshops in five geographic areas. Selection was based on community readiness whereby stakeholders were contacted for a telephone interview to determine capacity for workshops and incorporation the information into existing structures. Planning of the workshops included face-to-face meetings to identify the needs and opportunities for implementation of the WHO-FCTC. A strategic selection of employees in management positions related to

health, public health, services and education for children were invited to workshop. The analysis which is composed of information on common areas of the Conventions and application of this information to FCTC articles is presented as a working document and further improved by participant's input.

Results: Results include the production of an analysis of the WHO-FCTC using the CRC and further dissemination and development of the analysis by way of workshops at the Regional Government level. As the workshops will take place between October-November 2014 their preliminary results are to be presented in March 2015.

Conclusions: Tobacco use, exposure to tobacco smoke and marketing remains a public health challenge for children in Sweden. Legislative measures to deter children from using tobacco are found in the WHO-FCTC and its implementation is minimal in Sweden. Using the CRC, the resulting analysis has succeeded in building argumentation for legislative advances. An increased understanding for all layers of decision-making for tobacco control has already been seen.

OP-259-21 Tobacco endgame: smoke-free Sweden 2025

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Background: A number of countries are considering a sharpened strategy by deciding on a target year when tobacco use should be nil or close to nil. This abstract describes corresponding ambitions of the Swedish tobacco control NGOs.

Method: An advocacy campaign has been introduced with the aim to build public opinion for a government decision in the next few years containing two parts: i) cigarette smoking should be diminished to below 5 % of the population in 2025 and ii) a working plan to reach this goal, essentially containing the measures described in the FCTC.

To obtain wide and vocal public support for the government to act the information campaign is mounted at two levels. On the national level a wide range of organizations in all sectors of society are asked to support and take part in the advocacy.

On the regional and local level public health and tobacco control advocates have organized themselves to increase awareness and knowledge about the disastrous effects of tobacco use, the FCTC and the necessity to phase out tobacco smoking by implementing the FCTC.

An especially important target group consists of several thousand individuals running for a seat at local, regional and national parliaments in the election in September 2014 – the decision makers of the next four years!

Results: Within the first year about 50 organizations in all sectors of society have signed up and many more are considering to join. The advocacy campaign and its effects are

monitored, in terms of i) activities performed, tobacco use prevalence, population and politician attitudes as well as tobacco industry responses.

Conclusion: The campaign will continue until a government decision on an Endgame Strategy has been obtained.

OP-260-21 Ending the tobacco epidemic in the United States: healthy people 2020

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Background and challenges to implementation: Fifty years after the first Surgeon General's Report linked smoking and lung cancer, more than 480,000 Americans continue to die each year from smoking-related disease in the United States. Healthy People 2020 (HP2020) provides a road map with science-based, 10-year national objectives for improving the country's health, including 71 objectives related to tobacco use. HP2020 tracks progress made in reaching targets for tobacco use prevalence, health systems, and social and environmental change throughout the decade, and details evidence-based tobacco control interventions proven to be effective in reducing tobacco use.

Intervention or response: Tobacco use and secondhand smoke exposure cause serious diseases and deaths. Preventing tobacco use and helping people who use tobacco quit can improve the health and quality of life for many. Smoke-free policies have successfully reduced secondhand smoke exposure and denormalized smoking in public places. Despite this progress, the United States is not currently on track to achieve the HP2020 objective to reduce cigarette smoking among adults to 12% or less by the year 2020.

Results and lessons learnt: As a national initiative, Healthy People's success depends on a coordinated commitment to improve public health. HP2020 reflects assessments of major risks to health, changing public health priorities, and emerging issues related to health preparedness and prevention strategies. States and communities use Healthy People as a roadmap for tracking progress toward national health objectives. Due to current state tobacco control program funding levels in the United States, many states lack the time and resources often required to gather data related to tobacco prevention and control. HP2020 communicates high-priority health issues and interventions, as well as synthesizes data into health promotion tools allowing states and communities to gain increased access to information related to national tobacco prevention and control initiatives.

Conclusions and key recommendations: HP2020 offers a renewed emphasis on overcoming challenges in tobacco prevention and control efforts as progress is tracked over the course of the decade. The HP2020 framework and

indicators can be used as a template by other nations to assess national health, facilitate collaboration across sectors, and motivate action at the national and sub-national levels to improve health.

12. GLOBALISATION OF TOBACCO INTERFERENCE

OP-261-21 Intercountry coordination to counter tobacco industry interference in WHO South-East Asia Region

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Background and challenges to implementation: The tobacco industry used its usual technique of threatening governments with litigations to delay effective tobacco control measures in the WHO South-East Asia Region. Many countries in the Region faced with legal threats and court cases against implementation of smoke-free public places, large pictorial health warnings on cigarettes packages and on other tobacco products. The court cases had delayed implementation of these important measures in Indonesia, Nepal, Sri Lanka and Thailand for certain period of time. The industry used front groups such as tobacco farmers to protest against the legislations to come into force.

Intervention or response: The Tobacco Free Initiative programme of the WHO headquarters, WHO Regional Office for South-East Asia and country offices in the Region coordinated within WHO as well as with the counterparts in the Ministry of Health of these countries to fight against these litigations. Providing technical support and legal assistance by WHO to these countries and sharing of experience among countries on successful legal arguments had achieved huge success in the fight against court cases in these countries. Countries learned from each other and supported each other while WHO coordinates among them. A regional meeting and four country workshops on countering tobacco industry interference were conducted to enhance the capacity of the government officials in countering tobacco industry interference with tobacco control.

Results and lessons learnt: Indonesia, Nepal and Thailand have won the court cases and had started implementation of the measures; smoke free places in Indonesia, 75% graphic health warnings of front and back on all tobacco products in Nepal, 85% of both sides of cigarette packages in Thailand. There is a good progress in Sri Lanka for 80% graphic health warnings. Intercountry coordination and horizontal collaboration has been proven as an efficient mechanism in countering tobacco industry interference with tobacco control.

Conclusions and key recommendations: Inter-country coordination and sharing of best practices on successful arguments against industry litigations have proved to achieve good results. WHO and international organisations should coordinate among countries and provide technical support and legal advice.

OP-262-21 Seeing through the smoke: existing flexibilities in IIAs and BITs for tobacco control

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Background and challenges to implementation: Globally, most tobacco users begin their life-long addiction before they turn 18. Hence, tobacco control practitioners have been heartened by the option of plain packaging as an effective tool to significantly dent initiation. However, Australia's pioneering policy measure has met with stiff resistance from other states and the tobacco industry. Intellectual property rights, trademarks and other investor-related provisions in international investment agreements (IIAs) and bilateral investment treaties (BITs) are harnessed towards this end, posing an esoteric challenge to a well-thought public health policy tool.

Intervention or response: Tobacco companies imply threats of compensation due to them for the unfair expropriation of their intellectual property. This is a red herring that has caused a regulatory chill due to public health practitioners' ignorance of many provisions in IIAs and BITs that protect the rights of states to work for public health goals. Educating tobacco control advocates through an invited symposium presentation at the World Lung Conference, Paris (November 2013) and the National Pack Warning Workshop at Goa in India (April 2014) anticipates the need for greater knowledge of these provisions within the tobacco control community.

Results and lessons learnt: Informal feedback from practitioners at the Paris symposium and the National Workshop in India suggests there is great interest in learning about this area. This knowledge, at present limited to specialised international trade, arbitration and intellectual property rights journals, requires further simplification for productive application in tobacco control

Conclusions and key recommendations: Clearly, the greatest need is to disseminate this knowledge at national, regional and international forums. It is critical to demystify the complexities of international agreements, and to magnify the scope of (and the rights of) states to put in place policy measures without fear of exorbitant compen-

sation claims through litigation. Towards this end, educating tobacco control advocates at such conferences is the foremost recommendation proposed.

OP-263-21 Implementation of the Framework Convention on Tobacco Control in Africa: current Status of Legislation

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Background and challenges to implementation: To describe, as of July 2011, the status of tobacco control legislation in Africa in three key areas of the Framework Convention on Tobacco Control (FCTC)—(1) Protection from exposure to tobacco smoke, (2) Packaging and labelling of tobacco products, and (3) Tobacco advertising, promotion and sponsorship.

Intervention or response: Review and analysis of tobacco control legislation in Africa, media reports, journal articles, tobacco industry documents and data published in the 2011 WHO Report on the Global Tobacco Epidemic.

Results and lessons learnt: Modest progress in FCTC implementation in Africa with many countries having legislation or policies on the protection from exposure to tobacco smoke, however, only a handful of countries meet the standards of the FCTC Article 8 and its Guidelines particularly with regards to designated smoking areas. Little progress on packaging and labelling of tobacco products, with few countries having legislation meeting the minimum standards of the FCTC Article 11 and its Guidelines. Mauritius is the only African country with graphic or pictorial health warnings in place and has the largest warning labels in Africa. Slightly better progress in banning tobacco advertising, promotion and sponsorship has been shown by African countries, although the majority of legislation falls short of the standards of the FCTC Article 13 and its Guidelines. Despite their efforts, African countries' FCTC implementation at national level has not matched the strong regional commitment demonstrated during the FCTC treaty negotiations.

Conclusions and key recommendations: This study highlights the need for Africa to step up efforts to adopt and implement effective tobacco control legislation that is fully compliant with the FCTC. In order to achieve this, countries should prioritise resources for capacity building for drafting strong FCTC compliant legislation, research to inform policy and boost political will, and countering

the tobacco industry which is a major obstacle to FCTC implementation in Africa.

OP-264-21 Tobacco control: evaluating unique treatment of tobacco in trade treaties

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Background: In the Trans-Pacific Partnership Agreement, a multilateral trade agreement in which future trade and investment agreements (TIAs) are to be modeled after, both the US and Malaysia have their respective proposed languages to treat tobacco uniquely. Tobacco is now a key topic in discussions in trade negotiations. This study aims to assess the impact of these types of strategies on tobacco control.

Design/Methods: Existing strategies are culled from public statements and trade negotiation positions. FTAs were reviewed to look for any special treatment of tobacco products. WHA and FCTC documentation was searched for trade-related discussions. Strategies to treat tobacco differently were listed down and their impact on domestic policy is evaluated based on the stringency of specific tobacco control measures that would be affected.

Results: Various strategies to treat tobacco differently in trade treaties include:

- Exclusion from preferential tariff (Bangladesh, Bhutan, India, Jordan, Malaysia, Maldives, Nepal, Pakistan, Sri Lanka, and Vietnam);
- Exclusion in specific chapters (Australia);
- Exclusion by way of clarification that investments from tobacco industry are not welcome (Turkey); and,
- Imposing restrictions in trade negotiations, e.g., not to promote sale of tobacco in foreign countries (US).

Among countries found to have treated tobacco differently in a trade treaty, Australia, Malaysia, and Turkey have shown significant progress in implementing the FCTC with corresponding reduction in smoking prevalence in the past decade.

Conclusion: No correlation can be implied. In addition, none of the countries had shown consistency of behaviour in all their trade treaties. Nevertheless, the practices of some governments in treating tobacco in a unique manner during trade negotiations are encouraging signs that treating tobacco products differently is viable. Further research is needed to see how the health ministries have influenced these positions and to evaluate the extent to which public health policy has benefited.

OP-265-21 Tobacco industry interference in the UN system

D Sy

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Background: The tobacco industry (TI) has been deviant in resorting to numerous schemes, including exploiting international organizations, such as those in the UN System, thereby posing considerable challenges to FCTC parties in the implementation of FCTC's Art. 5.3. This study maps TI's interference in the UN System and cites case studies on how this affects domestic tobacco control policy development and implementation.

Design/Methods: This research employs an analysis of the reports of the Interagency Task Force on Tobacco Control, which involves numerous UN agencies. Websites of these UN agencies were reviewed for tobacco-related activities. Key informant interviews were done at country level to document domestic effects of TI interference at global level.

Results: Tobacco companies had not been excluded in the UN Global Compact despite protests of tobacco control advocates. TI's so-called CSR funding has found its way to the Interpol for anti-smuggling programs. According to the International Labor Organization's (ILO) website, the International Programme on the Elimination of Child Labour (IPEC) lists a transnational tobacco company as one of its donors. Events sponsored or endorsed by the World Customs Organization (WCO) and the International Monetary Fund (IMF) had been found to be attended by tobacco companies, creating access to policy-makers.

To illustrate the impact on domestic tobacco control, ILO's tripartite principle had been used by the TI in the Philippines to force health officials to meet with tobacco company representatives. Customs officials are desensitized to Art 5.3 principles after attending WCO-sponsored event that showcased a report that was funded by a prominent tobacco company.

Conclusion: Tobacco companies' liaisons with the UN agencies are designed to complement their strategies in interfering in domestic tobacco control efforts. Hence, the relationships fostered in WCO, indirectly, and ILO, directly. The companies take advantage of the fact that they are not excluded in the UN Global Compact, which is essentially a legitimization of their CSR. Thus, this would tend to normalize donations from TI, making it harder to impose comprehensive bans on tobacco advertising and sponsorship.

OP-266-21 The question of tobacco corporate social responsibility: trajectory, legal and political underpinnings and policy implications

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Background: Literature on tobacco corporate social responsibility (CSR) reveals that it is becoming a new paradigm for tobacco advertisement, promotion and sponsorship (TAPS) as the tobacco industry increasingly resorts to CSR in supporting their corporate marketing and corporate political activities. This development is in stark contradiction to the recommendations of FCTC. The upsurge of CSR-friendly legal and political frameworks at national and international levels, on the other hand, raises the question whether tobacco companies draw on the larger CSR movement to bypass TAPS ban regulations.

Design/Methods: Empirical level research: PMI's contributions to third parties for socially responsible causes, their so-called 'charitable giving program', is analysed for 2009-2013 to demonstrate the rise in the numbers, expenditure, and sophistication of tobacco CSR schemes throughout the world, and to look at underlying patterns and geographic distribution.

Content review: the UN Global Compact, OECD Guidelines for Multinational Enterprises, A Renewed EU Strategy 2011-2014 for CSR, and similar other initiatives are reviewed to identify policy recommendations that encourage tobacco CSR and potentially compete with FCTC recommendations.

Results: Findings indicate steady increase and proliferation of tobacco CSR and resultant large scale TAPS ban abuses across all regions, higher concentration of CSR effort in key markets, CSR used as a financial scheme to benefit larger business milieu of tobacco companies, and association with the moral authority of NGOs, GOs, universities, and red cross/crescent societies to substantiate their claim for "being part of the solution".

The analysis of international CSR policy documents reveals that they specifically avoid excluding tobacco corporations since their underlying prepositions are that CSR should be applicable to all corporations, and through CSR it is possible to prevent and mitigate adverse impact of business transactions and at the same time maximize shared value for shareholders, stakeholders, and society at large.

Conclusion: Tobacco CSR has multiplied negative consequences on public health as it has vast potential to conceal problems and defer real solutions. Tobacco CSR needs to be researched by taking into account political/legal frameworks in which it occurs, and comprehensive policies need to be developed that effectively address the impact of these frameworks and block and penalize TAPS ban abuses at all levels.

13. THE ROLE OF TOBACCO CONTROL ACTIVISTS

OP-267-21 BASTA! eight years of youth activism in Argentina

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Background and challenges to implementation: During the 13th World Conference on Tobacco or Health (WC-TOH) held in Washington DC in 2006, five Latin American youth from Argentina, Brazil, Chile, Uruguay, and Colombia, came together to create an organization called BASTA!.

BASTA! mainly focuses on the creation of programs that address youth smoking prevention and tobacco control advocacy.

One year later, only BASTA! Argentina continued working, and used a platform based on youth activism and reaching out to volunteers from all corners of Argentina. Despite of a challenging economy and lack of funding, BASTA! has succeeded in continuing with their work.

Intervention or response: Since 2006, BASTA! has been actively engaged in the community by bringing World No Tobacco Day and Free Air International Day to the forefront of the local agenda. It has also taken part in several global youth activism initiatives promoted by youth organizations from around the World. BASTA! has its own Facebook page, a Twitter account, as well as a blog. Social media is our tool of choice to reach out to those looking for information regarding tobacco legislation, advocacy, and participation.

Results and lessons learnt: After eight years of hard and uninterrupted work, BASTA! has become a leading youth organization in the World. We are proud to have been able to position ourselves as a youth organization that is known and recognized not only in Argentina but also among our South American neighbors.

In addition, BASTA! has been a point of reference for many other organizations involved in tobacco control advocacy activities worldwide. Its members have been invited to take part in international conferences such as the 13th WCTOH, 14th WCTOH, 15th WCTOH and the Society for Research on Nicotine and Tobacco (SRNT) Conference in 2007 in Brazil. BASTA!'s blog has now 38,704 visitors, BASTA!'s Facebook, which is a private group, has 86 members from across South America, and BASTA!'s Twitter account has 348 followers.

Conclusions and key recommendations: BASTA! is an organization that believes success is based on the hard work and commitment of its members. Facing the challenges is part of their work in the way to become a tobacco free youth.

OP-268-21 Transparency as a remedy against racketeering: fulfilling the promise of exposing big tobacco's dirty secrets

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Background: This paper adds to the published works related to tobacco document research by explaining the recently enhanced document disclosure obligations placed on the major U.S. tobacco companies as a result of federal litigation, including the recent public release of certain documents in the course of events in the litigation leading up to these new requirements.

Design/Methods: Public filings and judicial orders or opinions from the United States District Court for the District of Columbia were reviewed.

Results: We summarise and explain the new legal framework and enhanced document disclosure obligations of the major U.S. tobacco companies. We describe the events leading up to these new requirements, including the tobacco companies' failed attempt to close the Minnesota Tobacco Document Depository, the release of 100,000 documents onto the companies' document websites discovered to have been publicly available at the Minnesota Tobacco Document Depository but not online, and the addition of over 2,300 documents to those websites and now publicly available at Minnesota after being secured for years in a separate, nonpublic storage room at the Minnesota Tobacco Document Depository. We also detail the document indexing enhancements and redesign of the University of California, San Francisco's Legacy Tobacco Documents Library website, made possible by the RICO litigation, and which is anticipated to be released in September 2014.

Conclusion: These transparency measures provide public health advocates, lawyers and researchers an opportunity to not only continue to expose the tobacco industry's past bad acts, but to also monitor U.S. tobacco firms' ongoing behavior through new search enhancements and improved document accessibility and due to the continuously growing document collection until September 2021.

OP-269-21 The tobacco control activist and the tobacco control bureaucrat: an unlikely but essential and successful relationship

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Background and challenges to implementation: Uncompromising anti-smoking activists may prefer to adopt a demanding public pose, but the goals of the savviest

activists, and the movement as a whole, are more likely to be achieved by taking a harmonious and respectful approach to health officials behind the scenes. In return, public health program directors who are responsible for achieving tobacco control goals while balancing political pressures, tight budgets, and the morale of often overly risk-averse employees of large bureaucracies, can benefit from frank dialogue with even the most impatient activists. Indeed, the outspoken and sometimes controversial views of activists can enable the health official to espouse a stronger public policy than he or she might have been able to articulate. Policy can thus be implemented that is more substantive and less symbolic.

Intervention and response Such has been the relationship for more than 30 years between two physicians and veteran tobacco control strategists, who have formed a bond that has also benefited tobacco control and public health. One founded the first physicians' anti-smoking organization (Doctors Ought to Care, [DOC]) and is a professor at a medical school; the other directed the largest state tobacco control program in the US (California) and is a leader in national organizations. One is an outsider; the other, part of the system. Together they have shared observations of tobacco control since the 1970s and have critiqued each others' priorities and styles.

Results and lessons learnt The result has been a closeness and an opportunity to join forces in opposing the tobacco industry's deceptions and its tactic of dividing the health community, such as in the areas of harm reduction and e-cigarettes.

Conclusions and key recommendations: Successful examples in several nations of the implementation of assertive tobacco control policies originally called for by activists include BUGA-Up in Australia and Physicians for a Smoke-Free Canada. And in the 1970s and 1980s, long before government-created offices of tobacco control, anti-smoking activists in the US and Canada successfully led the fight for passage of clean indoor air legislation. Reconciling the continuum between activism and legislated policy can be successfully applied to everyday situations of tobacco control workers worldwide.

OP-270-21 Defeating big tobacco in the Big Apple: how New York City became an international model for tobacco control activism
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Background and challenges to implementation: For most of the past half-century, the global headquarters of the tobacco industry and its allies has been New York City, home to the largest cigarette manufacturers, their advertising and public relations companies, and their major investment firms and banks. The industry wielded further influence by advertising heavily in *The New York Times*, on mass transit systems, and on billboards in the city's sports stadiums, as well as by sponsoring the leading arts groups, including museums and libraries, opera and dance companies, and the city's largest music festivals.

Intervention or response: But beginning in the early-1980s New York City also produced pioneering anti-smoking strategists and organizations such as media expert Tony Schwartz, activist Joe Cherner, lung cancer surgeon Dr. William Cahan, the Reverend Calvin Butts, the counter-advertising group DOC (Doctors Ought to Care), and the theme issues on the world tobacco pandemic of the *New York State Journal of Medicine* [edited by the presenter], all of whose efforts laid the foundation for the visionary, comprehensive tobacco control initiative of Mayor Michael Bloomberg and Health Commissioner Tom Frieden in the 2000s.

Results and lessons learnt: This illustrated analysis is drawn from personal journals; an extensive archive of print and broadcast media news stories on antismoking activism personally collected since 1980; personal interviews with key tobacco control strategists and tobacco industry representatives; marketing and tobacco industry publications; tobacco industry documents; and personal ethnographic photo-documentation of tobacco advertisements and sponsorships throughout New York City over a 30-year period.

Conclusions and key recommendations: This presentation highlights the importance of identifying obstacles and opponents in the quest to implement tobacco control policies, as well as fear and foot-dragging within tobacco control coalitions; elucidates economic, cultural, and mass media factors that affect debates on tobacco control policy; and retraces key elements of the successes and setbacks behind the hard-fought battles that have led New York to become the model city for curbing tobacco use and promotion.

14. TOBACCO CONTROL PARTNERSHIPS

OP-271-21 Effectiveness of an intervention to teach physicians how to assist patients quit smoking in Argentina

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Background: Physicians who routinely identify smokers and provide cessation advice with or without pharmacological treatment, can increase the quit rate of their patients. We tested whether an evidence-based intervention to teach physicians how to help their patients who smoke quit, would result in higher cessation rates compared to usual care in Argentina, a middle-income country.

Design/Methods: General internists, family physicians and gynecologists were recruited from six clinical systems (private practices, HMO, public clinics) and randomized to intervention or usual care. The intervention consisted of two, 3-hour sessions including a standard didactic curriculum and referral resources. Smoking patients who saw participating physicians within 30 days of the intervention (index visit) were randomly sampled and interviewed by telephone at months 1, 6 and 12 after their index visit. The main outcome was tobacco abstinence at 6 or 12 months; secondary outcomes included quit attempt in the past month, use of medications to quit smoking, motivation to quit smoking, and number of cigarettes smoked per day. Repeated measures on the same participants were accommodated via generalized linear latent and mixed models (GLLAMM) analysis in Stata version 11.2.

Results: 254 physicians (124 internists, 57 family physicians, 73 gynecologists) were randomized; average age was 44.5 y, 133 were women and 12% smoked. There was no previous training on tobacco cessation among 24%; 41% reported previous training as good/excellent. A total of 1,378 smoking patients were surveyed; 81% were women, 45% had >12 years of education, 81% had rated their health status as good or excellent, and 63% had access to Internet. At 1 month, most patients (77%) reported daily smoking, 20% smoked some days and 3% had already quit smoking. Mean number of cigarettes smoked per day was 12.9 (SD=8.8) and 23% were ready to would quit within the next month while 26% indicated they were planning to quit within the next 12 months. By 12 months, 23% of patients in the control group and 25% in the intervention group had quit smoking ($p = 0.617$) compared to only 3% in each group at 1 month. The increase on the quit rate over time was similar for intervention and control groups.

Conclusion: Providing standardized training in tobacco cessation to physicians did not improve the cessation rates among their patients at 12 months.

OP-272-21 Attitudes of key RNTCP staff on a joint, collaborative programme to combat the global epidemics of TB and Tobacco

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Background: Globally, 20% of the tuberculosis (TB) incidence and 40% of the TB burden in India is attributed to tobacco. India ranks among the top five countries for a high burden of TB and tobacco. In spite of the intricate linkage of TB and tobacco, national programs address these epidemics disjointedly. An initial step in the initiation of a joint program is to assess the attitudes and acceptance of field staff.

Materials and methods: A semi-structured questionnaire was administered among key staff working in the Revised National TB Control Programme (RNTCP) in collaboration with Project Axshya under Catholic Health Association of India among four states of India, Uttar Pradesh, Jharkhand, Punjab and Tamil Nadu. Information gathered included the number of years the respondent has been working in the TB programme, education, designation and whether they were regular participants in TB training programmes. Attitudes towards inclusion of tobacco cessation activities in RNTCP, joint methods to combat the epidemics and if the respondents supported inclusion of tobacco control in RNTCP, the nature of involvement of staff were assessed on a three point Likert scale. If the respondents were not supportive of inclusion of tobacco control activities in RNTCP, the reasons thereof were evaluated.

Results: A total of 288 RNTCP staff participated in the study with a mean work experience in the field of TB of 6.4 ± 3.76 years ranging from a minimum of 1 year to a maximum of 23 years. All designations of staff were interviewed, ranging from grass root level works to state coordinators. An overwhelming 265 (92%) agreed that tobacco cessation activities will help control the epidemic of TB and 232 (80.6%) felt that tobacco control activities should be included as core activities in RNTCP. 101 (35.1%) of the respondents felt that TB patients need further education regarding the hazards of smoking. 213 (74%) responded that special staff will be required for tobacco cessation activities and 150 (52.1%) felt that there will be an additional monetary cost if a joint, collaborative programme is conducted.

Discussion: Though pilot programmes for joint tobacco and TB control are being evaluated, India follows a non-integrated approach towards the two global epidemics. Further impetus is required for promulgation of tobacco cessation activities through the existing framework of the TB control programme with inputs from key stakeholders and by addressing operational concerns.

OP-273-21 Regional strategic partnership among ASEAN countries for desired tobacco control policy

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Background and challenges to implementation: This paper emphasizes on the supremacy of fostering regional collaboration and strategic partnerships among ASEAN countries to attain tobacco control policy change.

Recognition of the power of working together to fight transnational tobacco companies' global expansion-into ASEAN markets and the growing tobacco epidemic has led to the establishment of a regional anti-smoking movement, the Southeast Asia Tobacco Control Alliance (SEATCA), in 2001.

Intervention or response: Built on common goals, SEATCA progressively forged strategic partnerships with various government and non-government organizations, universities, and the World Health Organization (WHO) in most ASEAN countries to advance comprehensive implementation of the Framework Convention on Tobacco Control (FCTC).

SEATCA provides a regional platform and catalyze to advance tobacco control policy by fostering strong commitments and participation of various stakeholders and strengthening local capacity. These partnerships were cemented through different channels by providing technical assistance through regional and country consultations, meetings/workshops, on-going capacity building in advocacy, research and communicating evidences for effective tobacco control policy development and implementation. These approaches empower and encourage country partners to contribute ideas, take initiatives, articulate challenges and work hand-in-hand with SEATCA to counter tobacco industry interference and strengthen tobacco control policy.

Results and lessons learnt: Over the past five years, strong collaborative partnership built upon common goals and need-based, trustful relationship, knowledge and resources sharing among ASEAN countries lead to progress in strengthening tobacco control policies including:

- Passing tobacco control law in Lao PDR (2009) and in Vietnam (2012)
- Implementing pictorial health warnings in Malaysia (2009), Vietnam (2013) and Indonesia (2014)
- Enacting of Sin Tax Law in the Philippines (2012)
- Passing of Sub-Decree to increase excise tax in Cambodia (2014) and banning tobacco-advertising (2011)
- Countering tobacco industry's trade fair in Thailand (2009), Indonesia (2012), Philippines (2012/2013)

Conclusions and key recommendations: It is evident that strategic partnership across ASEAN countries is crucial to advance tobacco control policies towards a shared vision for a healthy and tobacco-free ASEAN.

OP-274-21 Using YouTube as a vehicle for tobacco control communication

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Background and challenges: As the Internet continues to thrive, and the demand for content is at its highest levels, videos are becoming a staple of content on the web. Considering that a third of all online activity is attributed to video content, communication strategies should incorporate and consider the use of videos to effectively communicate to their audience. Of four prominent video sharing sites in the world, YouTube, Vimeo, Netflix and Vube, YouTube is the leader with more than 1 billion unique visitors a month, availability in 61 countries, and accessible by over 100 million devices worldwide. The average Internet user is exposed to an average of 32.2 videos in a month.

Intervention: The Institute for Global Tobacco Control (IGTC) at the Johns Hopkins Bloomberg School of Public Health began generating content for YouTube over the past year. With an Innovations in Tobacco Control Lecture series as well as smaller "infomercials" regarding some of our projects, we have begun to lay the foundation for a tobacco control media channel with a variety of programs aimed at educating and informing professionals about tobacco control.

Results and lessons learnt: The analytics provided by YouTube allow us to assess content reach. Currently, individuals from 107 countries have accessed at least one of our videos. Prior to 2013, IGTC had minimal activity on YouTube and one of the things we wanted to implement was the addition of videos specifically catered to tobacco control professionals. Two standouts this year were our Tobacco Pack Surveillance System (TPackSS) introductory video and our tobacco taxation video for World No Tobacco Day. With over 300 views within the first month of being released, these videos proved that there is a desire for videos in tobacco control.

Conclusions: YouTube is an effective medium for showcasing work when used correctly. YouTube works best when there is a consistent feed of content being posted. The more content posted, the better YouTube's referral system can work. 25% of IGTC's YouTube channel traffic is a result of YouTube's referrals. Moving forward, IGTC would like to create more videos using more engaging formats other than the "talking head" format, within the reality of limited financial resources. Organizations looking to use YouTube as a delivery channel for videos should consider creating an editorial schedule of videos and looking at what narrative format would be most engaging for their target audience.

SATURDAY, 21 MARCH 2015, 12:45 À 13:45 POSTER DISCUSSION SESSIONS

43. MONITORING THE IMPACT OF FCTC IMPLEMENTATION

PD-1087-21 Lessons learnt from the achievement of a dedicated health surcharge on tobacco products in Bangladesh

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Background: Although it is well known that the single most effective measure to reduce tobacco use is to increase taxes on tobacco, it is also possibly the single most difficult to achieve. The tobacco industry exerts a strong influence over taxation departments, while tobacco control advocates typically have little access. Tobacco control advocates also often are not well informed about the intricacies of taxation issues, making it difficult for us to engage in successful advocacy on the issue.

Response: For over a decade, tobacco control advocates in Bangladesh have sought to gain sustained increases in tobacco taxes. Advocates have attended and organized trainings, worked to involve the public through various campaigns including on the streets and through conventional and social media, produced materials, and met with various policymakers to show them how public health and the economy will benefit from higher taxes on tobacco. In recent years, we also pushed for a surcharge on tobacco products to be dedicated to public health.

Results and lessons learnt: Over the years, we have had little success in gaining significant increases in tobacco taxes. There have also been gaps in the tax treatment of different tobacco products. In 2014, there was a small increase in tobacco taxes, while the tax on smokeless tobacco doubled from 30% to 60%. Further, a one percent dedicated health surcharge was imposed on all tobacco products. The key aspect of our campaign was the targeting of specific Members of Parliament (MPs). In the past, MPs have resisted increases in tobacco tax. By training our network members to organize meetings with their MPs and to send them regular letters on the issue, we were able, over the course of a multi-year campaign, to bring enough MPs to our side as to ensure approval of the tax.

Conclusions: While the tobacco industry has significant influence on government, that influence can be broken not through matching their spending dollar for dollar, but rather through provision of good quality, clear, and timely information. A taxation campaign takes time—sometimes years—and requires careful planning and smart strategizing. Given funding crises of governments, the argument

that a surcharge will create an important fund for health can also be a strong argument. It is well worth the effort given the possibility of creating a genuinely sustainable funding mechanism for health.

PD-1088-21 Socioeconomic status and alcohol pricing: examining the impact on tobacco smoking in India

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Background: To examine the impact of tobacco and alcohol prices on smoking tobacco use in India with special attention to socioeconomic differences.

Design/Methods: Using a two-equation system of budget shares and unit values that attempts to correct for quality and measurement error, we first use household data from the most recent four consecutive rounds of the quinquennial National Sample Survey (NSS) (NSS 50, 55, 61 and 64 conducted in 1993/94, 1999/00, 2004/05 and 2009/10). Second, we pool data from nine NSS rounds (NSS 55-57, 59-64, 66,68) conducted between 1999/00 to 2011/12 and link these household data to retail prices collected as part of two of India's Consumer Price Indices (CPI).

Results: Our analyses of single and repeated cross-sections yield own-price elasticity for bidis that are roughly in keeping with existing evidence. We find, however, that own-price elasticity for cigarettes in India is substantially larger than previously thought. Our estimates suggest that cigarette users are at least as responsive as bidi users to price changes. On the whole, our analyses suggest that low socioeconomic status (SES) households are likely, but only marginally, more responsive to price changes than high SES households. Our extensive sensitivity analyses suggest that, on the whole, our estimates are robust to alternative specifications.

Conclusion: Findings from this study provide additional evidence of the effectiveness of tobacco prices at reducing tobacco use. Increasing the price of smoking tobacco products, in addition to leading to reduced tobacco use, can be expected to increase tax revenue. Household-level data, unlike individual-level data, do not allow to examine price responsiveness by individual characteristics such as sex or age. Household-level data also renders the interpretation of cross-price effects less evident. This is an important limitation of our analyses as smoking patterns vary considerably by type (e.g. bidi, cigarette, smokeless), age and sex in India and a promising opportunity for future research.

PD-1089-21 Positive reactions to third-hand smoke exposure are associated with smoking susceptibility among young children in Hong Kong

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Background: Positive reactions to the first cigarette and secondhand smoke (SHS) predict future smoking. Whether such reactions to third-hand smoke (THS) affect smoking is uncertain. We investigated the cross-sectional associations of reactions to THS with smoking susceptibility and ever smoking among Chinese children.

Methods: A school-based survey was conducted on 5365 primary 2-4 students (54.5% boys; mean age 8.6 years, SD 1.3) from 34 randomly selected schools in Hong Kong using an anonymous self-administered questionnaire. Students were asked "when you can smell cigarette from objects or people, yet no one smokes around, which of the following reactions/feelings do you have", with ten options, i.e. pleased/happy, nausea, excited, heart beat faster, relaxed, dislike the smell, like the smell, dizzy, cough/choking and eye discomfort. Information on smoking susceptibility, smoking and socio-demographic characteristics was also collected. Factor structure of student's reactions to THS was assessed using varimax rotation with summary scores calculated for each factor and categorised into different types of reactions. Logistic regression yielded adjusted odds ratios (AORs) of smoking susceptibility in never smokers, and ever smoking in relation to the types of reactions adjusting for age, sex, number of bedrooms at home (as proxy of socioeconomic status), father smoking, mother smoking, grandfather smoking, SHS exposure at home and outside home and school clustering effect.

Results: Two dimensions of reactions were identified, each of which captured four positive (pleased/happy, excited, relaxed and like the smell) or negative (nausea, dizzy, cough/choking and eye discomfort) reactions. Negative reactions (49.6%) to THS were much more prevalent than positive reactions (6.9%), while 44.4% did not report any reactions. AORs (95% CI) of smoking susceptibility and ever smoking for any positive reactions to THS exposure compared with no positive reactions were 3.68 (2.64-5.14) and 3.36 (2.18-5.17), respectively. The corresponding AORs (95% CI) for any negative reactions compared with no negative reactions were 0.56 (0.39-0.79) and 0.88 (0.66-1.16).

Conclusions: Our study found that, among young children, positive reactions to THS exposure were associated with smoking susceptibility and ever smoking, and negative reaction was associated with lower smoking susceptibility. Longitudinal studies are needed to confirm such associations.

PD-1090-21 How a standardised work plan lead to rapid expansion of smoke-free in India: experience from 60 jurisdictions

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Background and challenges to implementation: India's Cigarettes and other Tobacco Products Act (COTPA) 2003 and its rules prohibit smoking at public places, workplaces and many open places frequently visited by people. More than twenty categories of government officials have been notified and empowered to enforce smoke-free and take action against violations. Since 2008, many jurisdictions which include cities, districts and states have gone Smoke-free after effective enforcement of legislation and based on a third party compliance assessment to smoke-free provisions of the legislation. A standardised work plan was used to implement smokefree which proved very useful, easy to implement and cost effective in expanding Smoke-free across India.

Intervention or response: A standardised work plan with six objectives was used to implement smoke-free through Bloomberg Initiative grants programme with financial and technical assistance or technical assistance alone by The Union South-East Asia (The Union) office in India. The measurable objectives included creation of a politico-administrative and infrastructure framework; capacity building to enforce the law; establish an enforcement mechanism; establishing partnerships and networks; public education; and strategic policy focussed research, monitoring and evaluation.

Results and lessons learnt: Four states (Sikkim, Delhi, Mizoram and Himachal Pradesh), 17 cities, 39 districts have achieved high level of compliance to smoke-free laws and became or were declared smoke-free by respective government authorities. The smoke-free compliance assessment using a protocol jointly developed by Johns Hopkins, Campaign for Tobacco Free Kids (CTFK) and The Union was done to assess the compliance to smoke-free laws in these jurisdictions.

Conclusions and key recommendations: Despite India having enacted an anti-tobacco legislation, the enforcement of various provisions of this law including Smoke-free remains a challenge across the country. The enforcement officials and programme managers were not fully aware of the steps need to be taken to achieve Smoke-free. This standardised work plan with clear timelines helped them immensely to achieve smoke-free status of their jurisdictions in a short time and was easy to implement, cost effective, replicable and sustainable. The Union is using this framework to expand smoke-free up to sub-district and village level in India. The detailed findings will be presented at the conference.

PD-1091-21 Analysis of the decision to initiate smoking in Mexico: a behavioral economics approach

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Background: In Mexico, 21.7% of the population aged 12 to 65 years old is smoker and smoking causes nearly 47000 deaths annually. It has been estimated that teenagers who become daily smokers begin smoking every day

at 14.1 years old. The objective of this study is assess the decision of initiating smoking in individuals aged 12 to 25 years in Mexico.

Design/Methods: We used the National Addictions Survey 2011 (with national representativeness) as the main source of information. Structural Equations Models with probit specifications were estimated to identify factors associated with initiation, calculating direct and indirect effects. We adopted the behavioral economics framework to conceptualize the phenomenon, including variables that may challenge the rational assumption in the standard economic decision model, regarding rational time preferences, states of the world beliefs and deviations from standard decision-making.

Structural Equations Models with probit specification. Smoking initiation in persons aged 12-25 years. Mexico, National Addictions Survey, 2011.							
Variable	Direct Effect		Standard error	Indirect effect		Standard Error	Total Effect
Age	-0,039	**	0,02	-0,009	**	0,004	-0,047
Sex	0,183	*	0,104	-0,024		0,082	0,159
Psychological distress	-0,018		0,067	0,079		0,048	0,06
Suicidal ideation or attempt	0,153	*	0,092	0		0	0,153
Illegal drugs use perception	-0,13		0,257	0	***	0	-0,13
Individual factors							
Antisocial behaviors and criminality	0,16	***	0,061	0	***	0	0,16
Religion	-0,209	**	0,106	0	***	0	-0,209
Civil status	-0,217	*	0,125	-0,031		0,044	-0,247
Education	0,155	**	0,064	-0,037	**	0,02	0,117
Inactivity	0,209	**	0,1	0,024		0,017	0,233
Medical insurance	-0,005		0,075	0,004		0,005	-0,001
Alcohol consumption last year	0,796	***	0,075	0,141	***	0,039	0,937
Consumption of illegal drugs	0,308		0,198	0,259	***	0,071	0,567
Environmental factors							
Town size	0,018		0,087	0,006		0,027	0,024
Smoking restrictions at home	-0,029		0,097	0	***	0	-0,029
Nuclear household	0,083		0,069	0,031		0,023	0,114
Smoking peers	0,137	*	0,07	0	***	0	0,137
Dangerous context in house	0,086		0,077	0,077	***	0,026	0,164
Factors subject to policy							
Tobacco control advertisements	-0,197	**	0,087	0	***	0	-0,197
Environmental tobacco smoke	0,187	***	0,07	0	***	0	0,187
* p<0.1							
** p<0.05.							
*** p<0.01.							
Parameters	55						
CFI:	0,952						
TLI:	0,844						

Results: As seen in the table attached, we found statistical association between the following factors and initiation: age, sex, suicide attempt (a proxy variable to emotions), antisocial behaviors and criminality (a proxy for discount rate), religion, marital status, education, inactivity, alcohol consumption, illegal drugs consumption, smoker peers (social pressure), dangerous household context (framing effect), antismoking advertising and environmental tobacco smoke (perceived states of the world).

Conclusion: Initiation is subject to a complex process of decision that suggests deviations from economic rationality where individuals aim to maximize utility but the con-

text plays a critic role. We found that key variables are significant. Therefore, the Behavioral Economics approach is a worthwhile and innovative instrument to support policy design and evaluation in tobacco control and other health problems. Our findings are useful to support new tobacco control policies in Mexico, focused on the population aged 12-25 years, that can be reached thru schools and colleges. Our results are also helpful as a reference to the design of current and new tobacco and addictions surveys.

PD-1092-21 Impact evaluation of tobacco control interventions in Pakistan

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Background: Tobacco smoking is a man-made epidemic in Pakistan. It kills 274 persons per day in the country. The youth is primarily targeted by the tobacco companies. Pakistan is a signatory of Framework Convention on Tobacco Control (FTCC). The country has taken major steps in implementing its obligations through a long-term project.

Methods: To assess the impact of the project activities on behavior change of the smokers, 242 smokers were recruited from the 11 model districts. Semi-structured questionnaires were distributed in face to face interviews. Logistic regression was applied to assess change in behaviors of the respondents.

Results: Three measures undertaken: (a) awareness, (b) price measures, and (c) smoke-free public places on reducing smoking of the respondents were analysed. The adjusted R was 0.423 depicting 42% variation in behaviour towards the three measures. Out of the three, the price measures showed more variation (0.631 or 63%) while the others, awareness (0.153 or 15%) and smoke-free public places (0.193 or 19%) had lesser variation in changing behaviors of the respondents.

Conclusions: Taxing the cigarette prices in Pakistan are more effective in bring marked change in behaviors of the current smokers.

PD-1093-21 Research and advocacy for changes in ECOWAS and WAEMU countries: toward better implementation of Article 6 in the West African region

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Background and challenges to implementation: The main obstacle regarding tobacco taxation in West Africa was that tobacco taxation was not considered enough as a public health instrument, and this, despite the fact that all West African countries have ratified the Framework Convention on Tobacco Control (FCTC). Other noteworthy issues were the fact that there was not any multidisciplinary approach of tobacco taxation matters, and the lack of collaboration between researchers and West African policy makers on the formulation and application of tobacco related fiscal policies. There also was very few available data on tobacco in West African Countries, which restrained the possibility for policy makers to make an accurate evaluation of the impact of the reforms.

Intervention or response: In each country, we elaborated a country profile on tobacco taxation and compiled these information in one regional synthesis. We organized a regional conference, in order to share the documents we

produced and to allow the stakeholders to have a reflection about tobacco taxation issues in West Africa. We produced and shared 16 policy briefs based on country profiles, and a document called "argumentaire", that gathers arguments in favor of changes in the taxation policies. We organized two workshops with all West African countries, and at the end these meetings a proposal of new regional directive on tobacco taxation has been officially submitted to ECOWAS and WAEMU authorities

Results and lessons learnt: The project contributed to effective changes on taxation, in four West African countries. A change on tobacco taxation policy is about to being adopted at a regional level with ECOWAS Commission, who convened a statutory meeting and officially recommended to the ECOWAS Council of Ministers the adoption of the proposal of regional directives we elaborated. The project has resulted in considerable rise of awareness among national and regional decision makers, the civil society and the public opinion. It contributed to create synergy between the different stakeholders of tobacco control at a national and regional level.

Conclusions and key recommendations: Despite all constraints the projects lead to significative changes in West Africa policies. The key factor that explains this success is the combination of research and advocacy activities during the project. The collaboration between researchers, decisions makers and civil society was also a very important aspect.

PD-1094-21 Implementation of a regulation on pictorial health warnings

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Background and challenges to implementation: Sri Lanka became a Party to the FCTC in 2003 as the first Asian country. Though PHW regulation should have been implemented by 2008, it was not implemented due to administrative negligence. The major obstacle was overt judicial inferences resorted to, through covert influence exerted by the tobacco industry, hiring some of the best lawyers in the country. Jeewaka Foundation in collaboration of the National Authority on Tobacco and Alcohol (NATA) held a series of media awareness raising workshops, including an exhibition drawing the attention of the general public in the entire country and policy makers, highlighting the importance of implementation of PHW regulation and that highest coverage of PHWs matters, a lot in reducing consumption.

Intervention or response: Development of publications on PHW Meeting policy makers including the Health Minister Conducting an island-wide signature campaign among the general public Writing articles to newspapers on the subject covering entire country Promoting tobacco programs on national televisions and newspapers covering entire country, interviewing both government and public figures including Parliamentarians, lawyers etc. Holding workshops and small group meetings creating public education on the industry interventions

Results and lessons learnt: The PHW regulation was gazetted in August 2012 (pending implementation due to a legal case filed by the tobacco company in Sri Lanka on the percentage of the area of the cigarette packets on which the PHWs should be displayed. NATA says 80%, industry says 50-60% and they are asking for more time to prevent and delay implementation of PHWs. Currently supporting NATA to fight for 80% and speedy implementation

Conclusions and key recommendations: This long delayed regulation (Article 11) of the FCTC was gazetted in August 2012 amidst much industry pressure. It was a huge campaign launched for over 4 years. Both the electronic and print media did a vibrant campaign proving the support obtained through the media.

PD-1095-21 Reduction of tobacco consumption through mass media education

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Background and challenges to implementation: Smoking prevalence in Sri Lanka with a population of 20 million people is fairly high; annually 21,000 people die of tobacco related diseases. Therefore raising awareness on the hazards of smoking among people is vital. According to the World Health Organization, media is a leading stakeholder in promoting tobacco control in a country as they have the highest approach to general public. Thus as communicators to the entire society, constant and extensive contribution of media is vital for maintaining effective tobacco control by enlightening public on the hazards of smoking and to pressurizing policy makers for implementation of important laws. Empowering of media to react to industry interference and promotion too is vital. Media should be enlightened constantly on current worldwide and national issues relating to the subject. It is also necessary to monitor media involvement and to improve their strengths.

Intervention or response: Series of seminars for media were conducted on the need for strong law enforcement/compliance. Materials were developed and disseminated among media personnel highlighting the importance of law and FCTC implementation, violations of law and weaknesses in FCTC implementation, and suggestions for improvement. The Authority on Tobacco and Alcohol (NATA) supported the project activities with necessary technical expertise. The entire country was focused in these interventions, enlightening general public on the hazards of smoking.

Results and lessons learnt: Positive media response and enhanced contribution Media counteraction to Industry strategies Wide and encouraging response from general public

Conclusions and key recommendations: The media plays an important role in tobacco control, especially in creating awareness on the consequences of smoking which is very important in reducing consumption of tobacco products.

Media has become a watch dog to reiterate and pressurize on delays in law implementation. Opinion columns and editorials appearing frequently on the need of implementation of tobacco control laws.

PD-1096-21 Monitoring the implementation of WHO Framework Convention on tobacco control using secondary data in former Soviet Union countries

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Background: Despite WHO recommendations to monitor tobacco use in order to inform tobacco control policies, there is a lack of information on tobacco smoking from Former Soviet Union (FSU) countries. In recent years some attempts have been made to compare smoking prevalence, tobacco smoking policies between some countries in this region. However, due to lack of data, not all FSU countries were included in those publications, and these studies used a different study design, which makes it difficult to compare results across countries in the region. Response: One solution to these issues is to use data from common survey methodology, such as Global Youth Tobacco Survey (GYTS). The GYTS is a school-based survey, which uses a two-stage sample design to produce representative, independent, cross-sectional estimates. The GYTS was conducted in ten out of twelve FSU countries from 1999 to 2008.

Results: This study revealed that there was a wide variation in the changes among FSU countries over time: increase in smoking, smoking initiation, second hand exposure, decrease in supporting bans on smoking, having classes on the effects and dangers of smoking, desire to stop smoking, attempts to stop smoking, receiving smoking-cessation advice, and seeing fewer tobacco advertisements on newspapers and billboards. Indeed, these are encouraging changes and need to be maintained. In contrast, seeing actors smoking on TV stayed almost unchanged over time, and ownership of an object with a tobacco logo increased in Ukraine and Kyrgyzstan, while more youth in all countries except Moldova were offered free cigarettes.

Conclusion: Overall, our study shows that FSU countries had positive changes in tobacco use prevalence and perception of tobacco among youth over time. Our findings should be used as baseline measures for future tobacco control interventions aimed at reducing tobacco use among youth. Moreover, our results call for the enforcement of restricting advertising for tobacco products.

PD-1097-21 Monitoring the implementation of WHO Framework Convention on Tobacco Control using secondary data in WHO Eastern Mediterranean Region (EMR) countries

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Background: The Middle East has been targeted by transnational tobacco companies since 1970s as a key emerging market because of its young and growing population. In recent years several attempts have been made to compare smoking prevalence among youth in WHO EMR countries and link it to the tobacco control policies. However, these studies used a different study design, which makes it difficult to compare results across countries in the region. Response: One solution to these issues is to use data from common survey methodology, such as Global Youth Tobacco Survey (GYTS). The GYTS is a school-based survey, which uses a two-stage sample design to produce representative, independent, cross-sectional estimates. The GYTS was conducted in 23 countries in the WHO EMR from 1999 to 2008.

Results: The results show a major problem with tobacco in these countries. In fact, four WHO EMR countries (Gaza Strip, Morocco, Somalia, and West Bank) have not yet ratified FCTC. In 18 WHO EMR countries GYTS was

conducted more than once, which allowed comparison between baseline and repeated surveys. As a result, the following urgent public health problems were identified in the repeated survey. First, current smokeless tobacco use was significantly higher than cigarette smoking. Second, in Gaza Strip, Jordan, Lebanon, Pakistan, Syria, UAE, and West Bank more youth may initiate smoking next year. Third, in five countries fewer youth supported a ban on smoking in public places (Gaza Strip, Iran, Iraq, Pakistan, and Yemen); in four countries more youth saw actors smoking on TV (Iraq, Jordan, Libya, and Morocco) and were exposed to SHS outside of the home (Lebanon, Libya, Pakistan, and Syria). The following positive changes were identified in the repeated survey compared to the baseline survey: fewer youth were offered free cigarettes in 10 countries; in eight countries youth saw less advertisement on TV; in seven countries youth had less items with a tobacco logo and discussed reasons for smoking and the dangers of smoking, and were less exposed to SHS at home; in six countries youth saw less advertisement at sport events.

Conclusion: The present research provides valuable information for policy makers and health professionals in the EMR countries. It is crucial that the data is used as a baseline point for decision-making concerning National Tobacco Control Action Plans.

44. EMERGING CHALLENGES AND OLD TACTICS IN NEW SETTINGS

PD-1098-21 Smoking related attitudes among medical students and young physicians in Argentina

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Background: Physicians' attitudes towards smoking may vary depending on their smoking status. The objective of this study was to describe smoking related attitudes among medical students and young physicians in Argentina.

Design/Methods: A self-administered on-line survey was conducted in 2011 among medical students and recent medical graduates in Buenos Aires, Argentina. Attitudes were evaluated by using a 5-item Likert Scale (from

"strongly agree" to "strongly disagree") for 18 statements referring to effects of smoking cigarettes and the role of physicians in managing this problem; and by assessing their level of agreement with banning indoor smoking in different public places.

Results: Of 4969 potential participants, 1743 answered the survey (response rate: 35.1%). The final sample included 1659 respondents: 73.1% were women; 55.7% were medical students; and 27.3% were current smokers. Most respondents felt that medical students needed more teaching on smoking cessation methods (84.6%). In the statements evaluating patients' counseling, 85% or more of the respondents answered in a way that indicated agreement that physicians should provide cessation advice to all smoking patients and help them quit. Only 11.9% agreed with the statement: "Regarding smoking cessation, medical advice has little effect on the behavior of patients;" 18.9% did not agree or disagree and 67% agreed. Only 52.1% of the participants responded that physicians have a responsibility not to smoke and to set an example for their patients; 58.5% of non-smokers (former or never smokers) agreed with this statement, compared to 34.7% of current smokers ($P < 0.01$). Current smokers were less likely than non-smokers to agree with a full indoor smoking ban in hospitals (90.5% vs 97.1%), workplaces (74.6% vs 83.3%), restaurants (51.7% vs 73.1%), cafes (45.5% vs 68.3%), bars (34.9% vs 61.3%), night clubs (34% vs 62.9%) and universities (75.5% vs 86.4%) (P values < 0.05).

Attitudes towards smoking among medical students and young physicians in Argentina				
Statement	NON SMOKERS		CURRENT SMOKERS	
	Agree N (%)	Disagree N (%)	Agree N (%)	Disagree N (%)
It is doctors responsibility to help their patients quit smoking	1041 (86.3)	29 (2.4)	371 (81.9)	18 (4.0)
Patients already have too many problems to add to quit smoking	11 (0.9)	1149 (95.3)	3 (0.7)	418 (92.3)
Patients already know they should quit smoking It doesn't make sense to remind this to them	17 (1.4)	1152 (95.5)	6 (1.3)	423 (93.4)
If a patient has smoked for a long time, it is too late to stop because the patient won't be able to do it	7 (0.6)	1175 (97.4)	4 (0.9)	433 (95.6)
If a patient has smoked for a long time, it is too late to stop because their health is already irreversible affected	5 (0.4)	1182 (98.0)	2 (0.4)	433 (95.6)
Of the patients who quit smoking, the majority succeed to do so on their first attempt	33 (2.7)	956 (79.3)	10 (2.2)	359 (79.3)
It is useless to advise patients to quit smoking	95 (7.9)	1093 (90.6)	33 (7.3)	405 (89.4)
It is best to use physician time on other things rather than advising patients to quit smoking	3 (0.3)	1154 (95.7)	2 (0.4)	427 (94.3)
The physician has a responsibility not to smoke and be an example for their patients (**)	706 (58.5)	163 (13.5)	157 (34.7)	122 (26.9)
Regarding smoking cessation, medical advice has little effect on the behavior of patients	142 (11.8)	819 (67.9)	56 (12.4)	293 (64.7)
Medical students need more training on how to counsel patients on smoking cessation	1042 (86.4)	40 (3.3)	362 (79.9)	21 (4.6)
Tobacco consumption is an addiction	1166 (96.7)	12 (1.0)	424 (93.6)	7 (1.6)
The consumption of tobacco is a matter of personal decision in which the doctor should not meddle	15 (1.2)	1099 (91.1)	9 (2.0)	387 (85.4)
Si un médico lo deseara, debería poder negarse a atender a un paciente sólo porque éste no deja de fumar	92 (7.6)	928 (77.0)	24 (5.3)	374 (82.6)
Little smoking (1-5 cigarettes per day) is harmless to health	13 (1.1)	1161 (96.3)	6 (1.3)	412 (91.0)
Smoking increases the risk of developing colon cancer	833 (69.1)	111 (9.2)	309 (68.2)	40 (8.8)
Smoking on non-daily basis is not harmless to health	27 (2.2)	1129 (93.6)	9 (2.0)	396 (87.4)
Tobacco smoke in the environment (passive smoking) is only harmful to young children	39 (3.2)	1145 (94.9)	18 (4.0)	416 (91.8)

Agree = strongly agree + agree / Disagree = strongly disagree + disagree
% are reported considering missing data. Missing and "Neither agree nor disagree" responses were not included in statistical analysis.
(**) P<0.01

Conclusion: Our results indicate that smoking status influences attitudes among physicians and medical students in a Latin American country. Current smokers differ most from non-smokers when evaluating their opinion about indoor smoking bans. Considering the important role of physicians in tobacco control, efforts towards reducing smoking in this population should be a priority of health advocates, medical school faculty and professional societies.

PD-1099-21 The impact of Uruguay's 2010 'Single Presentation Law' on misperceptions of light cigarettes and prevalence of "light" cigarette smokers

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Background: In February 2010, Uruguay implemented a "single presentation" law, which limited cigarette brands to having only one variety (or "presentation"). The law was intended to reduce misperceptions of "light" cigarettes, which have been used by tobacco companies to mislead consumers into thinking that such cigarettes are less harmful, despite the fact that they are not. This paper reports the findings of a longitudinal evaluation of the impact of Uruguay's single presentation law.

Methods: The ITC Uruguay Survey is a longitudinal cohort survey of a probability sample of 1,400 smokers in

5 Uruguayan cities: Montevideo, Durazno, Maldonado, Rivera, and Salto. Included were questions asking smokers for their perceptions of light cigarettes. We used logistic regression employing generalized estimating equations with adjustments for time-in-sample to test whether misperceptions of light cigarettes and prevalence of "light" cigarettes decreased between Wave 2 (Oct 2008–Feb 2009), prior to the law, and Wave 3 (Oct 2010–Jan 2011) and Wave 4 (Sep–Dec 2012), which were conducted after the law.

Results: The percentage of smokers who wrongly believed that "light" cigarettes are less harmful than "regular" cigarettes decreased substantially, from 28.7% at Wave 2 to 15.3% at Wave 3 ($p < 0.001$). The percentage of smokers who wrongly believed that "lights" make it easier to quit also decreased from 14.5% at Wave 2 to 10.7% at Wave 3 ($p=0.041$). These significant declines were maintained at Wave 4. In addition, the percentage of smokers reporting that they smoke "light" cigarettes decreased from 14.5% at Wave 2 to 9.6% at Wave 3 ($p=0.012$) and did not significantly change at Wave 4 ($p=0.383$).

Conclusions: These findings support the conclusion that the single presentation law in Uruguay achieved its objectives in reducing misperceptions about "light" cigarettes. But because the tobacco industry possesses other effective strategies for continuing to mislead consumers that there exist credible differences in harmfulness among cigarettes, for example, names other than "light" and "mild" that have not yet been banned, and using lighter colours (e.g., silver, white) in their package design, a number of countries are considering policies such as Australia's plain and standardized packaging to achieve even greater gains in reducing consumer misperceptions.

PD-1100-21 The case for banning slims- and superslims cigarettes CANCELLED

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Background: For decades, the tobacco industry has targeted females with slims/superslims cigarettes. In recent years in a vast number of countries worldwide, a proliferation of new slims/superslims brands have been introduced in the market, and global sales volumes for the slims/superslims category have grown dramatically. **Intervention:** This presentation will make the case for banning "slims" and "superslims" cigarettes, that is, cigarettes with a diameter of 7.5mm or less. Slims/superslims cigarettes are detrimental in numerous ways, including (1) preying on weight concerns of women and girls; (2) making the cigarette more fashionable and attractive; (3) being packaged in "perfume packs" or "purse packs" that are stylish and attractive, and that have a thin package design that undermines the impact of the health warning; and (4) creating perceptions that slims/superslims cigarettes are significantly less harmful than regular cigarettes.

Results: The European Union's initial proposed revisions to the Tobacco Products Directive, released in December

2012, contained a provision to prohibit slims/superslims cigarettes of 7.5mm or less but, following tobacco industry lobbying, this provision was not included in the final adopted Directive. In Australia, while slims/superslims cigarettes have not yet been prohibited, the implementation of plain and standardized packaging has meant that “perfume pack” dimensions for packaging are now prohibited.

Conclusions and key recommendations: The tobacco industry's targeting of females through slims/superslims cigarettes should not be able to continue. Governments should implement a ban on slims/superslims cigarettes as soon as possible.

PD-1101-21 The combined effects of smoking quantity and CHRNA7 polymorphism on the risk of hyperglycemia in Chinese male smokers

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Background: Alpha7 nicotinic acetylcholine receptor subunit gene (CNRNA7) localizing in a chromosomal region (15q14) codes 7 nicotinic acetylcholine receptor (7nAChR) and nicotine combines with 7nAChR to inhibit the secretion of C-reactive protein (CRP). It has been found that T2DM is associated with systemic inflammation. Whether CHRNA7 genotypes moderates the relationship between smoking quantity and hyperglycemia and smoking jointing with CHRNA7 genetic polymorphism could affect hyperglycemia via inhibiting the cholinergic anti-inflammatory pathway remain unclear. This aimed to explore these issues.

Design/Methods: A total of 909 male smokers were interviewed with a structured questionnaire about socio-demographic status and smoking behavior, and a single nucleotide polymorphisms (SNPs) rs2337980 in CHRNA7 were measured with iMLDR method.

Results: Multivariate logistic regression analysis indicated that individuals smoking >15 cigarettes per day significantly increased the risk of hyperglycemia (OR=1.51, 95%CI=1.06-2.14) than those smoking 1-15 cigarettes/day after adjusting the potential confounders. In addition, compared to those with wild type (CC) of rs2337980, individuals with variant type (CT/TT) of rs2337980 had an increased risk of hyperglycemia (OR=1.74 95%CI=1.22-2.48). A further stratified analysis by smoking quantity and rs2337980 genotypes indicated that compared with individuals smoking 1-15 cigarettes per day and carrying wild type of rs2337980, the increased risk of hyperglycemia was observed in who smoking >15 cigarettes per day and carrying wild type (OR=1.81, 95% CI=1.07-3.07), who smoking 1-15 cigarettes per day and carrying variant type (OR=2.06, 95%CI=1.26-3.38) and who smoking >15 cigarettes per day and carrying variant type (OR=2.52, 95%CI=1.52-4.17) after adjusting for the potential confounders. But, it was not found that smoking quantity and rs2337980 polymorphism interactively affected on hyperglycemia.

Conclusion: These findings suggested that smoking quantity and CHRNA7 polymorphism might exert the joint effects on hyperglycemia and CRP mediated the relationship between smoking quantity combined with rs2337980 polymorphism and plasma glucose level.

PD-1102-21 Tobacco and tobacco-related cancers in France: a window of opportunity to move forward

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Background: Tobacco is still the leading preventable cause of cancer in France. The latest estimate of the number of deaths caused by tobacco-related cancer in France is approximately 44,000 (not counting second-hand smoke). In recent years, France has seen an increase in the prevalence of smoking, which contrasts with an underlying long-term decline in tobacco use evidenced by a sharp drop in tobacco sales when the 2003-2007 Cancer Plan was launched. France's anti-smoking strategies have failed to reduce the number of smokers mainly due to a lack of coordinated long-term strategy. Response: The French National Cancer Institute (INCa) launched in Mars 2014 a partnership program in order to establish research and actions priorities on tobacco and tobacco-related cancers. The ultimate objective of this program is to reduce the burden of cancer cases and deaths attributable to tobacco use by accelerating the pace of putting research findings into practice among decision-makers and physicians.

Results: INCa in cooperation with other agencies, ministries and researchers set up a multidisciplinary task force to identify a core set of tobacco-related cancer research priorities to define a long-term program including an annual competitive call for proposals. The program intends to cover a wide range of scientific domains, from basic science to public health, information and communications technologies, epidemiology, economic and political sciences, biology, etc. The task force defines five workshops to set priorities: Determinants of tobacco use and trajectories, reduction of tobacco consumption, screening programs, smoking cessation, electronic nicotine delivery systems. The tobacco-related cancer research priorities will be determined at the end of these workshops during a plenary session in September 2014. A national meeting will be organized in November 2014 in order to present research priorities for the call of proposals before its release.

Conclusions and key recommendations: To reduce the burden of tobacco-related cancer cases and deaths, INCa take the leadership in developing partnerships with other agencies in fostering research in tobacco products. This program is part of the 2014-2019 Cancer Plan and will be linked with the “Programme National de réduction du tabagisme” announced by the President at the launch of this plan. This program highlights INCa's determination to reverse the high and rising rates of smoking in France.

PD-1103-21 Tobacco use and apthous ulceration: a dilemma in tobacco cessation dental clinics

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Background: Current evidence shows ambiguous relationship between tobacco use and the occurrence of apthous. This creates a confusion in tobacco cessation clinics while explaining ill effects of tobacco. Objective. To find out relationship between Apthous ulcers and various forms of tobacco usage.

Design/Methods: A hospital based case control study was carried out in a dental teaching hospital in Cochin India. Outpatient subjects (102 Males, 56.9%) were identified having apthous ulceration using Natha's diagnostic criteria and were classified as cases. Subjects (108 Males, 70.4%) with no apthous ulceration were selected randomly as controls. Exposure ascertainment of tobacco usage was done by structured interview.

Results: The tobacco usage was found to be 20.6% among cases compared to 36.1% in controls. Tobacco smoking was found in 15.7% of cases compared to 25.9% in controls. Among the tobacco users, smoking tobacco users had the odds of 0.48 (95% CI 0.97-0.24), when compared to smokeless tobacco users who had odds ratio of 0.17 (95% CI 1.49-0.01) for getting apthous ulceration. The adjusted odd ratio was found to be 0.41 (95% CI 0.19-0.87) for tobacco usage and occurrence of apthous ulceration compared to non tobacco users.

Conclusion: The study found the statistical association between the occurrence of recurrent apthous ulceration and usage of tobacco. The association that exists between smoking and apthous ulcerations of the mouth is in a negative direction. The tobacco users tend to have 45 % less chance of occurrence of recurrent apthous ulcer than non-tobacco users. Further histopathological studies should be carried out to ascertain the exact etiopathogenesis. However the results of the study should be considered carefully as some amount of ascertain bias is possible in case-control studies and also the inverse relation should not be interpreted as tobacco is beneficial for apthous ulcerations. It should be further emphasized that, although there is an association between the two variables, it is difficult to conclude a causative relationship between them. One can merely suggest that there is some sort of association. The problem of causation cannot be answered solely by the statistical analysis of data. Tobacco cessations should place emphasis on all ill effects of tobacco which are much more grave than ulcerations.

PD-1104-21 Technical assistance and legal advice as key factor of success in the Latin American Region for development and implementation of tobacco control policies

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Background: On February 27th of 2005 in a historic landmark to public health, came into in force the Framework Convention for Tobacco Control (FCTC), the first treaty adopted under the auspicious of UN of WHO. As a result of the obligations assumed at the time of ratifying this international legal instrument, the parties began a process to approve legislation in order to implement measures for "tobacco control". In order to strength the efforts in the Latin America Region; The Union Mexico Office started activities in 2008 in order to provide technical, legal assistance for the implementation of the FCTC from WHO. Since 2008, The Union has trained health professionals from 14 countries, organized more 27 technical trainings, 21 managerial trainings, and has provided legal assessment to 14 countries with the objectives to create public awareness about the harms of tobacco use and also to guarantee the effective development and implementation of tobacco control policies recommended by WHO. The present analysis was conducted with the objectives to review and evaluate the activities conducted by The Union Mexico Office at regional level and also to define the achievements and outputs obtained directly and identify the challenges.

Design/Methods: Review of documentation developed by The Union Mexico, analysis of the technical and legal assessment conducted and data analysis of questionnaires and MandE process applied after the activities were developed that provided a comparison of the project impacts and the initial objectives, providing an overall framework on how effective and efficient were the activities and actions planned for the project and how were it impact in the project and organisation.

Results: Grants and projects implemented at regional level, more than Mass media campaigns, capacity building, in countries and states where technical and legal assessment was provided, smoke free legislation development and implementation at national and state level.

Conclusion: Despite the challenges presented in the region as the tobacco industry interference, the region has resulted considerable advances in tobacco control legislation and a direct correlation between the factor of success and technical and legal assessment provided has been identified.

PD-1105-21 Tobacco smoking using Midwakh: an emerging public health problem**M Al-houqani,¹ R Ali,¹ C Hajat¹**¹College of Medicine and Health Sciences, UAE University, Al-Ain, United Arab Emirates.

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Background: Accurate information about the prevalence and modes of tobacco use is essential to deliver effective public health policy. We aimed to study the prevalence and modes of tobacco consumption in the United Arab Emirates (UAE), particularly focusing on the use of Midwakh.

Methods: We studied 170,430 UAE nationals aged \geq 18 years (44% males and 56% females) in the Weqaya population-based screening program in Abu Dhabi residents during the period April 2008 - June 2010. Self-reported smoking status, type, quantity and duration of tobacco smoked were recorded. Descriptive statistics were used to describe the study findings; prevalence rates used the screened sample as the denominator. Result: The prevalence of any smoking was 24.3% in males and 0.8% in females and highest in males aged 20-39. Mean age (SD) of smokers was 32.8 (11.1) years, 32.7 (11.1) in males and 35.7 (12.1) in females. Cigarette smoking was the commonest form of tobacco use (77.4% of smokers), followed by Midwakh (Arabic traditional pipe) (15.0%), shisha (waterpipe) (6.8%), and cigar (0.66%). The mean durations of smoking for cigarettes, shisha, Midwakh and cigars were 11.4, 7.6, 9.3 and 11.0 years, respectively.

Conclusions: Smoking is most common among younger UAE national men. The use of Midwakh and the relatively young age of onset of Midwakh smokers is of particular concern as is the possibility of the habit spreading to other countries. Comprehensive tobacco control laws targeting the young and the use of Midwakh are needed.

PD-1106-21 Tobacco watcher: real-time global surveillance for tobacco control**J Cohen,¹ JW Ayers,^{2,3} M Dredze⁴**

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Background and challenges: The tobacco environment changes daily. Monitoring news media can help tobacco control professionals plan and implement strategic advocacy efforts responsive to the changing environment, such as emerging issues (e.g., e-cigarettes) or tobacco industry activities. Traditional media monitoring services require continuous human review and often focus on one country, one language, and/or one topic area, and may not be sufficiently agile to quickly detect new issues and products.

Intervention/response: To address these challenges we developed a first-of-its-kind tobacco control surveillance sys-

tem, called Tobacco Watcher, monitoring media across the entire globe, in numerous languages, for all tobacco topics.

Results and lessons learnt: Tobacco Watcher involves four stages. First, all possibly relevant news articles are collected from the Bing News and Bloomberg News feeds each day. Second, natural language processing algorithms based on extensive experience with human coding, are used to assess stories as tobacco-relevant or not, based on a combination of keywords and phrases, with a precision over 95%. Third, articles are processed noting the primary tobacco content of each article according to the MPOWER-ED framework (Monitor tobacco use; Protect from secondhand smoke; Offer assistance to quit; Warn about the dangers of tobacco products; Enforce bans on tobacco advertising, promotion and sponsorship; Raise taxes on tobacco; Emerging products; and, tobacco industry), and the main location of the story, with precisions all greater than 80%, and improving. Fourth, processed news media articles are displayed on a web interface where users can search through all historic alerts by location, MPOWER-ED, keywords or time (tobaccowatcher.org).

Conclusions: Early experiences suggest Tobacco Watcher can be useful for on-the-ground tobacco control advocacy work. For example, this system in principle would identify more topically and globally diverse alerts about the changing tobacco environment, and earlier than existing surveillance systems. Discussions with representatives of key target audiences will inform the next-stage development, including the addition of personalization (e.g., email alerts; a tool for user-initiated analysis of news stories by region, keyword, language or MPOWER-ED) and expansion of news sources by type, geography, and language.

PD-1107-21 Social and cultural contexts of betel quid consumption and the potential health consequences**E Gritz,¹ I Tami-maury,¹ C Lam,² C Lin,³ M Tsai,⁴ C Chiu,⁵ W Ma,⁶ T Li⁷**

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Background: Around 600 million people worldwide are thought to chew betel quid (BQ), making it the fourth most commonly used psychoactive substance after tobacco, alcohol and caffeinated drinks. BQ has been widely used in South Asia and Southeast Asia. BQ is a small parcel that typically contains areca nut, wrapped in a betel leaf coated with slaked lime. In many countries, the BQ parcel also contains tobacco. While flavoring agents may be

added to the Taiwanese BQ, it does not contain tobacco. However, cigarette smoking is common among BQ users. Epidemiological studies have established a causal relationship between BQ alone and oral cancer. However, this addiction is still largely undescribed, specifically regarding initiation and dependence on BQ. Therefore, the aim of the present study was to identify the individual, social, and contextual (cultural) factors related to initiation, continued use, and cessation of BQ chewing.

Design/Methods: Four focus groups and 15 in depth face-to-face interviews were conducted with current and former users of BQ, members of a community organization located in Jhushan Township, Taiwan. IRB approval was obtained from China Medical University.

Discussion was tape-recorded and transcribed; interpretative analysis was undertaken manually. Themes and emerging key points were developed into a thematic framework table for identifying social and cultural factors associated with BQ use.

Results: Study participants were 66% male and 34% female; mean age was 41.02 ± 9.23 years. Participants stated that BQ initiation usually occurs during childhood and that the most frequent reasons for chewing were: cultural/social traditions, to achieve an energetic feeling, and to avoid boredom. Participants perceived BQ chewing as an addiction and a risk factor for cancer and other health-related conditions. The most frequent mentioned barriers to quitting BQ included: peer pressure and selected withdrawal symptoms.

Conclusion: For the development of culturally relevant and effective cessation interventions for BQ in Taiwan, it is critical to understand and address perceptions of BQ chewing and barriers to cessation.

PD-1108-21 Smoke, smog and lung cancer

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Background: Lung cancer is the most frequently diagnosed cancer among men and second among women in China. While cigarette smoking is high among Chinese men (53%), it remains low among women (2.4%). Yet seven in ten non-smoking adults are exposed to secondhand smoke, and many women in rural areas are exposed to other forms of indoor air pollution (i.e. cooking fuel). At the same time, there has been widespread public concern over outdoor air pollution in urban areas, and hazardous levels of PM_{2.5} are regularly recorded in Beijing and other cities. However, the relative or combined contribution of these exposures (tobacco smoke and air pollution) has not been explored.

Design/Methods: A literature review was conducted to assess the degree to which reported patterns of lung cancer incidence and mortality could yield clues about the relative contribution of multiple exposures and to identify gaps or opportunities for future research.

Results: Few studies have looked at multiple exposures in relation to lung cancer in China. However, recent findings on changing patterns of cancer subtypes show promise for understanding the role of specific exposures. For example, as reported by the Beijing Cancer Registry, the proportion of squamous cell cancers, in relation to all lung cancers, has decreased over the past ten years while the proportion of adenocarcinomas has risen. Media reporting has highlighted these findings as evidence of the rising impact of air pollution. However, this pattern in fact matches historical experience from the U.S. and Europe as smokers increasingly moved to "light" and low-tar cigarettes and modified their smoking behavior. It is likely that this pattern is explained by the changing cigarette market in China and smoking behavior rather than air pollution.

Conclusion: Existing data can provide strong evidence of the impact of tobacco smoking in China. However, the data for lung cancer do not yet fully reflect the impact of recent changes in smoking behavior and air pollution exposure. Comprehensive surveillance of tobacco use behavior and exposure to secondhand smoke and air pollution is essential to further understand the combined effects of these exposures on the population. At the same time, broad public awareness in China of PM_{2.5} levels from air pollution offers a unique opportunity for communicating information about other exposures, particularly secondhand smoke.

PD-1109-21 The UAE paradox: stricter tobacco control policies but a stronger tobacco industry

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Background and challenges to implementation: Although the United Arab Emirates (UAE) has become one of the most progressive nations in the world in implementing policies to counter cigarette smoking, shisha pipes, and the promotion of tobacco products, the number of tobacco-related businesses in the UAE, including both multinational and regional corporations, has increased. And although great strides have been made in introducing far-reaching anti-tobacco laws, the level of tobacco use by young people in the UAE has been described by health officials as shocking (more than 20% of boys ages 13 to 15 smoke), and the degree of circumvention and pushback remains to be seen.

Intervention or response: In order to learn how tobacco-related companies in the UAE are regarded within the tobacco industry itself, a literature review was conducted of the tobacco industry trade press over a 15-year period. More than 100 issues of two journals to which the author subscribes (Tobacco Reporter and Tobacco International) were reviewed, and all articles and advertisements related to tobacco manufacturers, distributors, importers, duty-free shops, and suppliers of the tobacco industry with offices in the UAE were identified.

Results and lessons learnt: A list of more than a dozen tobacco-related companies in the UAE and the nature of their business has been compiled and will be discussed. A summary of articles in the public health literature about tobacco control efforts in the UAE will also be presented.

Conclusions and key recommendations: While the paradox of a growing tobacco-related business sector in the UAE in the face of stepped-up tobacco control policies doubtless relates principally to the economic strength of the nation and its rising role as one of the world's leading ports and international business centers, it is essential for those involved in tobacco control to be knowledgeable about, and to be prepared to address, the tobacco-related enterprises in their nation. This increasing business sector--a source of employment and revenue--represents an ever-present economic and political challenge to efforts to discourage tobacco consumption, to restrict tobacco use in public places, and to eliminate the promotion of tobacco products.

PD-1110-21 Tobacco regulation and product judgments

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Background: The Family Smoking Prevention and Tobacco Control Act granted the Food and Drug Administration (FDA) the authority to regulate tobacco products in the United States (U.S.). However, little is known about how regulation may be related to judgments about tobacco product-related risks. Given the priority of regulation

as set forth by the Framework Convention on Tobacco Control, it is important to understand how the public interprets government regulation of tobacco products. The purpose of this study is to understand how FDA tobacco regulation beliefs are associated with judgments about tobacco product-related risks.

Design/Methods: The Health Information National Trends Survey (HINTS) is a national survey of the U.S. adult population. Data used in this analysis were collected October 2012 through January 2013 (n=3,630) by mailed questionnaire and analyzed in 2013. Weighted bivariate chi-square analyses were used to assess associations among FDA regulation belief, tobacco harm judgments, sociodemographics, and smoking status. A weighted multinomial logistic regression was conducted where FDA regulation belief was regressed on tobacco product judgments, controlling for sociodemographic variables and smoking status.

Results: About 41% believe that the FDA regulates tobacco products in the US, 23.6% report the FDA does not, and 35.3% do not know. Chi-square analyses show that smoking status is significantly related to harm judgments about types of cigarettes (p<.008), e-cigarettes (p<.0001), and some day smoking (p=.014). The multinomial logistic regression reveals that uncertainty about FDA regulation is associated with tobacco product harm judgment uncertainty.

Conclusion: The findings from this study suggest that uncertainty about tobacco product regulation is associated with uncertainty about tobacco product harm. However, if increased awareness of regulation is conflated with "approval" or "safety" of tobacco products, it is important to develop messaging strategies that increase the public's understanding of tobacco regulation and the harms of tobacco, reinforcing the message that tobacco use, in any form, is harmful to health. Study findings have implications internationally for how the public perceives and understands tobacco regulation.

45. E-CIGARETTES: FINDINGS, THREATS AND LESSONS LEARNT

PD-1111-21 Lessons from Canada's failed attempt to regulate e-cigarettes as drugs CANCELLED

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Background and challenges to implementation: Five years ago Health Canada declared that electronic devices for the inhalation of nicotine could not be legally imported, marketed, or sold in Canada until approved as a new drug. Since then although no product has received ap-

proval, the e-cigarette market has exploded: e-cigarettes, both with and without nicotine, are available in corner stores, pharmacies, and vape shops, and experimentation among youth exceeds 15%.

Intervention or response: To respond to demand for guidance from the public and health organizations, the Non-Smokers' Rights Association (NSRA) developed a position statement based on a thorough review of the research, as well as an understanding of the marketplace, tobacco industry behaviour, and the important role of social norm change in decreasing tobacco use. NSRA advocates that e-cigarettes be regulated as tobacco products, believing that this approach would provide smokers with access to a less harmful nicotine product, while ensuring that critical tobacco control gains are not undermined by the widespread promotion and use of a cigarette-like product.

Results and lessons learnt: After two years of intensive public education using the media and knowledge exchange with public health organizations, support for applying the same policy measures to e-cigarettes as currently apply to tobacco products is growing. Many businesses and institutions have developed policies banning e-cigarette use on their premises, and several provincial governments are actively considering regulating e-cigarettes under their tobacco legislation.

Conclusions and key recommendations: E-cigarettes are a disruptive technology; whether they disrupt progress in tobacco control or the current trajectory of tobacco-caused disease and death will depend in large part on how they are regulated. Waiting for scientific certainty does not serve the public interest, nor does regulating e-cigarettes with nicotine as drugs and then allowing the unfettered marketing and sale of e-cigarettes ostensibly without nicotine. Regulating all e-cigarettes as tobacco products ensures that e-cigarettes without nicotine do not become the Trojan horse that undermines the intent of e-cigarette regulation. It also ensures that e-cigarettes do not become the Trojan horse that provides tobacco companies once again with a seat at the policy-making table.

PD-1112-21 How e-cigarette retailers present their products on their German language websites: a randomised study

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Background: The objective of the current study is to explore the product range and claims about product safety of e-cigarettes offered by e-cigarette retailers on their German language websites and to record their most common marketing strategies and presence in the social media.

Design/Methods: Observation Study based on a semi-structured questionnaire. The sample consists of 20 randomly selected online e-cigarette retailers drawn from the total population of traders selling e-cigarettes on German language websites. Internet monitoring was conducted between December 2012 and April 2014.

Results: Most common advertising slogans are “e-cigarettes are less hazardous to your health” (85%), “e-cigarettes do not cause potentially dangerous passive smoke” (70%) and “do not cause any offensive smell” (80%). Retailers offer a wide variety of flavours (95%), praise the modern design (90%) of the product and the high product quality (75%) without providing corresponding evidence. Product safety warnings are not easy visible (90%) and products are almost always (95%) sold without an age limit. All web pages are linked to Facebook, most of them to YouTube (90%) and two-thirds of them to twitter (65%).

Conclusion: There is a need for correct consumer information including health warnings for e-cigarettes. The Tobacco Products Directive 2014/40/EU suggests extensive information, including health warnings, so that this legislation has to be adopted and implemented immedi-

ately – for the safety of consumers and other vulnerable groups in the population.

PD-1113-21 Marketing strategies for electronic cigarettes in India

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Background: E-cigarettes are marketed as a healthier smoking alternative in India through online. There has been a phenomenal rise in the products available online with attractive advertisements. The present study was conducted to assess various electronic cigarette brands available online in India and to understand their marketing strategies

Design/Methods: A detailed online search was conducted in June 2014 using key words ‘electronic cigarettes in India’ through Google search engine. The electronic cigarette kits and e liquid brands available in India online in different websites were included from the first 5 pages excluding the news items. The various brands of the electronic cigarettes were selected and data was tabulated under the following headings – brand name, manufacturer name, price, website availability, ingredients, nicotine content, product specification and advertisement strategies. The frequency analysis was done using SPSS version 13 software.

Results: Total of 422 brands of e cigarettes were available in 20 different websites. The product price was found to range between Rs 134 to Rs.14026.25. 14% of sellers have revealed the ingredients present in the liquid content and 60.4% have shown the percentage of nicotine. The products have claimed for no tar (54.3%), no carcinogen (52.6%), no nicotine (39.4%), attractive design and colours (90.5%). 96.2% have targeted the youth and 96.7% have targeted women based on the sleeky, stylish design (94.3%), bold colors(79.1%)and wide range of flavours. The marketing strategies have been no passive smoke (58.1%), alternative to cigarettes (74.2%), popular abroad (40%), cost effective (39.1%), full smoking delight (92.4%), safe to health (73.7%) and environment (51.7%). Other strategies used were no bad smell (39.3%) and no stained teeth (10.7%). Products declared as not for minors were 63% and contraindications mentioned were pregnant women (59.5%), patients with lung and heart diseases (15.6%). Although 45% claim that their products were legal, 54.5% were noncommittal on legal issues and 0.5% declared that the products were not legal.

Conclusion: The online marketing of e-cigarettes is rampant and easily accessible and attractive to vulnerable to population like youth and women. Though it is illegal, as they claim as safer and healthier alternative it is crucial that India takes immediate action against these products before it becomes epidemic.

PD-1114-21 E-cigarette use, product characteristics, and perceived satisfaction: Findings from the ITC Netherlands Tobacco and Nicotine Products Survey

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Background: Electronic cigarettes (e-cigarettes) constitute a major controversy in recent tobacco control debates. Although potential gains and risks are widely acknowledged, uncertainties remain about the real-world impact of e-cigarettes on smoking behaviour. Product characteristics play a central role in substantiating perceived risks and benefits. For example, whereas the broad range of flavors available has fuelled concerns about uptake among youth, those flavors could also enhance the attractiveness of e-cigarettes among smokers.

Methods: Data from the International Tobacco Control (ITC) Netherlands Tobacco and Nicotine Products Survey (2014), a web-based panel survey among current, former and never smokers aged 16 or older (n = 3200), are used to describe ever, current and dual use. Associations between use, product characteristics and satisfaction are examined.

Results: About 1 in 4 current (27%) and former (23%) smokers reported having ever used e-cigarettes. Over half of these ever users reported current use (15%). Ever use among young never smokers (aged 16-24) was negligible (1%). Most ever users reported having last used e-cigarettes refillable with liquids (49%), with nicotine (65%), and with a tobacco and/or menthol flavor (62%). Use of fruit flavors was higher among young than older users (23% vs. 5%). About 2 in 3 users reported e-cigarettes to be somewhat satisfying, but less than ordinary cigarettes. Whereas the type of e-cigarette used (disposable, cartridge or tank system), flavor and perceived similarity of puffing e-cigarettes to smoking were associated with reported satisfaction, whether e-cigarettes contain nicotine was not. About 7 in 10 users (excluding never purchasers) reported to have cut down or quit smoking while using e-cigarettes. Users reporting higher levels of satisfaction were more likely to report having stopped or reduced smoking during e-cigarette use.

Conclusions: Most users reported e-cigarettes to be less satisfying than ordinary cigarettes. Satisfaction was associated with e-cigarette type, flavor and perceived similarity to smoking cigarettes. Higher levels of satisfaction were associated with increased odds of quitting or reducing smoking. Those under age 25 were more likely to report using fruit flavors, but e-cigarette use among young nev-

er-smokers was negligible. These results provide relevant input for future policy discussions, notably regarding the diversity of products available on the market.

PD-1115-21 Opinions and practices regarding electronic cigarette use among Romanian adolescents

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Background: This study aims at assessing awareness, opinions and practices regarding electronic cigarettes (e-cigarettes) use among high school students from Romania, a country where the sales and marketing of these products is not regulated in any way.

Design/Methods: A cross-sectional study was conducted in May 2013 in Cluj-Napoca and Sibiu, two big towns from North-West Romania. The study subjects were 342 high school students from tenth and eleventh grade aged 15-18. They were informed that their participation in the study was voluntary and were asked to fill in an anonymous questionnaire.

Results: The results show that 37.4% of the students were smokers (smoked at least once in the last month), 19% were ex-smokers, while 43.6% were non-smokers. A percentage of 93.9% of the students (93.8% of the smokers, 96.9% of the ex-smokers and 92.6% of the non-smokers) reported having heard about e-cigarettes. One third of the students (52.7% of the smokers, 29.2% of the ex-smokers and 8.8% of the non-smokers) declared that they had tried e-cigarettes at least once during their lifetime. 7.8 % of the smokers and 4.6% of the ex-smokers declared having used e-cigarettes in the last month, but not the non-smokers. Intention to use e-cigarettes in the next year was declared by 32% of the smokers, 12.3% of the ex-smokers and 7.4% of the non-smokers. A percentage of 67.1% of the study sample declared having friends who had experimented with e-cigarettes, while 7.3% of the students had parents who had done this.

Conclusion: The results underline the importance of addressing the issue of e-cigarette use through health education programs and regulatory interventions, since e-cigarettes are a reality faced by the Romanian adolescents.

PD-1116-21 Electronic cigarette use and attitudes toward regulations in workplaces and public places among the general population in Spain

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Background: Electronic cigarettes (e-cigarettes) have rapidly grown in the marketplace. However, valid data of their use at the population level is limited in many nations, particularly in Europe. The potential to use them anywhere could be a gateway to both nicotine addiction and renormalization of smoking in indoor public places. Our aim was to describe the e-cigarette use in a sample of the general population of Barcelona (Spain) and to assess the support of e-cigarette regulation in workplaces and public places.

Design/Methods: We used the follow-up data of a longitudinal study of a representative sample of the adult (≥ 16 years old) population of Barcelona, Spain (336 men and 400 women). The field work was conducted between May 2013 and February 2014. We computed the prevalence, adjusted odds ratios (OR), and their corresponding 95% confidence intervals (CI).

Results: The prevalence of ever e-cigarette use was 6.5% (95%CI: 4.7-8.3): 1.6% current, 2.2% past, and 2.7% only trial use. 75% of ever e-cigarette users were current smokers at the moment of the interview. E-cigarette use was more likely among current smokers (OR: 13.19; 95%CI: 1.68-103.82) and highly dependent cigarette smokers (OR: 3.96; 95%CI: 1.60-9.82). 62.5% of the ever users used their e-cigarettes with nicotine, with 70% of them obtaining the liquids with nicotine in a specialized shop. We found overall less disagreement with the use of e-cigarettes in all the venues studied among e-cigarette users and current smokers. Among all the sample, the awareness of e-cigarettes was 79.2% (95%CI: 76.3-82.1). Of them, 46.6% did not agree with allowing the use of e-cigarettes in public places and 52.7% in workplaces. Higher prevalence of disapproval of the use of e-cigarettes in indoor places was found for schools (72.3%) and for hospitals and health care centers (66.4%).

Conclusion: E-cigarette use is strongly associated with current tobacco smoking (dual use), most e-cigarettes used delivered nicotine and its users continue to be addicted to nicotine. There is a wide support of the popula-

tion to the regulation of the use of e-cigarettes in workplaces and public places. There is a good social climate to promote policies regulating e-cigarette use in workplaces and public places.

PD-1117-21 Is the electronic cigarette a tobacco industry discovery dating decades back?

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Background: Electronic cigarette (e-cigarette) is a product that divided public health community on the basis of its use and regulation. Most of the tobacco companies have acquired an electronic cigarette plant to start manufacturing. It seems as if e-cigarettes originated from China. It is hard to understand how tobacco industry with a vast capacity for research and development, failed in such a discovery. The presence of a similar device among the tobacco industry documents may lead the tobacco control advocates to a different path.

Design/methods: Basic and advanced searches were performed on “electronic cigarettes”, “electrically heated devices”, “non-tobacco” and “tobacco-free cigarettes” from legacy tobacco documents library web site, with regard to time.

Results: The documents showed that the industry started investing into the research of electrically heated non-tobacco products about half a century ago. There were only 441 recent documents on “electronic cigarettes” but 3491 documents on “electrically heated devices”, 528 being dating between 1960-1980. Among those there patent applications and drawings of the devices, as well as the list and code numbers of the tobacco industry owned patents. A document (Bates no 100335975) dated 1965, described a device that we call e-cigarette today.

Conclusion: Tobacco industry documents clearly show that electronic smoking devices were known to tobacco industry much earlier than it appeared in China. The lag period between the research and marketing must be meaningful and be investigated

PD-1118-21 E-Cigarettes: “Old wine in a new bottle”?

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Background: Electronic nicotine delivery devices, commonly called e-cigarettes are electronic devices mimicking real cigarette introduced into the market as a healthier alternative to tobacco smoking. After its introduction in 2003, the popularity of e-cigarettes is increasing in spite of limited data regarding their safety or effectiveness.

There is hence a need to have a detailed introspection into this product.

Design/Methods: Search for articles was conducted using Pubmed, pro quest and Google search engine. Keywords used were electronic cigarettes, e-cigarette, prevalence of e-cigarette use, global regulation on e-cigarette, health effects of e-cigarette. The results are presented in this scientific review under the titles: Introduction, factors leading to upward trend of its use, advantages, disadvantages, current status of global regulation and recommendations for future.

Results: Elaborate marketing network and attractive marketing strategies have led to the rapid market penetration of e-cigarette. While these products bank on the claim that they help quit smoking, reduce withdrawal symptoms and produce less exposure than conventional smoking, the list of disadvantages is quite exhaustive. Health claims and claims of efficacy for quitting smoking are challenged by studies providing contradictory results. The use of e-cigarettes in places where smoking is not permitted increases social exposure to smoking and may contribute to the 'renormalization' of smoking behaviours. The flavouring agents used in e-cigarettes have been shown to be cytotoxic and respiratory irritants. The inappropriate labelling of most of the e-cigarettes could pose a health hazard. Internationally there is a lot of variation in the legality of e-cigarette. FDA has been amending regulation governing sale and use of e-cigarettes over the past decade. The ministry of health, UAE has banned the sale and use of e-cigarette as part of the ministry's efforts to fight all forms of tobacco.

Conclusion: There is a growing need for an evidence based approach regulating e-cigarettes to ensure that e-cigarettes do not erode major public health gains made in the fight against tobacco. In the absence of substantial scientific evidence of safety and efficacy of e-cigarettes, increased worldwide research output on safety and efficacy of e-cigarettes can provide additional scientific data to public health authorities to decide on the regulatory status of this product.

PD-1119-21 E-cigarettes: an update on prevalence and recent regulatory developments

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Background: Electronic cigarettes (e-cigarettes) are extensively marketed as a smoking cessation aid. The sales of e-cigarette use have been increasing over the years and expected to increase to \$10 billion by 2017. We reviewed the prevalence of e-cigarette use world-wide and the recent developments in the regulatory status of e-cigarettes.

Design/Methods: We conducted search in Google Scholar, Pubmed and additional sources for published data until

June 2014 using keywords, such as e-cigarette, prevalence, regulations. Data retrieved from the search were reviewed and analyzed.

Results: Prevalence of e-cigarette use varied across the globe with United State (US) and Europe being predominant. In US, one in five adult smokers tried e-cigarettes. In the European Union, 20.3% of current smokers, 4.7% of ex-smokers, and 1.2% of never cigarette smokers used e-cigarettes. 52% smokers used e-cigarettes in United Kingdom (UK) and 67% in France. Korean survey reported 9.4% adolescents (8% ever-dual users) used e-cigarettes. 7% smokers in New Zealand used e-cigarette. Use among adolescents increased to 6.8% and, among high school students to as high as 10% from 2011 to 2012. Twofold increased use was noted among adolescents in US from 2011 to 2012 and among adults in UK from 2013 to 2014. Reports from other countries were limited in spite of its popularity worldwide. Recent reports of unidentified safety, doubtful benefits and increased e-cigarettes use necessitated implementing regulations. Until 2014, US-FDA attempted to regulate e-cigarettes under the Food, Drug, and Cosmetics Act. For that reason, many state and local governments formulated their regulations. In the GCC countries e-cigarettes are banned including the United Arab Emirates. In 2013, European Union regulated the upper limit of 20 mg/ml nicotine concentration in e-cigarettes and subsequently in 2014 developed a new rule to ensure equal treatment of nicotine containing e-cigarettes as tobacco products. In April 2014, FDA proposed to extend its tobacco authority to additional tobacco products, including e-cigarettes. However, World Health Organization is currently reviewing the existing evidence around e-cigarettes for the framing regulations.

Conclusion: Increasing prevalence noted worldwide particularly among the adolescents and shifting towards school students. The recent regulation by US-FDA considering e-cigarette under tobacco products is a positive directive to curb the inappropriate use.

PD-1120-21 Electronic cigarette industry and public health laws: opposition tactics and policy successes in the U.S.

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Electronic or e-cigarettes are a form of nicotine delivery devices which are making a major push into everyday stream of consciousness. Interestingly, we are seeing similar marketing, advertising, and policy opposition tactics from the industry as we did in the 1980's and 1990's. This multi-pronged effort can be broken down categorically into: making unwarranted statements regarding health benefits; legislative lobbying to curb restrictions and taxation; attempts to create social acceptance; consumer outreach via modern social online networks such as Twitter, Facebook and YouTube; as well as, a craven attempt to recruit younger users by offering 'kid-friendly' flavors

of their product. Financial analysts predict that the consumption of e-cigarettes could surpass consumption of traditional cigarettes in the next decade.

E-cigarette companies are turning to traditional Big Tobacco law and public relations firms and other allies for advice on aggressive lobbying tactics. Not only do traditional tobacco retailers and convenience stores now sell e-cigarettes, but major tobacco companies are also getting into the e-cigarette business. Many past tobacco industry front groups and/or individuals with tobacco industry ties that formerly opposed smoke-free campaigns are back and are opposing any regulations of e-cigarettes. Despite these opposition tactics, nearly 200 U.S. cities and three states include e-cigarettes in their smoke-free laws. Public health must be prepared for legislative and public relations battles, as well as understanding of health consequences of this unregulated product. This presentation will discuss current efforts of both successful public health campaigns and where the tobacco industry has been successful at avoiding regulation or proposing weak amendments to laws that are industry relief measures versus public health protections. Learning objectives include 1) Discussing the legislative strategies of e-cigarette and tobacco companies to exclude e-cigarettes from regulation and include e-cigarettes as harm reduction devices, 2) Exploring the current marketing of product (online, on tv, at amusement parks) and reviewing opposition tactics (radio advertisements, lobbying, front groups), and 3) Discussing current experiences in the field and brainstorm how to address these issues with programmatic, communications, or policy efforts.

PD-1121-21 Monitoring retail environments and tobacco control policy gaps related to electronic nicotine delivery systems (ENDS)

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Background: The rise in prominence of ENDS has posed recent challenges to the language and implementation of tobacco control policy development. The technical specifications of ENDS may fall beyond the scope of traditional tobacco control measures but the products are undoubtedly tied to the use and marketing of combustible tobacco. Some jurisdictions address this challenge by considering ENDS a simulation of tobacco use which can be regulated by tobacco advertising, promotion and sponsorship (TAPS) laws, and some ban the products entirely. Other countries such as the Russian Federation have adopted a very comprehensive law with a definition of tobacco use that is exclusionary to ENDS. TAPS strategies, particularly at point-of sale (POS), are used to increase product consumption and socially normalize their use. These strategies serve the same purpose for ENDS products. This study assessed the state of ENDS availability and product display at key retail locations in Russia.

Design/Methods: An ENDS component was integrated into a survey assessing TAPS compliance at POS in five

cities in Russia. ENDS observations included the sale and display of products at supermarkets, independent markets, and kiosks. If data collectors did not observe the display of ENDS products at the POS, they were instructed to ask a cashier if ENDS were sold at that retail establishment as they exited the location.

Results: Among 786 unique POS locations in Moscow (n=167), St. Petersburg (n=161), Kazan (n=137), Ekaterinburg (n=159), and Novosibirsk (n=162), 29% (n=231) sold ENDS products. Of those retail locations, 25% (n=58) were supermarkets, 36% (n=84) were independent markets, and 39% (n=89) were kiosks. Of those locations that sold ENDS, 89% (n=205) displayed the products: 21% (n=44) of supermarkets, 36% (n=73) of independent markets, and 43% (n=88) of kiosks.

Conclusion: As Parties to the FCTC continue to pass and implement policies that deter the use of tobacco products, tobacco control groups should integrate monitoring of ENDS marketing into regular surveillance efforts; such information can contribute to a country's assessment of whether and to what extent ENDS need to be brought under the fold of tobacco control legislation.

PD-1122-21 Experimentation with electronic cigarettes in young adults from three Eastern European countries

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Background: Despite the inconclusive results of the research conducted on the safety of electronic cigarettes (e-cigarettes), the prevalence of experimentation with e-cigarettes increases rapidly around the world, especially in young individuals. This study intended to offer a preliminary overview on the experimentation with (ever use of) e-cigarettes in a sample of young adults from three Eastern European countries – Hungary, Moldova and Romania, where this type of information is scarce. Thus, the objectives of his study were to evaluate the socio-demographic characteristics of individuals experimenting with e-cigarettes and to assess the determinants of this behavior across the three countries.

Methods: A cross-sectional, web-based survey was conducted between January and December 2013 among a sample of 1577 young adults enrolled in five medical and non-medical state universities in Hungary, Moldova, and Romania. Descriptive statistics and univariate and multivariate binary logistic regression models were employed

to meet the study's objectives. Covariates included in the models consisted of variables measuring attitudes toward the use of e-cigarettes, safety perceptions, the smoking behavior of participants, as well as their use of hookah.

Results: Approximately 21% of the sample consisted of males and 42% of the students were enrolled in medical universities. Experimentation with (ever use of) e-cigarettes varied from 41.9% in Romania, 24.9% in Hungary, and to 11% in Moldova. Regular tobacco smoking was found to be the strongest predictor of experimentation with (ever use of) e-cigarettes across the three countries (Hungary: OR=6.9, $p<0.01$; Moldova: OR=21.2, $p<0.01$; Romania: OR=13.2, $p<0.01$). The likelihood of experimenting with (ever use of) e-cigarette significantly in-

creased if students were told about e-cigarettes from their friends, if they had positive attitudes about e-cigarettes, and if they also experimented with hookah. Conversely, individuals who believe that e-cigarettes should be regulated had lower odds of experimenting with (ever use of) e-cigarettes.

Conclusions: In the context of inconclusive evidence regarding the safety of e-cigarettes, public health professionals working in the area of tobacco control in Hungary, Romania and Moldova should make efforts to address the issue of experimentation with e-cigarettes in young adults, especially because experimentation can lead to its regular use, and more importantly, to nicotine addiction.

46. FACTORS IN IMPROVING CESSATION

PD-1123-21 How are people trying to quit smoking? - Evidence from more than a decade of data

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Background: There are a myriad of options for smoking cessation now available to smokers who want to quit. There is some concern that smoking cessation has become over-medicalised and cessation messages and interventions imply that successful cessation must be assisted, despite the fact that two-thirds to three-quarters of ex-smokers stopped unaided. This study examines population smoking rates and modes of quitting attempts over 14 years.

Design/Methods: Smoking prevalence data were collected via face-to-face interviews in annual cross-sectional representative population surveys of South Australians aged ≥ 15 years from 1998 to 2012. Interviews were conducted at the same time each year and each survey had sample sizes of approximately $n=3,000$, and participation rates $\geq 60\%$. Questions were asked of current smokers to assess quitting history and quitting modes used.

Results: Smoking rates declined slowly in the general population (25.9% current smokers in 1998; cf 16.4% in 2012). Quitting history remained consistent among smokers, with an average of 21.3% never having tried to quit, 42.0% trying more than 12 months ago, 21.0% making one attempt in the past 12 months and the remainder making more attempts, in any given year. The most popular cessation method among those who had made a quit attempt in the past 12 months but were still smoking was pharmacological assistance (46.2%) followed by doctor assistance (29.6%), unassisted quitting (16.5%) and Quitline contact (10.7%). Multivariate analyses revealed

that there was a steady and significant increase in the use of pharmacological assistance over time (OR=1.07, $p<0.001$), along with a corresponding increase in doctor assisted quit attempts (OR=1.07, $p<0.001$). There was also a slight but significant increase in use of Quitline (OR=1.03, $p<0.05$), no change in the proportion who had made unassisted attempts and a decrease in the proportion of people who attended a quit smoking group or read how to quit brochures (OR=0.95, $p<0.001$).

Conclusion: Quit attempts have remained consistent indicating that smokers motivation to quit is consistent over time. Among smokers, there was a significant increase over time in the use of medical modes of quitting in line with the common message that successful quitting should be assisted. However, the proportion of smokers who made unassisted quit attempts remained stable suggesting it may be a different cohort of smokers who are encouraged to quit via assisted methods.

PD-1124-21 Hypertension screening: a good opportunity for tobacco cessation in Bangladeshi villagers?

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Background and challenges to implementation: One in five Bangladeshi adults suffers from hypertension. Clustering of other NCD risk factors in hypertensive patients is even more common. Therefore hypertension clinic services should be an opportunity for tobacco cessation. This study was done to assess whether a brief counseling during check-up visits for hypertension treatment can reduce tobacco use in Bangladeshi adults living in a village.

Intervention or response: This study was done in a public health clinic, Ekhlaspur Centre of Health (ECOH), in rural Bangladesh. 259 consecutive hypertensive patients visiting ECOH for hypertension treatment were recruited

between. Records were kept for all of their visits. The record sheets have information on salt intake and tobacco intake considering them most common preventable risk factors. Counseling was done by trained counsellors to quit tobacco use if they were tobacco users or not to start at all. Prevalence data on their first and fifth visits were compared by chi-square test.

Results and lessons learnt: Average age of the respondents was 55 years (standard deviation, 15 years). One-quarter had controlled blood pressure (<140/90 mmHg) which increased to 91% on fifth visit on average duration of 6 months. The prevalence of tobacco use in first visit was 40% which was declined to 6% ($p=0.001$) on their fifth visit. Commonly used products were jarda (21.6%, declined to 1.5% on fifth visit), sada pata (13.5%, 0%), cigarette (8.5%, 5.9%), biri (1.9%, 0%) and gul (0.8%, 0%). Details are given in Table 1.

	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5
Jarda	21.62	10.42	6.31	4.65	1.47
Sada	13.51	8.97	4.5	2.33	0
Gul	0.77	0.69	0.9	1.16	0
Cigar	8.49	6.21	5.4	4.65	5.88
Biri	1.93	0.69	0.9	0	0

Conclusions and key recommendations: Intervention during hypertension treatment follow-ups is a good approach for tobacco cessation. Primary health care system offering NCD clinical services should consider tobacco cessation as an opportunity.

PD-1125-21 Exploring use of smoking cessation pharmacotherapies and the risk of major cardiovascular events

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Background: Smoking cessation pharmacotherapy could potentially be related to greater risk of cardiovascular complications among cardiac patients.

Objective: To characterize the profile and comorbidities in a sample of smokers submitted to smoking cessation

program at Cardiovascular hospital. To describe the risk of major cardiovascular events during treatment using smoking cessation pharmacotherapies.

Methods: This is a retrospective study of 499 patients admitted to a smoking cessation program from 2011 to 2012. We relied on electronic Program of Assistance to Smokers (PAF) designed to monitor cessation treatment and outcomes.

Results: The mean age was 55 years old, 50% were male, with predominance of white race (65%), 16% had university level, 52% were married. 86% had previously attempted to quit smoking. According Fagerström Score, 66% had moderate to high nicotine dependence level (score >6), while in Issa Score, 71% had moderate to high dependence (>3). Regarding to cardiovascular co-morbidities; 68% were hypertensive, 31% had chronic coronary artery disease, 40% with previous acute myocardial infarction, 53% had dyslipidemia, 18% heart failure and 11.3% had arrhythmia, 11% were obese, 15% were diabetes type 2 and 5% were insulin-dependent diabetes. In psychiatric comorbidities stand out depression (22%) and anxiety disorder (18%). At 52 weeks after treatment: 6% of patients were lost, 24% had relapse, 34% were resistant to the treatment, 36% were successful. There were 6 deaths related to underlying disease, and all of these patients were not using antitobacco drugs, and all of them still smoking. There were no major cardiovascular events reported during the period of patients using smoking cessation drugs.

Conclusion: Smoking cessation pharmacotherapy seems to be safe even among patients with established cardiovascular chronic diseases

PD-1126-21 Factors associated with quit intentions among Zambian smokers: findings from the ITC Zambia Wave 1 Survey

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Background: Smoking cessation is critically important to reducing tobacco-related mortality. However, quitting is challenging and normally requires multiple quit attempts. One of the strongest predictors of quit attempts and successful quitting is having an intention to quit smoking. There are very few studies on determinants of quit intentions from Sub-Saharan Africa. This study examines the prevalence and predictors of quit intentions among Zambian smokers.

Design/Methods: Data were analyzed from the ITC Zambia Survey (2012), a nationally representative cohort of 1483 tobacco users aged 15 and older. Logistic regression was used to analyze weighted data to determine the predictors of quit intentions.

Results: 43% of Zambian smokers had ever tried to quit smoking and 24% had an intention to quit within the next 6 months. The following variables were positively corre-

lated with having intentions to quit: having previous quit attempts (OR=6.0, 95% CI:3.0-12.2), not being a heavy smoker (OR=1.3, 95% CI:1.1-1.5), perceiving that quitting is beneficial (OR=7.3, 95% CI:3.3-15.9), worrying about future health consequences of smoking (OR=3.2, 95% CI:1.9-5.4), believing that smoking is not an important part of life (OR=2.9, 95% CI:1.2-6.7), disagreeing with the statement that one should enjoy smoking since "everybody has got to die of something" (OR=5.7, 95% CI:2.1-15.9), and having a negative overall opinion about smoking (OR=3.9, 95% CI:1.6-9.7). However, age, gender, income, and education level were not associated with quit intentions. 34% of smokers who had accessed health care were given advice to quit and only 5% of smokers had heard about Nicotine Replacement Therapies.

Conclusion: Stronger tobacco control policies such as higher taxes/prices, graphic health warnings, and comprehensive smoke-free laws have been shown to motivate smokers to quit, and intentions are a key mediator of the pathway from policies to quitting. These findings show that the predictors of quit intentions among Zambian smokers are similar to those from high- and middle-income countries. Because quit intentions are strongly linked to future quit attempts, intentions can be used as a "leading indicator" to measure the impact of tobacco control policies. Knowledge about the key predictors of quit intentions has potential to guide the development of stronger tobacco control policies and programs to increase smoking cessation in Zambia and in other countries.

PD-1127-21 Identifying predictors of quit intentions among adult smokers in Mauritius: findings from the ITC Mauritius Waves 1 and 3 Survey

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Background: A central objective of tobacco control is to increase quitting among smokers, and FCTC policies, ultimately, are designed to increase quitting. Recent International Tobacco Control Policy Evaluation Project (ITC) national studies support the notion that smoke-free laws and health warnings are causally linked to quitting among smokers. A key mediator in the pathway from the FCTC policies to quit attempts is quit intentions (planning to quit). It is thus important for both theory and for policy to identify the factors that predict quit intentions over time. The vast majority of studies on intentions to quit, however, have been conducted in high-income countries. The present study is one of the few to focus on the factors that are related to quit intentions among smokers in the African Region.

Design/Methods: Data were analyzed from Wave 1 (2009) and Wave 3 (2011) of the ITC Mauritius Survey, a longitu-

dinal nationally representative cohort sample of 598 adult smokers. Multivariate logistic regression with weighted data was used to identify the correlates of quit intentions. Variables tested include demographics, heaviness of smoking, previous quit attempts, perceived quitting benefits and smoking risks, beliefs about smoking (having favourable attitudes towards smoking), and overall opinion about smoking.

Results: At Wave 3, 55.2% of Mauritian smokers reported that they had intentions to quit smoking. The variables that were positively correlated with having quit intentions remained the same in both waves (Wave 1 and 3). They include having a previous quit attempt, perceiving a benefit of quitting, being very worried about future health consequences of smoking, and having a non-favourable attitude towards smoking. However, age, gender, income, education level, and Heaviness of Smoking Index (this is a measure of dependence) were not associated with quit intentions in both waves.

Conclusion: The percentage of Mauritian smokers who have intentions to quit is low compared to other ITC countries (e.g., about 80% among Canadian smokers). The correlates of quit intentions among Mauritian smokers were consistent across the two waves and generally similar to those found in other ITC countries. These findings suggest that policies and public education programs could target these important predictors of intention to quit smoking so that such policies and programs could increase quitting among smokers in Mauritius.

PD-1128-21 Predictors of tobacco treatment in primary care practice in Canada

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Background and challenges to implementation: Despite the evidence supporting the efficacy of smoking cessation interventions, there is a well-documented practice gap in the rates at which 5As smoking cessation interventions are delivered by primary-care practitioners.

Intervention or response: We report on the delivery of evidence-based smoking cessation treatments (EBSCTs) within a sample of 40 family health teams (FHTs) in Ontario Canada. In each FHT, consecutive patients were screened for smoking status and eligible patients completed a questionnaire immediately following their clinic visits (index visits). Multilevel analysis was used to examine FHT-level, provider-level, and patient level predictors of EBSCCT delivery. Across the 40 participating FHTs, 24 033 patients were screened and 2501 eligible patients contributed data. Provider performance in the delivery of EBSCTs during the preceding 12 months and during the index visits was assessed.

Results and lessons learnt: The rate of provider delivery of EBSCCT for the previous 12 months was 74.0% for the advise strategy. At the index visit, rates of EBSCCT strategy delivery were 56.8% for ask; 46.9% for advise; 38.7% for

assist; 11.6% for prescribing pharmacotherapy; and 11.3% for arrange follow-up. Significant intra-FHT and intra-provider variability in the rates of EBSCCT delivery was identified. Family health teams with a physician champion (odds ratio [OR] 2.0; 95% CI 1.1 to 3.6; $P < .01$) and providers who highly ranked the importance of smoking cessation (OR 1.7; 95% CI 1.1 to 2.7; $P < .01$) were more likely to deliver EBSCCTs. Patient readiness to quit (OR 1.6; 95% CI 1.3 to 1.9; $P < .001$), presence of smoking-related illness (OR 1.6; 95% CI 1.2 to 2.1; $P < .01$), and presenting for an annual health examination (OR 2.0; 95% CI 1.6 to 2.5; $P < .001$) were associated with the delivery of EBSCCTs.

Conclusions and key recommendations: Rates of smoking cessation advice were higher than previously reported for Canadian physicians; however, rates of assistance with quitting were lower. Future quality improvement initiatives should specifically target increasing the rates of screening and advising among low-performing FHTs and providers within FHTs, with a particular emphasis on doing so at all clinic appointments; and improving the rate at which assistance with quitting is delivered.

PD-1129-21 Improving the delivery of smoking cessation interventions by physicians among ambulance patients in Kiev, Ukraine

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Background: Studied the consulting skills of physicians about patients smoking and methods of improve the quality of brief intervention skills.

Design/Methods: Target audience: Physicians from Kiev's clinics, patients, smokers and those who quit smoking from clinics of Kiev. Method of data collection: face-to-face (personal) interview physicians and patients. Random sample: All doctors 190 persons: General practitioners/therapists (50), family doctors (50) Cardiologists (50) Gastroenterologists (40). Patients (600). Age 18-65 (5 age groups: 18-25, 26-35, 36-45, 46-55, 56-65).

Results: Physicians indicated that they advise their patients to quit smoking - the therapists - 51%, the family doctors - 75% -70% cardiologists, gastroenterologists - 59%. On average, physicians spend 3-5 minutes at providing advice on smoking cessation. Most say they see no obstacles to advise their patients to quit smoking. However, physicians are more likely than other doctors say that lack adequate training (9%), a small percentage (4%) gastroenterologists notes that such assistance is not included in the scope of their responsibilities and with family physicians and physicians do not consider such advice efficient (9%). Also, about 10% of all doctors say that such advice take a long time. The majority of physicians (87%) within the councils cessation explain the risks associated with the habit. 55% of patients reported that they receive such advice from a physician. Advised to stop smoking 67% of doctors and 48% of patients received. Nicotine replacement medications are prescribed 11% of doctors and receive such prescription 3% of patients.

Conclusion: After provide training for physicians is significantly increased all activities of doctors Clinical Interventions for tobacco use and dependence among patients. Doctors have become closer to a record of smoking patients in primary health care documents almost 2 times. Dropped percentage of those who do not records cigarette status of the patient. Has increased the quality of brief interventions, namely advices: they are specific and contain more data about the methods and means of stopping smoking. Doctors began to more consciously treat smoking prevention work and noted that the experience of its usefulness and effectiveness of smoking cessation advice. The above indicates the effectiveness of efforts to improve the way doctors work smoking prevention outpatient network.

PD-1130-21 Factors influencing tobacco use treatment patterns among Vietnamese healthcare providers working in community health centres

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Background: Almost half of adult men in Viet Nam are current smokers, a smoking prevalence that is the second highest among South East Asian countries (SEAC). Although Viet Nam has a strong public health delivery system, according to the 2010 Global Adult Tobacco Survey, services to treat tobacco dependence are not readily available to smokers. The purpose of this study was to characterize current tobacco use treatment patterns among Vietnamese health care providers and factors influencing adherence to guideline recommended tobacco use screening and cessation interventions. This is the first study assessing smoking cessation practice patterns among Vietnamese health care providers.

Methods: A cross sectional survey of 134 health care providers working in 23 community health centers in Viet Nam.

Results: 23% of providers reported screening patients for tobacco use, 33% offered advice to quit and less than 10% offered assistance to half or more of their patients in the past three months. Older age, attitudes, self-efficacy and normative beliefs were associated with screening for tobacco use. Normative beliefs (e.g. most of the staff think that promoting smoking cessation is part of their job and my supervisors think that helping smokers quit is a priority) were associated with offering advice to quit. However in the logistic regression analysis only normative beliefs remained significant for both screening and offering advice to quit. Over 90% of providers reported having never received training related to tobacco use treatment. Major barriers to treating tobacco use included lack of training, lack of referral resources and staff to support counseling, and lack of patient interest.

Conclusion: Despite ratifying the Framework Convention on Tobacco Control, Viet Nam has not made progress in implementing policies and systems to ensure that smokers are receiving evidence-based treatment. This study suggests a need to change organizational norms through changes in national policies, training and local system-level changes that facilitate treatment. We will present additional data on organizational factors influencing smoking cessation practice patterns from surveys conducted with approximately 110 health providers and village health workers at 8 CHCs that were recently enrolled in a larger NIH funded cluster randomized trial.

PD-1131-21 Feasibility of a web-based smoking cessation programme for vocational students

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Background: Individuals occupying lower socioeconomic status (SES) categories report the highest rates of smoking and lowest rates of cessation. Low SES smokers are less likely than their peers to use effective cessation treatments, perhaps because they lack resources and support, or because they want to quit on their own. Web-based programs tailored to individual smoking characteristics are one of the only types of cessation programs that are self-directed and can reach large numbers of smokers for little cost. However, research on tailored web-based cessation programs focuses almost exclusively on higher SES, White females. This study examined the feasibility of a web-based smoking cessation program, Project Quit Texas (PQT), for adults from low SES backgrounds, namely students enrolled in post-secondary vocational schools.

Design/Methods: PQT is a tailored program that was adapted for vocational students from Project Quit (Streicher et al., 2008). NCI's online Clearing the Air program served as the Control Condition. 198 students from one of 17 vocational schools were randomly assigned to the Intervention (n=98) or Control (n=100) Conditions, and 149 completed the follow-up survey. The 149 students had a mean age of 36 (sd=11.1); 71% were female, 58% were White, and they smoked approximately 13 (sd=8.9) cigarettes per day at enrollment. Feasibility of PQT was tested by examining differences on utilization (time spent on program) and acceptability (program satisfaction, relevance, helpfulness, likeability) between: students who visited all eight online PQT sections/pages; students who visited fewer than eight PQT sections; and the Control students.

Results: Multivariate analyses of variance indicated that PQT students visiting all eight sections spent more time on each section, reported greater satisfaction with the program, and found it more relevant than students in the other two groups (see Table 1). Students visiting all eight PQT sections also found it more helpful and likeable than

Control students, but not students visiting fewer than eight PQT sections.

Conclusion: Previous research indicates that utilization and acceptability are associated with increased probability of cessation. Given that PQT students who visited all eight sections reported the most utilization and acceptability, findings suggest PQT shows promise as a self-directed on-line program that can reach large numbers of vocational students for relatively low cost.

	PQT 8 Sections (n=31)	PQT < 8 Sections (n=40)	Control Condition (n=78)	F
Utilisation				
Avg. Time on Each Section	5 min. 11 sec ^a	3 min 14 sec ^b	2 min 5 sec ^b	14.07***
Acceptability				
Program Satisfaction	8.77 ^a	7.25 ^b	7.44 ^b	5.05**
Program Relevance	6.45 ^a	5.33 ^b	5.45 ^b	6.50**
Program Helpfulness	6.29 ^a	5.53 ^{a,b}	5.50 ^b	3.52*
Program Likeability	6.35 ^a	5.65 ^{a,b}	5.56 ^b	3.16*
*p<.05. **p<.01. ***p<.001.				
Programme satisfaction scored on a scale from 1-10 and all other acceptability scales scored from 1-7. Estimates in the same row (across the three groups) that have different superscripts are significantly different at p<.05.				

PD-1132-21 Implementing tobacco use treatment guidelines (Article 14) in health centers in Vietnam

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Background: Although Viet Nam has a strong public health delivery system, according to the 2010 Global Adult Tobacco Survey, services to treat tobacco dependence are not readily available to smokers. The objective of this National Institutes of Health funded project is to conduct a cluster randomized controlled trial that compares the effectiveness and cost effectiveness of two practical system-level strategies for implementing evidence-based guidelines for the treatment of tobacco use in public health centers in Vietnam. The proposed implementation strategies draw on the WHO's recently released guidelines for implementing Article 14 of the Framework Convention on Tobacco Control (FCTC) and the growing literature that supports the effectiveness of integrating community

health workers (CHWs) as members of the health care team to improve access to preventive services.

Methods/Design: We are conducting a two arm, cluster randomized controlled trial that will compare the effectiveness and cost of technical assistance, training, plus clinical reminder system (TTC) vs. 2) TTC + a CHW referral system in which providers have the option to refer patients to trained CHWs for additional counseling. The primary outcome is change in provider behavior (i.e., improved adherence to guidelines) and the secondary outcomes are cost per quit, use of tobacco cessation treatment, and smoking cessation. We will also identify organizational and provider-level factors associated with implementation of evidence-based tobacco use treatment into community health centers (CHCs). The study will be conducted in 24 CHCs in Vietnam. We will present the study protocol, including intervention components and evaluation plans and preliminary findings from the first wave of 8 enrolled sites.

Conclusion: Our central hypothesis is that the addition of a referral system (the community health worker) will be superior to training, technical assistance and clinical reminders alone in increasing implementation effectiveness. The ultimate goal of the proposed research is to provide critical new knowledge to facilitate the widespread implementation, dissemination and sustained utilization of evidence-based tobacco use treatment strategies globally and locally.

PD-1133-21 Increasing adherence to varenicline to promote smoking cessation among HIV positive smokers

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Introduction: Despite the overwhelming burden of tobacco use, few studies have evaluated the delivery of smoking cessation interventions among people living with HIV/AIDS. We conducted a National Institutes of Drug Abuse funded three arm pilot RCT (n=150) to assess the effect of cell phone-delivered counseling and/or a text message intervention on varenicline adherence and smoking cessation among a HIV+ clinic-based population. The three arms were: 1) usual care (UC), 2) UC + text messages (TM), and 3) UC+TM+ 7 sessions of motivational interviewing (MI)-focused telephone counseling on adherence to varenicline and 3 and 6 month carbon monoxide confirmed smoking abstinence. All participants received 12 weeks of varenicline.

Methods: Study participants were recruited from three large HIV care centers serving a diverse population of PLWHA. We present findings from an analysis of pooled data (n=98). We used pill counts to assess adherence, defined as taking $\geq 80\%$ of the prescribed dose, at 4 weeks post randomization. We conducted a path analysis to assess correlations between factors proposed by the Infor-

mation, Motivation and Behavior Skills Model (IMB) model to predict adherence.

Results: Only 53.1% of smokers were adherent to varenicline at 4 weeks. Higher levels of education and higher rates of baseline adherence to antiretroviral therapy were associated with higher rates of varenicline adherence. Consistent with the IMB model, adherence-related information, attitudes and beliefs work through adherence-related self-efficacy to improve adherence to varenicline. Quit rates among 101 subjects completing end of treatment surveys (12 weeks) are 7.7%, 3% and 21.9% for Arm 1, 2 and 3 respectively. The final presentation will compare primary outcomes among the full sample across the three arms and will explore the relationship between varenicline adherence and smoking abstinence.

Conclusions: This is the first study to evaluate the effect of an intervention to increase varenicline adherence among HIV+ smokers, and the first to examine the use of text messages to increase smoking cessation medication adherence. Preliminary findings suggest that adherence-related self-efficacy is an important correlate of medication adherence in the treatment of nicotine addiction and may be amenable to change through increasing knowledge about the purpose and use of medication and addressing negative attitudes and beliefs related to smoking cessation pharmacotherapy.

PD-1134-21 Global Bridges Healthcare Alliance for tobacco dependence treatment: network analysis of an international healthcare professional training network

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Background: Global Bridges is a worldwide science-based initiative to help healthcare professionals treat tobacco dependence and advocate for effective tobacco control policies.

Design/Methods: An online survey was implemented with Global Bridges members, who registered to be a part of the network via the Global Bridges website, in order to better understand how members communicate and interact with each other and to assess member participation in Global Bridges activities.

Results: A total of 233 network members completed the survey, with responses from all six WHO regions. Twenty-seven percent of respondents were physicians, with another 15% who were non-physician clinicians. The remaining respondents were primarily comprised of researchers and academic faculty and executive leaders and program managers. Seventy-four percent of respondents reported

tobacco dependence treatment network ties, with 27% of those ties a direct result of involvement with Global Bridges. Sixty percent of respondents reported tobacco policy/advocacy network ties, with 17% of those ties a direct result of involvement with Global Bridges. Network centrality is high for the interaction network among Global Bridges members (0.85) and for the tobacco dependence treatment communication network (0.87). This indicates there is likely a dependence on the members of the Global Bridges executive committee (tobacco control experts/researchers based in the U.S.) and the regional directors as key points of contact and connection among the different regions.

Conclusion: Understanding the processes and evolution of building an international tobacco control network is timely and relevant as attention is increasingly turned towards low- and middle income countries. Network survey responses show activity and ties, both tobacco dependence treatment and policy/advocacy oriented ties, directly resulting from participation in Global Bridges activities and training, indicating progress towards this goal.

Results indicate an effect of Global Bridges efforts as well as suggesting areas to target for increased activity and improvement. Follow-up surveys are planned to track growth and evolution of the Global Bridges network.

47. BENEFITS OF COMMUNITY COLLABORATION AND OUTREACH

PD-1135-21 Social mobilisation for the implementation of measures to ban smoking

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Background and challenges to implementation: Two years after its accession to the Framework Convention on WHO tobacco Control (FCTC) January 28, 2010, Côte d'Ivoire took a Decree No. 2012-980 of 10 October 2012 on banning smoking in public places and public transportation. Despite this significant step forward for our country in the implementation of this convention, unfortunately a mitigate implementation can be note. In short, expected change in behavior that should accompany the interdiction to smoke in public places is not automatic. Faced with this situation, questions arise: what's people's appreciation regarding interdiction to smoke in public places have? What are the obstacles since the implementation of this measure? How to overcome this situation?

Intervention or response: We opted for a social mobilization approach, since it is run rally key stakeholders to the common aim which is the application of the prohibition order. As the method used to select the sample in the target population, we used the random sample such that each element has a known probability of being positive in the sample. The methodology of data collection consisted of a semi-structured interview with several key stakeholders (owners of public places and public transport on the one hand and those of entities responding to enforce this decree on the other).

Results and lessons learnt: The data collected through these interviews focused on understanding the status of implementation of this decree, behaviors and knowledge of actors according to the decree, the problems encountered by them in the application and proposals for ideas for effective strategies for tobacco control in these institutions. Therefore, the simplification measures are identi-

fied at different levels: some laws, other regulations and finally some related to social communication. The results of this study could provide a database for African countries and those in developing countries that are still struggling to achieve the effective implementation, and compliance with smoke free policies and even tobacco laws in general.

Conclusions and key recommendations: This article presents the results of research initiated by the Ivorian civil society engaged in tobacco control. It serves as a tool for the preparation of a social mobilization to achieve the effective implementation of this Decree.

PD-1136-21 Social determinants of intention to quit and actions taken among current tobacco using youths in the slums of Villupuram town in Tamil Nadu, India

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Background: The various factors responsible for tobacco consumption among youth in developing countries are known. Information on social determinants of various steps in behavior change such as 'Intention to quit' and 'actions to quit' can contribute significantly to cessation activities at the community level.

Objectives: To study the social determinants of 'intention to quit' and 'actions to quit' among currently tobacco consuming male youth in a peri-urban setting of Tamil Nadu, India Material and

Methods: Setting – The present analytic cross-sectional study was done in the peripheral area of Villupuram town in South India. The total population of the area was 30,000. Sample size and sampling – A representative sample of 600 youth (15-24 years) was selected by two stage cluster sampling, where, at first stage, thirty clusters were selected by population proportional to size method and at the second stage, the respondents in each cluster were chosen by a random walk method. Data collection: Two trained medical interviewers collected the data by house-to-house

visits by using pre-designed and pre-tested questionnaire. Data analysis: The data was entered and the binary logistic regression was done in SPSS (version 16) software package by the enter method. The dependent variables were 'intention to quit' and 'actions to quit' and independent variables were various social determinants. The multicollinearity of the independent variables was checked by correlations of the estimates. Ethical issues: The study was cleared by the Institutional Ethics Committee.

Results: Out of 600 youth, 179 (29.8%) were currently consuming tobacco products. Out of 177 male youth (2 females excluded), 129 (72.1%) had an intention to quit in next 30 days. Out of 129 youths who had an intention to quit, 72 (55.8%) had taken at least one action to quit it. The odds of intention to quit significantly rose by 1.26 times with a unit rise in age and the intention to quit was high among youth belonging to below poverty line status. The only determinant for 'action taken' was the age of the respondent (adjusted OR; 1.25:95%CI-1.04-1.51).

Conclusions: The intention to quit increases with the rising age and It was found high among youth who were below the poverty line. The action to quit increased with the age. The population level tobacco cessation program should focus on below poverty line youths, who are relatively older.

PD-1137-21 Tobacco use, awareness, and effect on oral health among Malayali tribes, Yelagiri Hills, Tamil Nadu, India

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Background: India has the second largest tribal population of the world next to the African countries. About half of the world's autochthonous people live in India, thus making India home to many tribes which have an interesting and varied history of origins, customs and social practices. The Imperial Gazetteer of India, 1911, defines a tribe as a "collection of families bearing a common name, speaking a common dialect, occupying or professing to occupy a common territory and is not usually endogamous though originally it might have been so". 635 primitive tribal communities have been identified by the Government of India. Situated halfway between Chennai and Bangalore and positioned at an elevation of 920m above sea level, Yelagiri is a huddle of tiny villages, which extend over four hills and comprises 14 small villages, situated in the Jawadh Hill ranges of the Eastern Ghats. The present study was conducted to assess the tobacco usage and its effect on oral health among Malayali tribes, Yelagiri Hills, Tamil nadu, India.

Design/Methods: A cross-sectional descriptive study was conducted to assess the tobacco use and oral health status of 660 Malayali tribes in the Yelagiri Hills. Data was collected using a survey proforma which comprised of a questionnaire and WHO Oral Health Surveys – Basic Methods Proforma (1997). The sample was selected using cluster random sampling method.

Results: Among 660 study population, 57.7% had no formal education, 34.5% had not visited dentist before. 64.5% had indigenous brushing habits, 33% had the habit of alcohol consumption. Of those who had the habit of smoking, 33.6% smoked beedi, 1.06% smoked cigarette, 60.83% chewed raw tobacco chewing, 2.73% chewed Hans and 26.33% had a combination of smoking and smokeless tobacco usage. Deep rooted beliefs and customs regarding dentition and dental treatment prevailed. The percentage of oral mucosal lesions observed were as follows: 26.33% leukoplakia, 3.94% ulceration and 2.5% malignant tumor. 5.76% of the study populations had other abnormal conditions like candidiasis and OSMF.

Conclusion: From the results of this study it may be concluded that the Malayali tribes were characterized by a lack of awareness about oral health, deep rooted dental beliefs, high prevalence of tobacco use and limited access to oral health services. Oral health is a neglected issue in the case of Malayali tribes. They are in definite need of oral health care.

Recommendation: Periodic oral examination

PD-1138-21 Recall and self-perceived effectiveness of anti-tobacco advertisements among hospital visitors at Mangalore, India: a cross-sectional study

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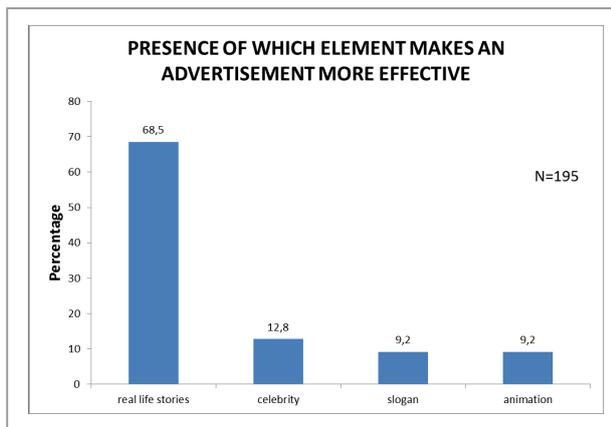
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Background: Multiple mass media campaigns have been developed in India to raise awareness of the harms of tobacco usage and promote tobacco related behaviour change. The "Sponge" and "Mukesh" campaigns were among the many. For successful campaigns and development of further educational media advertisements, it is imperative to know the strategies that work and the elements that appeal to people. This study was conducted to assess the effectiveness, the message conveyed and the recall ability of these two anti-tobacco advertisements in the study population. The study highlights the components which make an advertisement influential and persuasive.

Methodology: After approval from institutional ethics committee and requisite permissions, 195 hospital visitors were invited to participate in this survey. Informed consent was taken and data were collected using a semi-structured interview scheduled in May 2014. The respondents were shown photos of the two advertisements and asked a series of questions related to these and about tobacco cessation campaigns. The responses were noted and the collected data was entered in, and analysed using SPSS version 11.5. Association was calculated using chi square test. The sample size was calculated with 95% confidence level and 90% power with the reference value of 72% from a previous study.

Results: The recall ability of these two advertisements was 70.8%. Less than half (41.5%) of the study population found the anti-tobacco advertisements highly effective.

tive in spreading awareness. More than half (51.3%) of them thought the main message conveyed by these advertisements is regarding the harmful effects of tobacco use while 41% believed these advertisements encouraged people to quit tobacco. Majority (68.7%) of our population felt that real life stories make an advertisement more effective. The study population could perceive the following elements the most from these advertisements-educational (22.9%), genuine (17.7%), realistic (13.4%) and emotional (13.4%). These advertisements made such an impact on the tobacco consumers that 70.4% of the 69 current tobacco consumers were willing to quit after watching these advertisements. However, only 8.7% of the 195 had actually quit the habit.



Conclusion: Anti-tobacco advertisements had positive effects, good recall ability and can play an important role in behaviour change. The presence of a real life story and an educational component play a vital role in influencing the population.

PD-1139-21 Using the voice of tobacco victims to denormalise the tobacco industry in Indonesia

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Background and challenges to implementation: Indonesia is the country with the highest prevalence on female smokers in the world regarding to GATS 2011 (67.4% of men and 36.1% overall). While the government has not yet signed the FCTC, the tobacco industry can advertised and freely do their CSR in almost all fields. The tobacco industry has been regarded as a savior to the country through the cigarette tax revenue. Voice of the victims is the program that used to de-normalizing tobacco industry activities in Indonesia. By developing victims' alliance, it is now the only alliance ever formed in Indonesia in 2012 that consists of patient survival and the family members of tobacco users or passive smokers. The alliance formed in the national level and has members from 6 cities in Indonesia.

Intervention or response: Strategies used to de-normalizing tobacco industry are: lobby to the decision makers,

mobilize young communities and public figures, and creative campaign media advocacy. The alliance had lobbied MoH to support the government regulation in 2013, lobbying parliament members to object the "Tobacco" bill that has interfered by the tobacco industry. In collaboration with other agencies and NGOs, the alliance also produce the book of victims that used as an advocacy tools, production of public service ads on billboards in Jakarta and national printed media. The alliance also actively participates in various opportunities in radio, television talk shows, and social media campaign through the twitter account @kitakorban. Media monitoring is used as a method to measure the successful of this program.

Results and lessons learnt: At least 2 reporting on tobacco industry accountability appeared in local or national level media in every month during 2012-2013. By exposing the story of tobacco victims and their family, public will more believe that tobacco industry is a bad industry. Positive responses and supports from the public also given through alliance's twitter account. However, getting a new members from outside Jakarta is a big challenge because not many of the patients and professionals aware to do this movement. The best way to start this movement is by engaging young people to lead the program in local level.

Conclusions and key recommendations: Using the voice of victims as a tool for de-normalizing tobacco industry in Indonesia is an effective way to do. And the best way to do it is collaborating with young group and using creative media campaign.

PD-1140-21 The "Smoke-free area and smoke-free home" project in Belawae Health Center and Buntu Buangin Village, Sidenreng Rappang (Sidrap) District, Indonesia: An evaluation

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Background and challenges to implementation: In Indonesia, 97 million people are regularly exposed to secondhand smoke. Although Indonesia has not ratified the Framework Convention on Tobacco Control (FCTC), its government has implemented national smoke free air legislation, PP 109/2010. The local governments are responsible for the enforcement, but only 120 out of 412 districts have implemented it.

Intervention or response: Located in Sidrap Districts, which has not implemented the legislation, local health providers in Belawae Community Health Center initiative developed Smoke-Free Area and Smoke-Free Home project based on the national guideline and World Health Organization (WHO) MPOWER measures. After Sidrap district government accepted their grant proposal, Belawae health providers' conducted the project from October 2012 to May 2013, which includes trainings, health communication tools development, community leaders involvement, schools and communities health promotion, local petitions, and smoking cessation group therapy

using the American Lung Association method. Moreover, a household survey was conducted for evaluation. The local health officials conducted a seminar to disseminate the activities to Sidrap district government, inviting central level health officer and WHO member as guest speakers. Local and national media covered the seminar and the story of Buntu Buangin smoke-free home village in radios, local TV, and newspapers.

Results and lessons learnt: In Buntu Buangin village, 62 % houses became smoke-free, 74% smokers thought about quitting smoking while 40% tried to quit smoking. From 9 participants of the smoking cessation group therapy, 7 quit smoking while 2 significantly reduced their smoking intake by the end of the program. However, continuation and long term plan are needed for sustainability. While national exposures encourage the district government to implement the Smoke Free Law, without constant follow up and lack of political will the Smoke Free Law implementation might be delayed.

Conclusions and key recommendations: Community health centers have the potential to implement Smoke-Free Law and to recommend the implementation at district level. Collaboration between community leaders and local health workers can encourage smoke free home policies which increase quit attempts, reduce smokers' cigarette intake and increase successful quit attempts.

PD-1141-21 Smoking rates and attitudes toward second hand smoking: a comparative study

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Background: There is no safe level of secondhand smoke and conclusive evidence exists about the association between life threatening disease and passive smoking. Breathing even a little secondhand smoke can be dangerous. Secondhand smoke contains over 4,000 chemicals, 200 of which are toxins and 43 are carcinogens. Those who have heart disease and/or asthma are particularly susceptible to exposure to secondhand smoke exposure. Passive smoking, according to the recent global assessment of the burden of environmental tobacco smoke (ETS), is still one of the most important threats to public health. The aim of the study was to determine the smoking rates and perceptions of students towards second hand smoke in a University setting.

Design/Methods: A study was conducted among 181 students of faculty of Dentistry and Faculty of Mass-communication at SEGi University, Malaysia. A validated questionnaire was administered to all students agreeing to participate in the study. Their responses were tabulated and compared. A simple quantitative analysis was done to compare both groups.

Results: A total of 118 dental students and 63 students from Faculty of Mass Communication completed the survey. Fewer dental students (2.5%) have smoked more than 100 cigarettes in their life when compared to the mass communication students (19.05 %) who were also

current smokers. Current smokers averaged 6.4 cigarettes per day and smoked 2.6 per day on campus. A majority of dental students (37.2%) and mass communication students (11.1%) believed air quality to be poor. All mass communication students had an experience of second hand smoke while (3.4%) dental students have never experienced second hand smoke. On the other hand 81.3% of the dental students and 30.2% of mass communication students believed that a smoking ban would greatly improve the public image of University. Though 95% of dental students and 71.4% of mass communication students agreed that tobacco smoke is dangerous for smokers and nonsmokers health; only the dental students (85%) wanted the campus to be smoke free in the future, while the mass communication students (38%) only wanted campus to be smoke free.

Conclusion: It is clear that there is considerable support for a smoke free policy in the university but there must be adequate education and consultation among all the parties involved. In the meantime, students should be provided health education to discourage tobacco use in the university campus.

PD-1142-21 Tobacco control campaign in Uganda: a population-based trend analysis

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Background: In 2009, Uganda initiated a series of comprehensive anti-smoking measures. We aimed to assess the effect of Uganda's anti-tobacco campaign.

Methods: We did a population-based trend analysis, using neighbouring Kenya, which has not instituted such extensive anti-tobacco measures, as a control. We assessed three key endpoints in both countries: per-person consumption of cigarettes, as measured by tax records; the prevalence of tobacco use in adolescents, as measured by school-based surveys; and the prevalence of tobacco use in adults, as measured by nationwide household-based surveys. Findings During 2005—11, per-person consumption of cigarettes in Uganda decreased by 4.3% per year (95% CI 2.4 to 6.2), whereas per-person consumption in Kenya increased by 0.6% per year (—1.2 to 2.5; $p=0.002$ for difference in trends). During 2003—09, the 30-day prevalence of tobacco use in Ugandan students aged 13 years, 15 years, and 17 years decreased by an estimated 8.0% per year (4.5 to 11.6), compared with a decrease of 2.5% annually (0.5 to 4.5) in Kenyan students during 2001—09 ($p=0.02$ for difference in trends). From 2009 to 2011, the prevalence of current tobacco use in Uganda decreased annually by an estimated 3.3% (2.4 to 4.1), compared with an annual decrease in Kenya of 1.7% (0.8 to 2.6; $p=0.02$ for difference in trends). Interpretation Uganda's comprehensive tobacco-control campaign has been associated with a substantial, unprecedented decrease in tobacco use. Decreases in tobacco use in other low-income and Low-income countries of the magnitude seen in Uganda would have a substantial effect on the future global burden of tobacco-related diseases.

PD-1143-21 World No Tobacco Month: impacting the news cycle as an academic institution

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Background and challenges: As academic institutions often rely on new research to bring attention to their websites and better disseminate information, they must take advantage of key publicity opportunities. While World No Tobacco Day (WNTD) is an obvious opportunity, media saturation can block smaller organizations' efforts.

Intervention: The Institute for Global Tobacco Control (IGTC) completed a four-part, month-long series to bring attention to our research and the 2014 WNTD theme, raising taxes on tobacco. The series included 1) Video "Why Tobacco Taxation Matters" 2) Infographic "TPackSS: Cigarette Tax and Price" 3) Highlighted publications "IGTC Tobacco Taxation Research Highlights" and 4) Story "Challenges to Tobacco Taxation." All parts of the series are related to IGTC research projects, and feature experts from IGTC or its partners. All pieces were marketed through Facebook, LinkedIn, and email marketing.

Results and lessons learnt: Traffic to the website in the month of May (leading up to WNTD) increased 24% from 2013, with a 58% increase in the proportion of new visitors. There were 6,095 page views from 177 countries, with India topping the list. The WNTD page that hosted all content had 917 page views from 88 countries during the month. The download of the infographic "TPackSS: Taxation and Cigarette Price" was the top site "event" in May 2014, and the video was viewed 333 times. Facebook posts also received better-than-average likes and shares, although not many comments. Challenges included creating a well-defined release schedule and coordinating with key partner organizations. IGTC intends to build interactivity into future releases, including creating tools and asking for pictures or feedback from users.

Conclusions: A longer promotion, and potentially the larger number of resources released, brought substantially more attention to IGTC's website, creating more tobacco taxation knowledge tools leading up to WNTD. This allows tobacco control, public health, and healthcare professionals to be more prepared for effective media and other advocacy efforts on May 31, and is an approach that could benefit academic institutions and other organizations as well.

PD-1144-21 The importance of branding and design as it relates to tobacco control communication

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Background and challenges to implementation: The dissemination of research findings is essential for knowledge

translation, to influence changes in programs and policies. Globaltobaccocontrol.org, prior to 2013, was strictly a site for the Institute for Global Tobacco Control's online course. With the introduction of our new Healthcare Professionals course, we saw an opportunity to expand the presence of globaltobaccocontrol.org to also include resources aimed at our key target audiences. This larger presence required the globaltobaccocontrol.org brand be updated by establishing a new logo and color palette, which was then used to build and strengthen the brand from the ground up.

Intervention: Looking at the old site we noticed two glaring issues. First, the layout and presentation of the site was not up to the standards currently being used on the Internet. Secondly, branding was non-existent. We went with a flexible design that could be used on any mobile device or desktop. This helped open up more free space, gave us the freedom we needed to have a layout which was dynamic, and allowed us to incorporate other collateral material seamlessly. With the shift of globaltobaccocontrol.org to a resource dedicated to tobacco control, it was important that this was reflected in our branding and any subsequent resources introduced should be used to build our burgeoning brand.

Results and lessons learnt: Using web analytics we can see what the effect of the new design has on visits to our site. The two key metrics used to evaluate the website are page views and users. Page views increased 40% from the previous year, up from 299,937 to 419,556. Users increased 49%, from 8,266 to 12,335. While there is no set standard rate increase, most professionals in the field agree that a 20% increase in web traffic indicates a significant improvement.

Conclusions: As we move forward, we plan to create more multimedia content to help drive more traffic to the site. Redesign and branding can be a daunting task especially when building from the ground up and with few resources, but the benefits, such as consistent traffic to a website and larger exposure to your target audience will ultimately help in disseminating research findings and build the brand of your organization. A stronger brand helps to distinguish your material and ensures that you are a trusted resource that can be relied on for future visits and resources.

PD-1145-21 Spit It Out: community coalitions and smokeless tobacco use

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Background and challenges to implementation: McDowell County, located in southwestern West Virginia, had high rates of tobacco use. This was facilitated by a lack of prevention and cessation services in the area, and a deeply-entrenched rural culture that viewed sports and hunting as synonymous with smokeless tobacco use. The Southern Coalfields Regional Tobacco Prevention Net-

work Office (SCRTPNO)- a community-based regional prevention coalition- decided to address this problem by implementing Spit It Out-West Virginia. Spit It Out was a community-based, culturally appropriate tobacco prevention and cessation program. McDowell County is the 8th poorest county in the USA.

Intervention or response: The project had two main goals: to increase access to smokeless tobacco prevention and cessation services, and to increase tobacco-free workplaces and recreational venues. To achieve these goals, Spit It Out:

- Provided tobacco free education at community events
- Provided materials at local businesses and venues
- Held tobacco cessation workshops for miners at the Brooks Run Mining Company
- Provided individual counseling
- Engaged local faith-based organizations to promote tobacco prevention and cessation
- Worked with local businesses on how to create a tobacco-free workplace

Results and lessons learnt: Because of the Spit It Out programme:

- 254 residents attended smokeless tobacco cessation workshops that focused on helping them quit smokeless tobacco during the project's first year
- The tobacco cessation hotline enrollment from the county increased by 800%
- 110 individuals received cessation counseling
- 102 individuals received nicotine replacement therapy
- 49 church representatives received smokeless tobacco prevention and cessation resources for their church
- 5 businesses adopted a tobacco-free workplace policy
- Donald Reed Jr., a tobacco prevention specialist with the SCRTPNO, received the 2010 Community Activist Award from Legacy

Conclusions and key recommendations: While the Spit It Out project was tailored to this community, other organisations can replicate it by targeting the social norms and cultural traditions of their residents. This programme was successful in reaching the most disadvantaged residents of McDowell County because it worked with the faith organisations in the community.

PD-1146-21 "Quit to Win": a smoking cessation promotion and scientific research project with community participation

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Background: In Hong Kong, the daily smoking prevalence dropped to 10.7% in 2012. However, over 60% of the daily smokers had never tried and 53% had no intention to quit. Urgent actions and novel approaches are needed to promote smoking cessation. To actively offer smokers assistance to quit, the Hong Kong Council on Smoking and Health (COSH) partnered with Schools of Nursing and School of Public Health of The University of Hong Kong (HKU) to launch a smoking cessation contest – "Quit to Win" Contest in 2009, to raise public awareness on the harms of smoking and the benefits of quitting, and motivating smokers to quit. The contest was re-organized in 2010 and evolved to become "Quit to Win" Smoke-free Community Campaign in 2012, 2013 and 2014.

Intervention: "Quit to Win" is a smoking cessation contest with different elements including scientific research, social marketing and community involvement. In partnership with HKU and non-governmental organizations (NGOs) and with support of all 18 District Councils, COSH organized recruitment and smoking cessation publicity activities throughout Hong Kong. Various media outlets, including television, radio and newspapers, were used to increase the reach of the campaign. Participants were randomized into groups to receive different brief smoking cessation interventions and strategies. They were followed up regularly for at least 6 months to assess the effectiveness of specific interventions on smoking reduction and cessation.

Results: In 2009-2013, over 4,500 smokers joined the contest and 23 NGOs joined the campaign. At 6-month follow-up, 21.6% of the contestants had quit smoking in 2009, 16.4% in 2010 and 9.5% in 2012. About 1/3 had reduced smoking by half or more: 38%, 37.5% and 25.9% respectively.

Conclusions: "Quit to Win" had led to an increased awareness of the benefits of smoking cessation and a smoke-free Hong Kong, and successfully got the attention of thousands of smokers who were difficult to reach and did not have intention to seek for cessation assistance. Collaborations among COSH, NGOs, academic institutions and the general public fostered an increasingly supportive network for tobacco control and cessation. Continuous, proactive and mass media campaigns of cessation messages and successful cases of quitters, with more attractive monetary incentives are needed as these are essential to encourage more smokers to quit, more nonsmokers to help and more NGOs to collaborate in tobacco control.

48. BRIDGING THE INEQUALITY GAPS

PD-1147-21 Level of education, tobacco consumption, and the association with other drugs use

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Material and method: Three hundred patients were selected at random at an addiction assistance centre; 25% were females and 75%, males. The larger part of respondents were under 40 years old, this age being exceeded by those individuals who only consumed tobacco and attended the centre for the purpose of cessation. They were classified in accordance with their level of education, their use of tobacco in association with other drugs and the use of tobacco alone. Out of the total number of patients, 33.58% had completed the elementary, higher and college education, whereas 54.29% had not completed any of them; 1.42% was either illiterate or could just read and write. No data about the remaining 10.71%.

Conclusion: It has been remarked that the higher the level of education, the lower was the consumption of tobacco and of the latter in association with other drugs. When assessing the same sample for the time elapsed between the beginning of consumption and the first consultation visit, it was noted that the period of time for requiring assistance in respect of the use of tobacco in association with other drugs was shorter than in the use of tobacco alone. As part of our comments, we can mention that our country has not ratified the FMTC and that there is a high level of social tolerance for tobacco consumption. It was only a year ago that a national law on tobacco control was passed and the rules applicable to smoke-free closed premises are not being complied with as provided by the existing national and provincial legislations.

PD-1148-21 Tobacco control policies and reduction of cardiovascular diseases and myocardial infarction deaths in Olavarria, Buenos Aires, Argentina

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Background and challenges to implementation: After five years of educational policies on healthy habits at population level, in year 2008 a local law was implemented and enforced in city of Olavarria, Province of Buenos Aires, as part of comprehensive tobacco policies. Also, tobacco consumption has fallen from 27% to 22 % in adults in Argentina from 2005 until now.

Intervention or response: Since 2008 strict control of the legislation has been implemented, health care clinics had been opened, free medication and educational plans at both population level and school level have been imple-

mented permanently. Aim: To analyze impact of tobacco policies in the middle term on cardiovascular diseases and myocardial infarction deaths .

Methods: We have analyzed cardiovascular diseases and myocardial infarction deaths trends from 2001 to 2012 in Olavarria, according to age from Provincial statistics.

Results and lessons learnt: Death rate from cardiovascular disease has fallen by almost 10% (from 233.9 ‰ to 198.7 ‰) from 2001 to 2012 , while the death rate from myocardial infarction has decreased from 77.7 ‰ to 38.1 ‰) in people older than 30 years of age in the same period . On the other hand, in the province of Buenos Aires, mortality rates trends of cardiovascular diseases (296 ‰ to 269.1 ‰) and myocardial infarction (96.7‰ to 80.9‰) have remained stable during the same period. Main decreasing rates of myocardial infarction in Olavarria have been observed in 30-49 year-old young men.

Conclusions and key recommendations: The implementation of tobacco control policies and strict monitoring of compliance have had significant impact on population health, particularly reducing early deaths from cardiovascular diseases.

PD-1149-21 Mortality risks of COPD from a prospective cohort of 390,269 subjects: assessing involvement beyond the lungs

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Background: COPD is known to increase mortality in respiratory diseases, but is less known for its extra-pulmonary and lung cancer effect. The objectives of this study are to assess the prevalence and mortality risks of COPD subjects as classified by GOLD classification.

Design/Methods: The cohort consisted of 390,269 healthy adults who went through a self-paying health screening program, between 1994 and 2008. COPD was defined by Gold criteria. Mortality and cancer incidence were identified in an average of 8.5 years of follow-up. Cox proportionate model was used to calculate the hazard ratios (HR).

Results: More men (4.6%) than women (3.8%) and more smokers (5.3%) than nonsmokers (3.7%) had COPD, with a mean age of 50. Not only smoking COPD (4.5-fold) but also nonsmoking COPD (1.4-fold) had increased lung cancer mortality risk, implying the independent effect from COPD. Other than lung cancer and respiratory diseases, COPD had increased risks for CVD (HR: 1.76; 1.46-2.13), including ischemic heart disease (HR: 1.63; 1.12-2.37) and stroke (HR: 1.80; 1.34-2.43), and kidney diseases (HR: 2.32; 1.43-3.75). The extra-pulmonary causes constituted 77% for non-smokers and 58% for smokers.

Table 1. Hazard ratio for cause-specific mortality risk by COPD and smoking status when comparing to non-smoker and non-COPD subjects

Cause of death	Non-COPD, non-smoker		COPD, non-smoker		COPD, smoker			
	death	HR	death	HR	95% CI	death	HR	95% CI
All causes	2,947	1	659	1.53 *	(1.40, 1.66)	886	2.51 *	(2.3, 2.8)
All cancer	1,370	1	230	1.20 *	(1.04, 1.38)	292	1.95 *	(1.7, 2.3)
Oral cancer	11	1	2	1.83	(0.39, 8.66)	11	6.69 *	(2.5, 18.0)
Esophagus cancer	12	1	6	2.60	(0.94, 7.21)	12	7.22 *	(3.0, 17.2)
Stomach cancer	84	1	19	1.67 *	(1.00, 2.79)	8	1.14	(0.5, 2.4)
Colon and rectum cancer	148	1	40	1.85 *	(1.29, 2.66)	33	1.81 *	(1.1, 2.9)
Liver cancer	276	1	39	0.96	(0.68, 1.36)	43	1.01	(0.7, 1.5)
Lung cancer	216	1	44	1.41 *	(1.01, 1.97)	105	4.50 *	(3.4, 6.0)
Diabetes mellitus	161	1	41	1.26	(0.89, 1.80)	61	3.07 *	(2.1, 4.4)
Cardiovascular disease	475	1	149	1.76 *	(1.46, 2.13)	189	2.66 *	(2.1, 3.3)
Ischaemic heart disease	131	1	38	1.63 *	(1.12, 2.37)	65	3.31 *	(2.3, 4.8)
Stroke	186	1	62	1.80 *	(1.34, 2.43)	75	3.10 *	(2.2, 4.3)
Respiratory system	93	1	60	3.01 *	(2.14, 4.22)	129	5.96 *	(4.2, 8.4)
Chronic obstructive pulmonary disease	13	1	31	14.26 *	(7.23, 28.10)	78	35.24 *	(17.3, 71.9)
Digestive system	182	1	52	1.75 *	(1.27, 2.41)	50	2.85 *	(2.0, 4.2)
Peptic ulcer and GI haemorrhage	5	1	9	8.60 *	(2.74, 27.05)	8	14.98 *	(4.1, 54.4)
Liver cirrhosis	104	1	19	1.19	(0.72, 1.96)	24	2.62 *	(1.6, 4.4)
Genitourinary system	78	1	29	2.02 *	(1.30, 3.14)	23	1.92 *	(1.0, 3.5)
Kidney diseases	62	1	25	2.32 *	(1.43, 3.75)	20	2.26 *	(1.2, 4.3)

Non-smoker as the reference group

Conclusion: More than half of smoking COPD subjects died from causes beyond the lungs. They had systemic involvement with increases in stroke, heart, renal and infectious diseases, in addition to lung cancer. These extra-pulmonary risks, under-appreciated by clinicians and unaware of by the patients, are major challenges to overcome.

PD-1150-21 Reassessing the role of physical activity for smokers: how critical is it?

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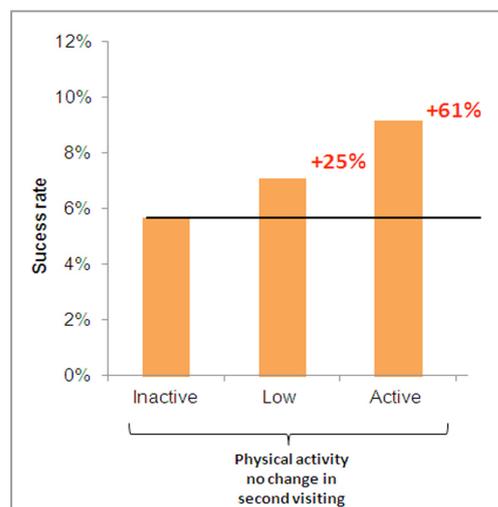
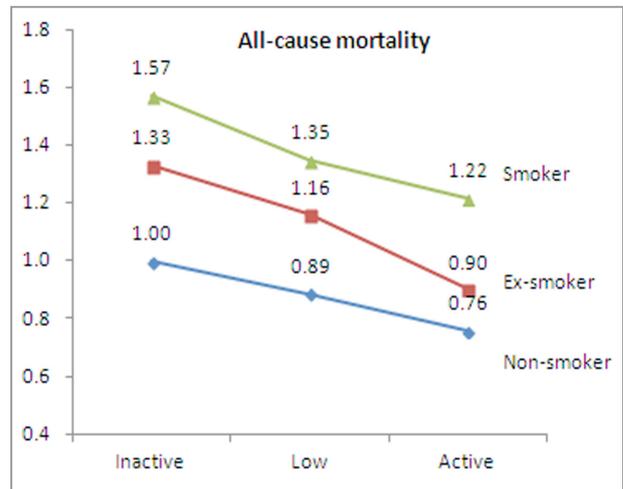
Background: Exercise is viewed as a nice behavior to have and rarely considered as essential. The effect of physical activity on smokers has been reviewed with limited data. The objectives of this study are, with the use of large data set from long term follow up, to find out whether exercise could contribute to smoking cessation and to the reduction of smoking hazards.

Design/Methods: In this prospective cohort study, 429,244 individuals (47.9% men) went through standard medical screening program(s) from 1996 to 2008, with an average follow up of 8.05 (SD: 4.21) years. The exercise volume of each individual, expressed in MET-hour/week, was placed into inactive (<3.75), low-active (3.75-7.49), or active (≥7.50) category. Hazard ratios (HR) for cardio-vascular disease (CVD) mortality, adjusted for 10 confounders, were calculated.

Results: A fully active smoker could cut down one half of smoking related excess mortality from HR:1.57 to HR: 1.22. A 22% excess risk remained among active smoker when compared to inactive nonsmoker. The quit rate of active smoker, 11% in 2 years was 55% more than quit rate of inactive smoker, 8%.

Conclusion: Active smokers had lower all-cause mortality than inactive smokers by up to one third. Active smokers also doubled their quit rate compared to inactive ones. Unable to quit, smokers could be counseled into physi-

cal activity to increase quit rate and to decrease mortality risks. Exercise is critical to smokers.



PD-1151-21 The correlation between tobacco use and media publicity among youth in China

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Background: Huge amount of scientific evidence shows, smoking would have instant maleficent on teenagers' respiratory and cardiovascular system after using tobacco, and smoking would accelerate the incidence of chronic disease in adult life. In recent years, National Health and Family Planning Commission of the People's Republic of China take the lead of carrying out tobacco control activities, including various forms of anti-tobacco campaigns. However, advertising, promotion and sponsorship abound for tobacco use. Therefore, we need to evaluate the correlation between tobacco use and media publicity among youth.

Design/Methods: The Global Youth Tobacco Survey (a.k.a. GYTS) uses a global standardized methodology that includes a two-stage sample design. The survey uses a standard global core questionnaire with a set of optional questions that permits adaptation to meet the needs of the

country on tobacco use and other related indicators. Data collection was implemented from October to December of 2013; data entry, cleaning and analysis were conducted from January to March of 2014. By using Canonical Correlation Analysis and Factor Analysis, this paper studies the correlation between tobacco use and media publicity among youth in China.

Results: By using the Factor Analysis, the reasonable outcomes of aggregative indicators would take into compared the development level of regional anti-tobacco media publicity, the current situation of tobacco advertising and promotion among youth and the regional youth tobacco use situation. Several provinces (cities, autonomy regions) in the Southwest part of China (e.g. Yunnan, Guangxi, Chongqing, etc.) get lower synthesized factor score than others in both sides. By using Canonical Correlation Analysis, this paper verifies the negative correlation between the tobacco use and anti-tobacco campaigns and the positive correlation between the tobacco use and tobacco advertising and promotion.

Conclusion: The great importance of media publicity in tobacco control cannot be overemphasized, especially for the young generation. Popularization of anti-tobacco campaigns can promote the rising of young generation awareness about harm due to tobacco use. Restriction of tobacco advertising and promotion imposed to reduce the youth tobacco use.

PD-1152-21 Tobacco use and oral cancer: a population based study in Mangalore Taluka, Dakshina Kannada, India

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Background: Mangalore taluka in Dakshina Kannada in India is hub for health care facilities; still an uneven distribution of health care exists. Lack of knowledge on prevalence of tobacco use, type of tobacco use and oral cancer is clear barrier to tobacco cessation initiatives. An epidemiological study was conducted with the following objectives: To assess the distribution of the tobacco use, associated risk factors and prevalence of premalignant lesions, conditions and oral cancer

Design/Methods: A Community-based cross sectional house to house Oral Cancer screening was carried out in Mangalore, India. A multi-stage stratified cluster sampling design was adopted on a sample of 2184 subjects. A structured questionnaire by Centers of disease control and prevention, i.e., Questionnaire for GYTS (Global Youth Tobacco Survey for 13-15 year olds) and schedule for GATS (Global Adult Tobacco Survey for subjects >15 years). The Chi Square test and 'independent t test' were used. Bivariate analyses was used to understand the variables associated with both tobacco use and nicotine dependence and their odds ratios (OR) using SPSS ver 18.0

Results: Overall prevalence of tobacco use was observed to be 42.4% in the form of smoked and smokeless tobacco, 11.3% smoked tobacco, 26.7% smoke tobacco and

remaining used both the forms. The proportion of males to females consuming tobacco was observed to be 45.8% to 18.2%. 64.5% of the residents of rural areas consumed tobacco in all forms when compared to 34.5% in urban areas. Similarly females consumed more tobacco in rural areas 28.6% in contrast to urban areas 12.2%. Betel quid is the most commonly used smokeless form of tobacco followed by gutka chewing, khaini and others more reportedly in males compared to females. Education level influenced the consumption of smokeless tobacco. Oral cancer prevalence indicated as high as 1.6%.

Conclusion: The disease burden due to tobacco especially in the middle age is on an all-time high. Effective tobacco control initiatives will be effective through organized community efforts and also by creating anti tobacco control units or cells in the dental colleges in the country. The findings urge the policy makers to consider the issue of tobacco related deaths especially oral and lung cancers while planning and implementing the tobacco control acts. Strengthening focus on prevention, education on early quitting and cessation, early detection and therapeutic interventions are the top priority.

PD-1153-21 Improving implementation of the National Tobacco Control Programme (NTCP) in 75 districts of Uttar Pradesh State, India: a three year experience

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Background Information: Uttar Pradesh State of India is the most populated along with high rate of tobacco consumption, mortality and disability. Implantation of NTCP and Cigarettes and Other Tobacco Product Act (COTPA) 2003 is lacking since its inception. Noncompliance of domestic tobacco control laws can be seen all government departments even in Health department also. Since last three years with consistent team efforts and support from district/state administrations has resulted in a remarkable progress in term of compliance of tobacco control law in the state.

Design/Method: Establish a State/District level Coordination Committee involving representatives from different government departments including Civil Society Organizations, to provide technical support for improving implementation of COTPA 2003 in the state. Forming another District Level Task Force Committee in all districts conduct random monitoring and imposing fine on the violation of main provision of COTPA such as smoke free policy, ban on tobacco advertisements promotion and sponsorship (TAPS) among others. Issuance of inter-departmental circulars/notifications regarding compliance of COTPA 2003 law and coordinating/advocating with senior bureaucrats for cooperation to support the implementation of NTCP along with capacity building and sensitization workshop for staffs working in different government departments.

Result: In the last three years we have established around 60 District Level Coordination Committee/Task Force Committee working in the districts along with One State Level Coordination Committee. Nearly 30 inter-departmental circulars have been issued. More than 200 educational institutions, 100 government offices and one district have been declared smoke free. Approximately Rs 120000 have been collected in the previous years as fine imposed on around 12000 people for violating tobacco control law in the state.

Lesson Learnt: Collaborative work; consistent support from state/district administration; and support from civil society partners created favorable environments and improved the compliance of tobacco control law in the state beyond our expectation.

PD-1154-21 Psychological problems and personality traits in college student smokers based on nicotine dependence

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Objectives: This article makes a comparison of nicotine dependence level in a sample group of college student smokers to indicate how they are different in Psychological problems and personality traits.

Methods: An ex post factor design and a two-step sampling method were used. 22 faculties out of the governmental and non-governmental universities in Tehran city were randomly selected. 426 Questionnaires among 900 completed ones belonged to daily smokers, so these people were asked to fill out Nicotine Dependence Scale, NEO Personality Inventory and Hopkins Symptom Check List (HSCL). Statistical analysis was carried out through SPSS-16 and using descriptive methods plus Multivariate analysis of variance (MANOVA).

Results: The two groups differed in these three items: somatisation ($F=4.204$, $DF=2$, $P\leq.016$), anxiety ($F=4.517$, $DF=2$, $P\leq.012$) and responsibility ($F=3.518$, $DF=2$, $P\leq.013$). The differences between each two groups were examined using Scheffe post-hoc test.

Conclusion: The nicotine dependence level in smokers relates to some personality traits and psychological problems

PD-1156-21 Prevalence of tobacco use among women: a cross-sectional survey from a squatter settlement of Karachi, Pakistan

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Background: While the prevalence of tobacco use has been slowly declining in the developed countries over the

past 20 years, it has been steadily increasing in developing countries especially in women. This has led to a rapid rise in lung diseases among women. Objective: To determine the prevalence of tobacco use (both smoking and smokeless tobacco) among women in an urban squatter settlement in Karachi, Pakistan.

Methods: A cross-sectional survey was conducted from 1st July 2012 to 31 December 2012 on near 19,325 females of aged 15 - 80 years in Orangi Town, an urban squatter settlement in Karachi, Pakistan. The approximate population is near 2 million. A total of 16,987 women responded. Modified questionnaire, developed by WHO, was used in Urdu.

Results: The mean age was 37.3 ± 9.8 years and 15,255 (89.80%) were married. 9143 (53.82%) admitted that at least one person uses tobacco in some form in their homes. The prevalence of smokeless tobacco use was 47.08% while cigarette smoking was 2262 (13.31%) among women. Among smokers 1927 (85.19%) admitted that they have tried to quit smoking during last 12 months but failed and 1658 (73.29%) mentioned that they have received their doctor advice for quitting. Almost all smokers mentioned that they think of quitting after seeing warning on cigarette pack. 99.5 % promise to quite this habit during interview.

Conclusion: Tobacco use among women in an urban squatter settlement is very high and alarming. Preventive and control measures against tobacco use are required in these communities

PD-1157-21 Reasons for failure to quit smoking: a cross-sectional survey in major cities in Pakistan

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Tobacco dependence is a chronic relapsing disease which is potentially treatable. It kills a third to half of its users and most die on average 10–15 years prematurely. A vast majority of smokers would like to quit but are unable to because variety of reasons.

Aims: To assess factors associated with failure to quit smoking among current smokers / tobacco users in major cities of Pakistan.

Methods: Free health camps supervised by a physician and manned by trained staff were held across major cities of Pakistan. All consenting participants were administered a self-reporting questionnaire and had their exhaled carbon monoxide level measured.

Results: 12969 participants were interviewed. 99.3% (12872) were men. Mean age \pm SD was 31.4 ± 10 years (Range 13–85). 66.1 % smoked tobacco where as 12.6% used smokeless tobacco and 20.5% both. Average duration of smoking \pm SD was 8.8 ± 6.5 years (Range 0.25 - 40). Measured exhaled carbon monoxide (ppm) was 12 ± 8 (Range 0 - 215). 12633 (97.4%) participants wanted to quit. 12708 (98%) had received some form of advice to quit. 81.6% had tried smoking cessation pharmaco-

therapy. Reasons cited for failing to quit were dependence 1965 (15.2%), unknown reason 1622 (12.5%), friends / peer pressures 1554 (12%), family related anxiety 771 (5.9%), work related anxiety 681 (5.3%), changes in mood 390 (3%) and weight gain 82 (0.6%)

Conclusion: A vast majority of participants wanted to quit tobacco use regardless of age, gender or years of usage. Nearly everyone had received advice about quitting, and more than three quarter had tried smoking cessation pharmacotherapy. Three commonest reasons cited for failing to quit were dependence, unknown reason and friend/peer pressure.

PD-1158-21 SmokeHaz: Definitive systematic reviews on the effects of active and passive smoking on respiratory health outcomes

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Background: Active and passive smoking increases the risk of respiratory disease in adults and children, but communicating the magnitude of these effects in a manner that is accessible and usable by public and policymakers presents a challenge. We have therefore developed SmokeHaz (www.smokehaz.eu), a freely-accessible online resource to provide a one-stop web platform which summarises the impact of smoking on a range of health outcomes, focusing on respiratory disease.

Methods: We conducted a series of definitive systematic reviews and meta-analyses of longitudinal, nested case control, and cohort studies published from 1985 onwards. We identified eligible studies using electronic databases, conference proceedings, and websites, reference lists of reviews and studies and through contact with experts. Random effect meta-analyses were used to pool the findings, heterogeneity was explored using subgroup analyses.

Results: Our reviews confirmed substantially increased risks of lung cancer (increased by 11 times), COPD (by 4 times) and asthma (by 1.6 times) among adult smokers, though these effects were all strongly related to cigarette consumption. Exposure to passive smoking significantly increased the risk of several respiratory diseases in childhood, including asthma, wheeze, lower respiratory infections, and reduced lung function; and lung cancer (41% increase) in adults. In addition to these expected findings, our reviews demonstrated that active smoking significantly increased the risk of asthma exacerbations, in adult general and pregnant populations; sleep apnoea (by 2 times) and tuberculosis (57% increase); and that passive smoking increased the risk of tuberculosis in adults. These and a range of other findings are presented in detail on the SmokeHaz website (www.smokehaz.eu)

Conclusion: The findings from this series of definitive systematic reviews and meta-analyses provide contemporary estimates of the effect of active and passive smoking on a range of respiratory health diseases. By publishing these results on the SmokeHaz website we have a unique one-stop platform which summarises the harms of smoking on respiratory health for both policy makers and the general public.

49. COMPLIANCE AND ENFORCEMENT: RESULTS AND CHALLENGES

PD-1159-21 Is the behaviour of purchasing "loose" cigarettes associated with intensity of smoking? An analysis from the Global Adult Tobacco Survey in India

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Background: Raising tax on tobacco products is one of important tobacco control strategies. In India, it led to decrease in overall cigarette consumption but on other hand contributed to increased sale and purchase of loose cigarettes. These loose cigarettes thus have an important

public health implication. Thus we examined whether there is an association between behaviour of buying loose cigarettes and intensity of smoking in India.

Design/Methods: A secondary analysis of the disaggregated publically accessible data (the Global Adult Tobacco Survey, India 2009-10) was done in May 2014 for the adult population age 15 years and above.

Results: Nearly 57% of current cigarette smokers bought loose cigarettes. The intensity of smoking was 70% less among loose cigarette buyers than non-buyers (OR 0.29, 95% CI 0.24-0.34). It was found to be significantly lower in rural areas (OR 0.81, 95% CI 0.68-0.97) and among females (OR 0.44, 95% CI 0.29-0.67) buying loose cigarettes.

Conclusion: This study showed that loose cigarette buying is associated with decreased in smoking intensity. This may be due to increased taxes leading to increased buying of single cigarettes. These findings therefore highlight a need for a comprehensive policy on loose cigarette selling in India.

PD-1160-21 Daily cigarette consumption and quantity bought during last purchase: Information from GATS India data and its validity

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Introduction: Global tobacco surveillance system tracks spending for tobacco use as a key tobacco control indicator. Therefore Global Adult Tobacco Survey (GATS) tool in its section F – ‘Economics – Manufactured Cigarettes’ had collected information on quantity purchased during last purchase. As validity of GATS data has been questioned in the recent past, this study is aimed at examining validity and reliability of GATS-India (2009-10) data on quantity of manufactured cigarette bought during last purchase.

Method: The GATS: Indicator Guidelines: Definition and Syntax (2009), GATS-India Report (2010), GATS-India Codebook (2011) and GATS-India data available in public domain were reviewed and analyzed. Use pattern and last purchase, sale unit of cigarette, cigarettes per pack/carton were subjected to validity analysis and compared with available scientific literature. Internal consistency between daily use of cigarette and quantity last purchased was assessed.

Results: Among 3410 daily cigarette smokers 141 (weighted 7.1%) had never bought cigarette for their use. Overall 1 in 11 current users never bought cigarettes for their use. All the respondents reporting purchase of ‘other units’ of manufactured cigarette, were failed to specify the same. In the market only loose cigarette, pack (10 or 20 cigarettes) or cartoon (10 packs i.e. 100 or 200 cigarettes) as selling unit exists. The respondents who purchased manufactured cigarette in packs reported that their pack contained cigarettes ranging from one to 200 with 92% reporting pack size as 10 or 20. Similarly four to 405 cigarettes per carton was reported by the respondents. No one reported 100 cigarettes per carton and only 1.2% reported 200 cigarettes per carton. When average number of cigarettes smoked per day and number of cigarettes last purchased (n=3219) were compared, Pearson correlation coefficient and Chronbach’s alpha were estimated to be 0.006 and 0.089 respectively.

Conclusion: The GATS-India data available in public domain and used to produce GATS-India report contains invalid responses with respect to last purchase of cigarettes by current smokers. As invalid data can’t be reliable and unacceptable internal consistency in this data set highlights poor data quality as confirmed by earlier research. This possess enormous challenge to the credibility of GATS-India report. Validation of the GATS-India tool should be given priority in order to get credible information.

PD-1161-21 Assessment of point of sale tobacco advertisement, promotion and sponsorship strategies in Karnataka: a cross-sectional study

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Background: Tobacco Advertisement, Promotion and Sponsorship (TAPS) are the key strategies adopted by the tobacco industry to increase the number of new recruits and also to retain their existing consumers. Point of sale (PoS) promotion is an effective means to communicate with underage potential and current smokers. Youth experimenting with tobacco are more likely to have reported seeing tobacco advertisements in points of sale. The Cigarettes and other Tobacco Products (Prohibition of Advertisement and regulation of Trade and Commerce, Production, Supply and Distribution) Act 2003 is a social legislation in India to control point of sale Tobacco Advertisement, Promotion and Sponsorship. The objectives of this study were to assess the Tobacco Advertisement, Promotion and Sponsorship strategies in Karnataka and to identify and assess the violations of TAPS norms in India.

Design/Methods: This Cross-sectional Study was done in 7 out of 30 Districts of Karnataka State, India. The study investigators made a direct observation of points of sale in the 7 Districts to assess the Tobacco Advertisement, Promotion and Sponsorship strategies and assessment of the violations of TAPS norms in India by using a structured, pre-tested checklist based assessment method.

Results: Out of the total 2650 points of sale observed for tobacco advertisements, 1412 (53.28%) PoS had displayed any kind of advertisements. Among them, 699 (26.38%) of the PoS had displayed advertisement boards, posters in 620 (23.4%), banners in 203 (7.66%), stickers in 502 (18.94%), LCD display in 32 (1.21%), danglers in 137 (5.17%), promotional gifts/offers in 31 (1.17%) and product showcases in 230 (8.68%) of the Points of Sale. Of the 699 PoS advertisement boards, 280 (40.06%) advertisement boards were backlit and 500 (75.53%) of the advertisements had brand pack shot of the tobacco product.

Conclusion: More than a half of the Points of Sale had displayed tobacco advertisements in any form. This suggests that stringent measures need to be taken by all the key stakeholders in order to contain the interference of the Tobacco Industry by promotion and advertising tobacco products.

PD-1162-21 Compliance to tobacco control laws in Karnataka, India

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Background: Cigarettes and other Tobacco Products Act (COTPA) 2003 is the legislation in India to regulate to-

bacco use, production, sale and advertisement. In the 11th year of COTPA in the Country, it is imperative to study the compliance levels of major provisions of tobacco control laws in Karnataka. The objectives of this study were to assess the compliance levels of major tobacco control provisions of COTPA that are considered as compoundable offences and to assess the Point of Sale advertisement strategies.

Design/Methods: This Cross-Sectional study was done in 7 out of 30 Districts of Karnataka in the year 2014 using a structured, pre-tested checklist-based assessment method to assess public places, educational institutions and Points of Sale.

Results: Out of 2920 public places observed, 707 (24.2%) were found to have the mandatory signages used to indicate that smoking is prohibited in the public place. Active smoking was not observed in 1803 (61.74%) of the public places and in 1479 (50.65%) of the public places, no cigarettes or bidi butts were found. Of the 2683 points of sale observed, 335 (12.48%) had the signages depicting the prohibition of sale of tobacco products to minors aged below 18 years. Minors were found handling/selling tobacco products in 380 (14.16%) of the points of sale, and 1436 (53.52%) of the shops had a prominent display of tobacco products. About 28% of the educational institutions had a mandatory signage depicting prohibition of sale of tobacco products within 100 yards of the institution and nearly 42% of the institutions had tobacco selling shops within 100 yards. Among various types of point of sale Tobacco Advertisement, Promotion and Sponsorships such as advertisement boards, posters, banners, stickers, promotional offers and product showcases, advertisement boards were found in maximum number of shops (24.13%) and least was that of promotional gifts/offers (1.6%).

Conclusion: Among the provisions of COTPA related to compoundable offences, mandatory display of relevant signages had low compliance levels. However compliance to smoke-free rules in public places was satisfactory despite the absence of signages in most public places. Point of Sale Tobacco Advertisement, Promotion and Sponsorship strategies continue to be used scarcely by shopkeepers which needs immediate action.

PD-1163-21 Compliance to smoke-free rules in the State of Karnataka, India: a cross-sectional study

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Background: Smoking in public places was prohibited nationwide from 2nd October 2008 in India. India is home to 12% of the World's smokers and approximately 1 million people die every year in India due to tobacco use. The Cigarettes and other Tobacco Products Act 2003 is a social legislation in India to control the harmful effects of second-hand smoke by enforcing prohibition of smoking in public places. The objectives of this study were to assess

the compliance to "Smoke Free Rules" in Karnataka and category-wise assessment of public places.

Design/Methods: This Cross-sectional Study was done in 6 out of 30 Districts of Karnataka. The study investigators made a direct observation of various categories of public places in the 6 Districts to assess the compliance to smoke free rules by using a structured, pre-tested checklist based assessment method.

Results: The study revealed that out of 2387 public places observed, 710 (29.74%) of the public places had a signage displayed on prohibition of smoking in public places. However, 1487 (62.29%) and 1184 (49.60%) of the public places did not have active smoking and no presence of odour emanating from cigarette/beedi in these places respectively. Smoking aids were not found in 1620 (67.86%) and cigarette/beedi butts were absent in 50.14% (1197) of the public places. Among the categories of public places viz. educational institutions, accommodation facility, eateries, offices, health care facilities and public transport, signages were displayed in maximum percentage in the category of educational institutions (45.92%) and health care facilities (45.96%); however, lowest percentage was observed in eateries (14.07%). Health care facilities showed no cases of smoking in maximum percentage (72.14%) and lowest was observed in other most commonly visited public places.(55.69%).

Conclusion: Among the various provisions of the tobacco control legislation related to smoke free rules, display of "No smoking Area" signages had low compliance which is the most important mandate to comply to the smoke free rules. Despite this, active smoking was not observed in many public places which indicate that the public is aware of smoke free rules. However, to completely curtail active smoking in public places the signages play a key role in creating awareness to the general public.

PD-1164-21 Compliance to smoke-free rules in Bangalore City: a cross-sectional study

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Background: Millions of non-smokers in India are exposed to high levels of second-hand smoke, which is sufficient enough to increase the risk of chronic diseases and death. The Cigarettes and other Tobacco Products Act 2003 is a social legislation in India to control the harmful effects of second-hand smoke by enforcing prohibition of smoking in public places. The objectives of this study were to assess the compliance to "Smoke Free Rules" in Bangalore City and category-wise assessment of public places.

Design/Methods: This Cross-sectional Study was done in Bangalore City of Karnataka State, India. The study investigators made a direct observation of various categories of public places in Bangalore City to assess the compliance to smoke free rules by using a structured, pre-tested checklist based assessment method.

Results: The study revealed that out of 434 public places observed, 12 (2.8%) of the public places had a signage displayed on prohibition of smoking in public places. However, 71.4% (310) and 319 (73.5%) of the public places did not have active smoking and no presence of odour emanating from cigarette/beedi in these places respectively. Smoking aids were not found in 309 (71.2%) of the public places and cigarette/beedi butts were absent in 64.97% (282) of the public places. Among the categories of public places viz. educational institutions, accommodation facility, eateries, offices, health care facilities and public transport, signages were displayed in maximum percentage in the category of educational institutions (11.11%) and lowest in Public Transport facilities (0%). Educational institutions, health care facilities and public transport showed no cases of smoking in maximum percentage (100%) and lowest was observed in offices/work places (40.35%).

Conclusion: Among the various provisions of the tobacco control legislation related to smoke free rules, display of "No smoking Area" signages had very low compliance which is the most important mandate to comply to the smoke free rules. Despite this, active smoking was not observed in many public places which indicate that the public is aware of smoke free rules. However, to completely curtail active smoking in public places the signages play a key role in creating awareness to the general public.

PD-1165-21 Disparities in tobacco message penetration: findings from the Global Adult Tobacco Survey in Nigeria

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Background: Tobacco advertisements are a tool to initiate and maintain product use in the population. A counter to this is anti-tobacco messaging which highlights ill effects and the addictive nature of tobacco use. The FCTC MPOWER strategies include recommendations to warn people about the dangers of tobacco smoke and enforce bans on advertisement and promotion of tobacco products. To assess population reach of tobacco and anti-tobacco messages we analysed the Global Adult Tobacco Survey Nigeria (GATS) 2012. We evaluate differences in pro and anti tobacco messages for geographic and demographic groups.

Design/Methods: This study was a secondary analysis of GATS Nigeria data. A composite measure of tobacco advertisement or promotion was derived from questions measuring respondents observing direct or indirect promotions of tobacco products in a preceding 30 day period. Similarly a composite measure of exposure to anti-tobacco messaging was derived. Logistic models were fitted for odds of respondent exposure to tobacco and anti-tobacco messages controlling for age, gender, education level and geographical location (rural or urban). Significance cut off was set at 5%.

Results: A total of 9765 individuals were surveyed, mean age was 33.7±16.1 years, 51.5% were male and 50.8% lived

in rural areas. 23.2% of urban and 20.8% of rural respondents reported seeing a tobacco advert, product placement or promotion in a preceding 30 day period. The most frequent form these took were tobacco logos and messaging on clothing and items 7.9% (urban 8.0%, rural 7.8%), at stores selling tobacco 6.5% (urban 5.3%, rural 7.6%) and posters 5.1% (urban 5.2%, rural 5.1%). The odds of seeing a tobacco message was higher among men AOR 1.5 (95%CI 1.3-1.6), Urban respondents AOR 1.5 (95%CI 1.3-1.6), higher education levels were significantly associated with seeing a pro tobacco message and age was not contributory. Anti-tobacco messages had been seen by 49.3% (50.7% urban, 47.9% rural). The most frequent avenues were radio 32%, posters 24.5%, Television 15.9%. Higher levels of education, male gender and urban residence were significantly associated with odds of seeing an anti-tobacco message.

Conclusion: Cigarette shops and merchandising items are the last bastions of tobacco product promotion in Nigeria. Females, rural dwellers and less educated are less frequently reached by anti-tobacco messages in their current forms.

PD-1166-21 Content and bibliometric analysis of tobacco regulatory science research: exploring the developing field of tobacco product regulation

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Background: In 2009, the U.S. Food and Drug Administration (FDA) gained regulatory authority over tobacco. This authority has the potential to achieve what many in tobacco control have sought to achieve for decades: the virtual elimination of tobacco-caused morbidity and mortality for future generations of Americans. Although a sound science base exists with regard to numerous areas of tobacco control, new research is needed to provide scientific evidence to inform tobacco products regulation. Therefore, the FDA's new authority has resulted in a large expansion of research activity across many disciplines to gain the information necessary to make regulatory decisions in the best interest of the public's health.

Design/Methods: We conducted bibliometric analyses of publication data in the domain of tobacco regulatory science (TRS). Publications were pulled from currently funded TRS investigators to examine author-topic modelling and co-authorship networks, as well as by keyword terms pulled from TRS priority areas identified by the FDA to look at how concepts are linked, temporal trends in TRS research, and to begin identifying the boundaries of TRS research. In order to assess the breadth and scope of TRS research funded by the FDA we also conducted content analysis of funded TRS grants and projects.

Results: Analysis of TRS publications showed many topic clusters, with the top clusters related to research on youth

and adolescents, nicotine content of tobacco products, and the harmful constituents of tobacco products. We examined trends over time for four tobacco regulation topics: tobacco product characteristics, cigars, electronic cigarettes, and smokeless tobacco. This analysis demonstrated a lack of consistency in the use of terms for electronic nicotine delivery systems. There was also a marked increase in research related to menthol since 2000 and a decrease in the use of the term cotinine (though a small increase in the term metabolite could account for some of this). Analysis of currently funded TRS grants indicated potential areas of collaboration and innovation around similar topics and areas of expertise.

Conclusion: This proof of concept pilot project has yielded a great deal of useful information on the state of tobacco regulatory science that has relevance to both funding agencies and the scientific community.

PD-1167-21 Evaluation of point of sale display bans in large shops in England: findings from a school-based cohort study

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Background: In the United Kingdom in 2002 the Tobacco Advertising and Promotion Act was implemented with some major restrictions on marketing, advertising and sales of tobacco products. However tobacco product packaging and point-of-sale (PoS) displays were not covered by this Act and have been used increasingly to promote these products. Exposure to tobacco PoS displays is related to smoking uptake and increases in susceptibility to smoking in children and is therefore of particular importance in tobacco control. In England in 2012, a PoS display ban was implemented in large shops, but tobacco PoS displays remain permitted in small shops until April 2015. The aim of this study was to explore whether prohibition of PoS displays in large shops has led to a reduction in recall of PoS displays among children. Design: We used individually linked data from 1,918 children aged 11-16 from two waves of a cohort study involving children from eight schools in Nottingham, United Kingdom. Data were collected in March 2012 shortly before the ban in large shops was implemented, and then again one year later. The main outcome variable was changes in the proportion of children who reported noticing PoS displays in small shops and large shops, before and after the PoS ban.

Results: There were minor differences in the proportion of children visiting each type of shop in 2012 and 2013 suggesting that any changes in recall are unlikely to be attributable to changes in frequency of visiting shops. More than two thirds of children reported that they noticed to-

bacco PoS displays in small shops in both years. In 2012 57.5% of children reported that they noticed tobacco PoS displays in large shops, and in 2013, this proportion fell to 46.7% suggesting that PoS display ban led to only a 10.8% reduction in recall of tobacco PoS displays in large shops among school children in England.

Conclusions: The main source of exposure to tobacco PoS displays among children in England remains small shops. This study suggests that prohibiting PoS displays in large shops actually has not resulted in the major drop in recall of tobacco PoS displays, and that a comprehensive complete ban in all shops is required.

PD-1168-21 Evaluation of smoking cessation using Cytisine in tobacco cessation service hospitals in Cacak, Serbia

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Background: Smoking is the cause and one of the most important risk factor of many non-communicable diseases. From in 1993. Tobacco Cessation Service is active at Hospital Cacak. Medication Cytisine-Tabex was at discovered Soviet Union and is sold by Sopharma AD, Bulgaria (Ivanovic and sons, Serbia). Cytisine is a herbal preparation. Use according to scheme 25 days.

Design/Methods: We registered smokers who during smoking cessation medications used-Cytisine. Every smoker is followed for 12 months. Monitored parameters: presence of smokers by gender, age, educational level, pack / years, concomitant diseases. Control of smoking status was carried out by measuring PPM and % COHb with Smoki lyser.

Results: Smokers cards are reviewed 100 patients who used Cytizine: Male (M) 33,33% (quit smoke (QS) 16,66%), Female (F) 66,66% (QS 33,33%). Age: F 47,7, M 45,2. Degrees: elementary school 6,66%. medium high 63,33%, high school 33,33%. P / Y: F 47,36, M 28,8.

Concomitant diseases: respiratory diseases 20% (QS 49,66%), cardiovascular diseases 16,6% (QS 46,33%), Carcinom 10% (QS 100%), healthy smokers 63,33% (QS 42%). Cessation success: stopped smoking 50%, recurrences after 12 months 3,33%, still smoke 53,33%. During treatment with Cytisine there were no side effects.

Conclusion: In comparison with other published studies so far (W. Zatonski, R. West), use Cytizina has shown good efficacy in the process of withdrawal, without side effects, and the drug is affordable large number of patients its price tag (less than 10 W). In our experience, we would recommend Cytizine for use in quitting smoking.

50. TOOLS FOR ACCELERATING SMOKEFREE

PD-1169-21 Utilisation of telephone surveys in assessing the intervention of the Buenos Aires 100% Smoke-free Project

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Background and challenges to implementation: Law No. 1799/05 of Buenos Aires City "Tobacco Control Law" stipulated exceptions. The restaurants over 100 m² could have designated smoking areas. The "Buenos Aires, 100% Smoke Free" Project began in 2010 with the aim to change the standard to achieve 100% smoke free environments (SFE). We worked with legislators and authorities, and the society. Communication campaign, aimed at promoting 100% SFE and to increase knowledge about the health risks of passive smoking was made. In 2011, Law No. 3718 was achieved by establishing 100% SFE. Between 2010 and 2013, a media and communication strategy that included 310 news and campaign posters on public roads, participation in 30 events and workshops, which allowed to reach over 3500000 people spreading the harmful of second hand smoke(SHS), and promoting law enforcement. Three telephone surveys were conducted in order to observe the evolution of knowledge and practices regarding smoking and evaluate strategies that governments have been driven, in the framework of the project intervention "Buenos Aires, 100% Smoke Free".

Intervention or response: A telephone survey of adults CABA which provided the baseline of smokers, SHS exposure, attitudes and support the law of 100% SFE was made in 2010, In 2012 and 2013 the survey was repeated in order to assess changes. The questionnaire was developed by the project team using validated questions. A consultant implemented the survey using a random sample of representing residential landlines category CABA. Were eligible people over 18 who answered the phone and agreed to participate. SPSS11 package was used.

Results and lessons learnt: The survey was answered by 1500 people over 18 years old in 2010, 2012 and 2013. Through the years has decreased smoking prevalence of 28.7% in 2010 to 23.5% in 2013. There is growing to implement SF homes and cars trend. Knowledge about harm of smoking remained above 92%. The level of support for the law of environments 100% smoke-free over 88% in 2012 to 92.5% in 2013 increased presence of the subject in the media of mass communication while the health team continues absent in this area is noted.

Conclusions and key recommendations: The telephone survey has shown to be a useful, simple and economical

way to observe the evolution of knowledge and practice about smoking and government communications strategies. This study was conducted with support from Bloomberg Philanthropies and The Union.

PD-1170-21 Shisha and smokeless tobacco use among university students in Egypt: prevalence, determinants, and economic aspects

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Background: Cigarette smoking, the leading type of tobacco use all over the world, has been studied extensively. In contrast, little is known about other forms of tobacco use like shisha smoking, the first emerging form of tobacco use in the 21st century, and smokeless tobacco use the recently emerging form of tobacco use. Also, Most of the epidemiological studies of tobacco use have been conducted among adults; only a few reports have been published about university students. Understanding the factors contributing to the trends in tobacco use is important to develop properly tailored preventive programs and cessation programs targeting this important sector of the community.

Methodology: A self-administrated questionnaire was used to collect data concerning smoking status from university students in the age group of 17–25 years old. Questions were based on the standardized Global Tobacco Questions for Survey (TQS) developed by the U.S. Centers for Disease Control and Prevention. A three-stage cluster sample representing Egypt's universities was designed. In the first stage, a subsample of five universities and two high institutes were selected from sampling frames of all Egyptian universities. In the second stage, two faculties (theoretical and practical) were selected from each university.

Results: Prevalence: The percentage of current tobacco users among university students was 16.5% (28.9% among males and 1.9% among females). Majority of tobacco users (16.2%) were cigarette smokers, while the prevalence of shisha smokers was 12.2%. The prevalence of smokeless tobacco use was low (1.5%). Determinants: About 63.5% of university students reported exposure to secondhand smoke at their university and 47% at their homes. About 56.2% and 67.2% of shisha smokers and smokeless tobacco users claimed that they have a smoker family member and 94.7% and 94.0% of shisha smokers and smokeless tobacco users, respectively, claimed having a smoker close friend. Economics: Current tobacco users spent on average 53.7% of their monthly pocket money on purchasing tobacco products.

Conclusion: Shisha smoking is an emerging form of tobacco use. Male sex, older age, residing in cosmopolitan areas, enrollment in a private university or high institute and peer effects, curiosity and desire for experience and for reducing stress are the main determinants of shisha smoking. Current tobacco users spent 54% of their monthly pocket money on using tobacco products.

PD-1171-21 Supari: an emerging epidemic among Mumbai's youth

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Background: Supari, also known as areca nut or betel nut, is a commonly-chewed product available in India (either on its own, or with tobacco products). Endemic across the Indian subcontinent, supari is low-cost (as little as one rupee or \$0.02USD per packet) and socially acceptable. Despite its popularity, supari is a known carcinogen and may act as a precursor product for smokeless tobacco use.

Methods: Approximately 1,500 students in the 7th, 8th, and 9th standards were surveyed in randomly selected public schools participating in anti-tobacco programs run by the Salaam Bombay Foundation (www.salaambombay.org) in Mumbai, India in September 2013. Students were asked about current supari use, and perceptions of harm associated with supari. The results were analyzed using SPSS.

Results: Among students, 23.3% (n=260) reported using supari within the last 30 days. Supari use was more frequently reported by male students (29.9%, n=176) compared to female students (16.0%, n=84), and prevalence increased with age 14.7% (n=21) of 12-year olds reported supari use, compared to 30.0% (n=19) of 16-year olds). Only a small proportion of students identified supari as a harmful product (12.5%, n=180).

Conclusions: The results of this study indicate that supari is commonly used by school-aged youth in Mumbai, India. Awareness of the health effects of supari use was critically low among the surveyed students. Efforts to control supari use among children and youth, including awareness of the harms of supari, and bans on bright packaging and the use of pop culture icons, should be enacted.

PD-1172-21 Waterpipe and cigarette smoking among Iranian professional athletes

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Background: Water pipe smoking is an emerging trend among youth in Iran. As Professional athletes of a country are usually in the spotlight, they can be role models for their fans who are mostly young adults. It seems this group have had tendency to water pipe smoking. The purpose of this study was to evaluate water pipe and cigarette smoking among professional athletes in Iran

Design/Methods: A total of 738 athletes from 10 different types of sports were evaluated. Athletes were all members of the priority leagues. After obtaining consent from the Physical Education Organization and coordination with the related federations, athletes were asked to fill out the standard questionnaire.

Results: All understudy subjects were males. The mean age was 28.4±2.7 yrs. A total of 46.7% had high school diploma. In general, 293 subjects (39.7%) were playing individual and 445 (60.3%) were playing team sports. The mean age of initiation of sport in these subjects was reported to be 12.3±4.01 yrs. A total of 178 (24.6%) subjects had experienced cigarette smoking and 308 (42.3%) had experienced Water pipe smoking. Sixty four subjects (9%) were current Cigarette smokers. Twelve percent (12%) of them were current Water pipe smoker. A total of 40 sportsmen from individual sports were current smokers, this rate was 24 (5.5%) among team players (P=0.00). Over half of the sample (55%) perceived that tobacco smoking from a water pipe was less harmful than cigarette smoking.

Conclusion: Rate of water pipe smoking among professional athletes is higher than cigarette smoking. This could be under misperception about its safety compare with cigarette smoking. cigarette smoking in professional athletes is lower than general population average in Iran. So participation in organised sports may be a protective factor against tobacco use in people.

PD-1173-21 Smoke-free New Zealand: a Nation's commitment to stop the damage caused by smoking

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Background: Smoking is the single leading preventable cause of early death in New Zealand. An estimated 4,500 to 5,000 New Zealanders die each year due to smoking or exposure to second-hand smoke. Smoking related disease is a major cause of health inequality for M ori (indigenous people of New Zealand) compared to the rest of the population. In March 2011 the Government adopted the Smokefree 2025 goal for New Zealand. This was in response to the recommendations of a landmark Parliamentary inquiry by the M ori Affairs select committee. This ambitious goal establishes New Zealand as one of the first countries in the world with such a strong commitment to reducing death and disease caused by smoking at a national level.

Intervention/response: Since 2006 New Zealand has implemented many tobacco control measures including banning tobacco displays, annual tobacco tax increases, supporting smoking cessation services to help people quit, establishing a national health target to better help smokers to quit and creating a dedicated national fund to encourage innovative approaches to smoking cessation.

Results/Achievements: The smoking rate in New Zealand is currently at its lowest point in history and one of the lowest in the world. Evidence indicates that increasing numbers of young people have never tried smoking. According to the 2013 Census, 15 percent of the adult population in New Zealand smoke (463,000 adult smokers). This exhibits a drop of 23 percent from 598,000 at the last

census in 2006. Even more encouraging is the fact that smoking prevalence among M ori has dropped from 42.2 percent in the 2006 Census to 32.7 percent in 2013.

Conclusions: Although we cannot determine the exact impact of each of these interventions on the change in prevalence, evidence suggests that the most successful approaches to tobacco control include those with a multifaceted and diverse range of activities that target legislation, health promotion and smoking cessation. Building on the success of the initiatives mentioned above, the Government will continue to employ such a combination approach to reduce the prevalence of tobacco use and the harm it causes.

PD-1174-21 Creating smoke-free environments for pregnant mothers

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Background and challenges to implementation: Public health services in Sri Lanka are provided through a well-organized health unit system called the Medical Officer of Health (MOH) areas. There are 325 MOH areas with a targeted 60,000 – 100,000. The management and planning of each area is done by a medical officer specialized in Public Health. Public Health Midwives (PHM) and Public Health Inspectors (PHI) are engaged in field work at the community level working in the areas of Maternal and Child Health (MCH) and Environment and Sanitation activities. The main objectives of the project had been to aware the mothers who access the MOH clinics

- How secondary smoking affects the fetus during pregnancy.
- Reduce or stopped spouse's tobacco smoking of pregnant mothers,
- Create house premises of the pregnant mothers smoke free

The rationale to target pregnant mothers for this project was that pregnancy is considered as a good entry point where ladies have more opportunity to talk about theirs and the newborns health and impact of others activities on their health.

My name is Champika Thushari.
Since I am a pregnant mother I also participated for the discussion which was conducted by ADIC members at Piliyandala MOH clinic. I became aware on how secondary smoking affects the fetus during the pregnancy. My husband is not a smoker. But my neighbour is smoking and his wife is also pregnant. He usually smoked five or six cigarettes per day.

So I shared all the information which I gained from the discussion with them. I explained how the secondary smoking weakens the growth of the baby. As the first step my neighbour stopped smoking near his wife. Now he has completely stopped smoking.

I shared the information with many other people using the educational materials which were provided. I explained how media promotions influence children to start smoking or consume alcohol. After those discussions another person who smoked 10 cigarettes per day, reduced it up to one. Now he spends more money on his child's education. I think this programme is a very successful.



I am Nadeeha Sadamali.
I am a pregnant mother living in Piliyandala. The facilitators from ADIC visited to our clinic and discussed about the harmful effects of smoking to pregnant mothers and to our unborn children. So I discussed about this with my husband when I got to know that secondary smoking also weakens the growth of fetus.

Earlier my husband was a smoker. But when I made him aware regarding these issues, he quit smoking. He himself explained children on how alcohol and tobacco industries try to promote their products among children through media. Now his colleagues at work place also reduced and some have quit smoking.

Results and lessons learnt: A post evaluation carried out with 602 from 8871 pregnant mothers. 77% of pregnant mothers and 61.2% of their husbands were aware and have taken necessary steps to avoid secondary smoking hence its harms the fetus. 70.2% of participated pregnant mothers react to reduce the cigarette use in their houses. 34.72% of the husbands who have smoked have reduced the tobacco use and 15.6% has stopped their usage. 170 out of 185 PHM were skilled to carried out the same project in an effective manner. A main unintended benefit of the project to the PHMs had been the improvement in their communication skills. According to the MOH nearly 50% of the midwives have improved their communication skills. Follow up sessions with one to one discussions were not very successful hence the difficulty to meet the same group at once. Some of the sessions were not very effective due to limited time and they are attention is mostly on their maternity needs.

Conclusions and key recommendations: The project could be considered very promising and the implementers at ADIC as well as the identified implementers at the field level had been effective in achieving the final objectives. Addressing the tobacco issue at the most sensitive time have a better impact. Providing compressive training, follow up system and providing needed educational material to the PHM will ensure the sustainability of the project.

PD-1175-21 A review of the quality of studies on the economic effects of smoke-free policies on the hospitality industry

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Objective: To compare the quality and funding source of studies concluding a negative economic impact of smoke-free policies in the hospitality industry to studies concluding no such negative impact. Data sources: Researchers sought all studies produced before 31 August 2012. Articles published in scientific journals were located with Medline, Science Citation Index, Social Sciences Citation Index, Current Contents, PsychInfo, Econlit, and Healthstar. Unpublished studies were located from tobacco company websites and through internet searches. Study selection: 97 studies that made statements about economic impact were included. 93% of the studies located met the selection criteria as determined by consensus between multiple reviewers. Data extraction: Findings and characteristics of studies (apart from funding source) were classified independently by two researchers. A third assessor blind to both the objective of the present study and to funding source also classified each study. Data synthesis: In studies concluding a negative impact, the odds of using a subjective outcome measure was 4.0 times (95% confidence interval (CI) 1.4 to 9.6; p = 0.007) and the odds of not being peer reviewed was 20 times (95% CI 2.6 to 166.7; p = 0.004) that of studies concluding no such negative impact. All of the studies concluding a negative im-

fact were supported by the tobacco industry. 94% of the tobacco industry supported studies concluded a negative economic impact compared to none of the non-industry supported studies.

Conclusion: All of the best designed studies report no impact or a positive impact of smoke-free restaurant and bar laws on sales or employment. Policymakers can act to protect workers and patrons from the toxins in secondhand smoke confident in rejecting industry claims that there will be an adverse economic impact.

PD-1176-21 Smoke-free policies in homes and cars among U.S. adults: what exceptions exist regarding products and situations?

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Background: How individuals address the use of emerging tobacco products and marijuana or the other exceptions made to personal smoke-free policies has received limited attention. Thus, we examined what exceptions exist regarding types of tobacco product and marijuana emissions, locations within the home, and situational factors.

Design/Methods: In 2013, we conducted a cross-sectional survey among 2,500 U.S. adults recruited through an online survey panel, oversampling tobacco users. We assessed tobacco/marijuana use, smoke-free policies in homes and cars, types of emissions from tobacco products and marijuana allowed in the home, locations/rooms where smoking was allowed, and situational exceptions to smoke-free policies. We conducted descriptive, bivariate, and multivariate analyses to examine prevalence and correlates of these nuances.

Results: In the past month, 36.7% had used cigarettes, 5.7% large cigars, 6.6% little cigars, 4.9% cigarillos, 3.5% hookah, 7.6% e-cigarettes, and 9.9% marijuana. In homes, 71.1% reported a full ban (not allowed anywhere), 15.0% reported a partial ban (allowed some places/times); and 15.9% reported to ban (allowed anywhere). In cars, 61.0% reported a full ban, 13.2% reported a partial ban, and 17.0% reported no ban. When asked about which types of emissions were allowed in the home, 24.5% allowed cigarette smoke, 16.4% cigar smoke, 33.8% e-cigarette vapor, 11.4% hookah emissions, and 12.6% marijuana smoke. In addition, 18.7% allowed smoking in the family/living room, 14.8% in the kitchen, 13.0% in the bathroom, 13.0% in an adult bedroom, and 2.2% in a child's bedroom. In terms of situational exceptions, 21.6% made exceptions when the weather was bad, 19.8% when it was dark, 20.2% when there is a party/celebration in the home, and 7.5% when a guest is visiting.

Conclusion: Assessments of personal smoke-free policies indicate various exceptions based on type of product used and other nuances to location and situations, thus requiring attention in order to prevent secondhand exposure to toxins from tobacco products and marijuana.

PD-1177-21 A new tool for smoking cessation: leveraging Mondays for successful quits

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Background and challenges to implementation: A majority of US smokers want to quit and half made a past year quit attempt. However, the prevalence of quitting in the last year was only 6.2%. Article 14 of the WHO Framework Convention on Tobacco Control compels the public health community to provide cessation to promote successful quit attempts. Novel and cost-effective strategies that better leverage current quit resources are necessary in order to effectively address smoking cessation.

Intervention or response: To improve our current approaches to cessation, the Monday Campaigns has sought to establish Monday as a day for smokers to quit and recommit-to-quit smoking. Emerging data suggest that individuals look to engage in positive health behavior changes at the beginning of the week. We have found that Google search queries for the term "healthy" showed a pronounced early week spike with Monday and Tuesday having about 200% more queries than other days of the week. We also assessed smoking cessation related searches in 6 languages (English, French, Mandarin, Portuguese, Russian, Spanish); cessation queries peaked early in the week. A recent survey found that 58% of respondents indicated Mondays as an opportunity to start afresh and organize one's life.

Results and lessons learnt: These findings suggest that health behaviors may have a weekly rhythm that could be leveraged to improve health interventions, particularly smoking cessation efforts. Individuals appear to be thinking about quitting smoking early in the week and thus may be primed for a more substantial impact for interventions. The promise of Mondays as a day for health behavior change has led us to partner with current Maryland-state smoking cessation programs and use a quasi-experimental study to test whether smoking cessation classes that emphasize Mondays as an opportunity to begin or recommit to a quit attempt allow for improved cessation rates for participants. Monday class participants are advised to quit on Mondays. They receive a Monday cessation "tip of the week" and are asked to communicate with a quit buddy on Mondays. Otherwise, the instructional content of Monday versus standard classes will not differ.

Conclusions and key recommendations: If the Monday frame for smoking cessation has an effect on abstinence, self-efficacy, time from relapse to next quit, length of quit, and program retention rate, it could represent a novel approach to cessation that requires minimal additional costs.

PD-1178-21 Physicians as tobacco control activists: now needed more than ever**A Blum,¹ E Solberg^{2,3}**

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Background and challenges to implementation: Although physicians and medical students around the world have learnt to prescribe smoking cessation medications and to offer brief stop-smoking advice, few doctors are active in countering tobacco use beyond the hospital and clinic settings. Yet some physicians have played key roles as community leaders, agents of change, and strategists in tobacco control. For more than 25 years, the organization Doctors Ought to Care (DOC) in the USA has catalyzed tobacco control policy changes at the local, state, and national levels. It has also motivated conservative medical organizations to shift from tokenistic public relations statements to public health actions, such as lobbying of legislatures.

Intervention or response: Founded in 1977 by a family physician to inspire doctors to play an active role in countering the promotion of unhealthy products, DOC was the first medical organization to concentrate exclusively on ending the tobacco pandemic. DOC added humor to anti-smoking messages; shifted the focus away from smokers and onto the cigarette manufacturers; and pioneered the purchase of satirical counter advertising in the mass media to shame the tobacco industry and its allies, such as those in the arts and sports whose silence was bought by tobacco sponsorship money. DOC also led the first protest demonstrations by physicians (re-named "housecalls") at dozens of tobacco-sponsored sports and cultural events across the USA.

Results and lessons learnt: As an extracurricular activity for medical students to teach in local schools about smoking and its promotion, DOC has created clinical, classroom, and community-wide strategies involving more than 5000 physicians and medical students at over 80 medical schools. DOC inspired the founding of Physicians for a Smoke-Free Canada in 1985 and the creation of the American Academy of Family Physicians' Tar Wars poster contest, which has been disseminated in all 50 states since 1990. DOC has also mobilized medical students to participate in public health policy development, to present testimony at hearings, and to conduct research.

Conclusions and key recommendations: The increasingly globalized environment of public health efforts to curb tobacco industry practices provides new opportunities for involvement by physicians and medical students. The DOC model engages them in tobacco control and sustains their involvement.

PD-1179-21 Muslim communities learning about second-hand smoke (MCLASS): a pilot cluster randomised controlled trial**K Siddiqi,¹ S Shah,¹ H Tilbrook,¹ C Fairhurst,¹ A Amos,² D Torgerson,¹ H Thomson,³ A Sheikh²**

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Background: Protecting people from second-hand smoke (SHS) is a key tobacco control measure. The UK ban on smoking in public places has been highly successful in protecting non-smokers from SHS. However, non-smokers in communities of Bangladeshi and Pakistani origin continue to have high SHS exposure due to higher rates of smoking in men and fewer smoking restrictions in the home than in the general population. We developed the 'Smoke-free Homes' intervention, an educational resource on how to implement smoking restrictions at home, to be used/implemented/delivered by Muslim religious leaders to encourage their congregation to implement smoking restrictions in their homes. A pilot trial MCLASS (ISRCTN 03035510) was designed to establish the feasibility of conducting a definitive trial to assess the effectiveness of 'Smokefree homes'.

Design/Methods: We designed a pilot cluster randomised controlled trial in which Islamic religious centres in England were randomised to either receive the Smoke-free Homes intervention or allocated to the control arm. We recruited households with at least one smoker and a non-smoker, attending these clusters. Our primary outcome was saliva cotinine level, as a measure of SHS exposure, at five months post randomisation.

Results: Of the 24 (eligible) mosques approached, 19 agreed to participate and 14 were recruited. 544 households expressed an interest and 213 (eligible) were recruited among which 198 agreed to provide saliva sample. Randomised equally, six out of seven intervention mosques delivered the intervention with variable adherence. All clusters were retained throughout the trial. Among consenting households, 93% (185/198) provided a saliva sample at baseline; 74% (78/105) in the intervention arm and 63% (50/80) in the control arm had cotinine levels indicating tobacco smoke exposure. We were able to follow up 81% (172/213) of households, and obtain saliva samples from 62% (123/198). At follow up, 79% (59/72) of samples in the intervention arm and 65% (33/51) in the control indicated that the supplier was exposed to SHS.

Conclusion: The recruitment and retention rates for mosques and households were encouraging. However, to make a definitive trial viable, alternative approaches/strategies would be required to obtain saliva samples. Moreover, the religious leaders need intensive support and supervision to improve the consistency with which the intervention is delivered.

PD-1180-21 Assessing the impact of textual and pictorial warning on smokers

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Background: To assess if smokers read all textual warnings on the cigarette box and if they motivate them for smoking cessation. Consideration of the difference of the 2013 research in comparison to 2008. If the pictorial warnings would have stronger influence?

Design/Methods: Study subjects voluntarily participated in smoking cessation program at the Smoking cessation counseling department of the Clinic for Pulmonology of the Clinical Centre of Serbia. Statistical analysis was done by the methods of descriptive statistics, paired t-test for 2 samples and the analysis of variance (ANOVA) for repeated measurements.

Results: In both assessments we included 734 subjects (356 in 2008 and 378 in 2013). Fagerstrom test of the nicotine dependence showed significantly higher number 53.3% of smokers who has a severe dependence in 2013 in comparison with 2008 (26.1%) ($p < 0.01$). Study subjects woke up at night to smoke 8 times more in 2013 than in 2008 (24.9% and 3.1%, respectively; $p < 0.001$). Heavy addicts could not control their craving for cigarettes even during the sleep – they woke up at night 2 to 3 times because of smoking. Textual warnings are regulated in Serbia by the law from 2005. This reading motivated the majority of the subjects for quitting in 2008 (60.1%) in comparison with 2013 (18.0%) ($p < 0.001$). Although the content of the warnings changed, we found that after 5 years textual warnings lesser influenced smokers. This is in line with the finding that in 2013 where more than half of the subjects 51.3 have read the warnings, but they did not have the influence them $p < 0.001$. Almost equally smokers ignored the textual warnings on cigarette boxes in both examined years – 25.0% in 2008 and 30.7% in 2013. Subjects more believed 27.2% in 2008 that “weaker” cigarettes are less harmful than it was the case 16.4% in 2013 $p < 0.01$. Although the level of information that the concentration of tar, nicotine, and carbon monoxide relates to 1 cigarette is low, 5 more subjects knew this in 2013 (9.5%) than in 2008 (2.2%). The vast majority of subjects 71.9% in 2008 thought that the pictorial warnings have stronger influence on them for the quitting decision in comparison with subjects examined 37.3% in 2013 ($p < 0.01$). Pictorial warnings could not have any influence on 42.6% of subjects in 2013. Only 5.1% of subjects examined in 2008 thought that pictorial warnings would not have the influence on them and the significant difference exists between 2008 and 2013 ($p < 0.001$).

Conclusion: It's noticed that more and more heavy smokers and heavy nicotine addicts come to the smoking ces-

sation programs. Only severe dependence can awake the smoker and break his sleep due to the smoking need. This can be related to the design and content changes of the cigarette boxes. Forcing smoking and intense craving for the cigarette influence the effect of textual and pictorial warnings. All these data indicate that we need more clear, synchronized and intense work on all measures of smoking control.

PD-1374-21 Smoke-free violations in hospitality premises in Istanbul

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Background: Turkey enacted a comprehensive smoke-free legislation on 19th July 2009. Compliance of the hospitality sector was reported to be variable in Istanbul. This study was carried out in two consecutive years in order to identify the rate, type, reason and changing pattern of violations, as well as to determine the characteristics of the hospitality premises prone to violations.

Design/Methods: This is a cross-sectional, descriptive and analytical study. 450 hospitality premises in 4 provinces with the highest number of establishments were randomly selected with stratified cluster sampling.

The study was carried out in the same months of 2013 and 2014. Entire building was observed and presence of smoking signage display, cigarette butts were noted. If violation of the law was not documented during the noon time, the same establishment was revisited after 21:00 and the observation was repeated.

The observation form and the questionnaire were adapted from the guide on Assessing Compliance with Smoke-free Law. Both forms were pilot tested.

After finishing all the observations in the cluster, an interview is requested from the manager of the establishment. Oral consent is sought. The interview was carried out face to face.

Results: In 2014 Of the 450 premises 367 were operating at the same address. The rate of cigarette smoking indoors was found 35% in 2013 and 25 % in 2014. Ashtray was observed in 37% in 2013 and 19% in 2014. When ashtrays and cigarette butts are considered as violation, the total rate of smoke-free violation increases to 49 % in 2013. The total violation rate of 49% went down to 30% in one year. Smoking outside the establishment was observed at a rate of 25 % in 2013 and 32% in 2014 which documented improved compliance. The characteristics of the establishments with violations in both years were compared with the compliant ones. The violations were higher in premises which served alcohol ($P = 0.007$), installed ventilation system recently ($P < 0.001$), were penalized previously ($P < 0.001$), had business meetings with tobacco industry ($P = 0.027$).

Conclusion: The smoke-free violations have decreased between 2013 and 2014 but still remain high. The fines issued are low and they do not deter establishments from violating the law.

Existing methods of enforcement are inadequate in ensuring compliance with the law. The establishments with determined risk factors should be followed consistently.

51. WATERPIPE, HOOKAH AND SHISHA: GENDER ISSUES AND EFFECTS

PD-1181-21 Knowledge of waterpipe smoking among medical students in Bangladesh

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Background: Bangladesh is overburdened with tobacco-related illnesses. According to Global Adult Tobacco Survey Bangladesh 2009, current tobacco use among all adults aged 15 years and above is 43.3% both smoking and smokeless tobacco. Among them 97.4% of adults believe that smoking causes serious illnesses. In urban population of Dhaka city especially in youth are interested to use waterpipe smoking and they have no idea about the harmful effect of water pipe smoking. Waterpipe smoking lounges are popular among youth. But Bangladesh has no specific data about it. To determine the knowledge of waterpipe smoking among medical college students.

Intervention: This was a cross sectional study. A total of 50 students from a government medical college named Government Unani and Ayurvedic Medical College, a 200 bedded hospital situated in Mirpur, Dhaka under the University of Dhaka were participated in the study. The respondents were first year and second year medical students who selected purposively. A self administered questionnaire was randomly distributed into class and library. The study was conducted in June 2014. The data were analyzed by SPSS version 16.

Results: The study found that the mean age was 19 years. The respondents reported that waterpipe smoking causes lung cancer (42%), heart disease (28%), chronic respiratory distress (14%) and don't know (16%). The majorities (40%) believed that waterpipe smoking was less harmful than cigarettes and most of them (48%) reported that waterpipe smoking was less addictive. Among the respondents 88% believed that waterpipe smoking had no nicotine and 70% believed that waterpipe smoking had no carbon monoxide.

Conclusions and key recommendations: The knowledge about the harmful effect of waterpipe smoking was low. Advocacy about the danger of waterpipe smoking is recommended.

PD-1182-21 Young adults and hookah: why they start and what they believe

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Background: Limited data are available on the motivations for young adults to initiate waterpipe smoking, and in particular the role of ethnicity and cultural background in this form of tobacco use.

Methods: This qualitative descriptive study portrayed the views of two groups of waterpipe smokers – those with and without cultural/ethnic ties to countries where hookah smoking is endemic. Open-ended questions were developed to ensure consistency. Thematic analysis techniques were used for analysis. Transcripts were independently coded by two of study investigators.

Findings: Sixteen discussion sessions with a total of 75 waterpipe smokers aged between 18 and 30 were conducted. Perceptions about hookah did not differ between the groups studied. Most started smoking at age <18 calling it a 'high school thing', admitting that they had easy access to shisha bars under the legal age of 18. Factors that influenced this behaviour included "the desire to try something new", smoking hookah being perceived as "healthier" and the multiple flavors that were available. The majority initiated hookah smoking due to the influence of "their friends". Contrary to popular belief and the claims of some in the industry few participants saw culture as a factor supporting this behavior. Many smokers indicated that did not know if they were smoking tobacco or a "herbal" substance, while some knowingly smoked both. A minority described symptoms of addiction. Other materials were added to the water reservoir including ice, juice, commercial colas, alcohol or milk. Adding marijuana to shisha was reported by some. Frequency of use was very variable and was influenced by age (reduced use as age increased), free time availability; cost considerations, availability of friend to smoke with and occurrence of withdrawal symptoms.

Conclusion: Peer pressure, availability of flavored products and facile access to shisha bars are major factors in hookah initiation. Cultural issues play only a minor role.

PD-1183-21 Community leaders knowledge of and attitudes toward waterpipe use: a qualitative assessment

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Background: In Canada developing appropriate measures to address the issue of waterpipe is still in its infancy. The aim of this study is to explore community leaders' knowledge and attitude toward addressing waterpipe use.

Methods: A sample of community leaders, politicians, family physicians, and pharmacists were invited to participate in one-one interview. Critical case sampling and maximum variation sampling were utilized. Open-ended questions were developed to ensure consistency. Thematic analysis techniques were used for analysis.

Results: A total of 18 interviews were conducted. Participants were aware that waterpipe smoking is increasing. Those from Eastern Mediterranean backgrounds raise doubt about the overemphasized cultural significance of the waterpipe and they perceived that as a marketing strategy used to promote the waterpipe use. Participants perceived waterpipe use as social activity and showed limited knowledge of its health effects. They thought that the common belief that the waterpipe is less harmful than cigarettes and the variety of flavours are what motivate people to smoke, and saw that parents have relatively positive attitudes toward the waterpipe. However, healthcare professionals seemed skeptical regarding the safety of the waterpipe raising concern about association with asthma, lung disease and cancer. Most participants believed that education should include the general public, healthcare professionals, and different stakeholders suggesting school programs and social media to approach young smokers. Community leaders were convinced that the current practices regarding packaging, age verification in shisha bars, second hand smoke exposure, and workers protection are causing confusion among the general public. They identified barriers for change such as the lack of knowledge, enforcement procedures, cultural aspects, and the impact on small businesses; however, most participants reasoned that waterpipe use should be regulated like cigarettes, and that cultural claims should be further investigated to verify the real significance of this practice in the culture – if there is any!

Conclusion: Despite the awareness of the increase in waterpipe use among community leaders, they recognized that little has been done to curb this problem emphasizing the need for further education and the importance of having better legislations to regulate waterpipe use and availability.

PD-1184-21 Immediate effects of waterpipe smoking on control of breathing among young smokers

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Background: The acute response of respiratory system after water-pipe smoking is an area of special interest, given the fact that water-pipe smoking is a rapidly increasing trend among young smokers worldwide. Moreover, immediate effects of smoking on control of breathing have not been comprehensively investigated yet.

Design/Methods: 50 young smokers (average age=23±4, 32 males, mean pack-years=3.6) using cigarettes and occasionally water-pipe, voluntarily participated in this study. 25 had mild respiratory symptoms (atopic history, mild cough and exercise induced chest tightness) and mild peripheral airways obstruction (FEF25%-75%=74.15% pred., MRS-subgroup). The other 25 had normal dynamic flows and no respiratory complaints (NRS-subgroup). Mouth occlusion pressure at 0.1 sec. (P0.1), tidal volume (VT), inspiratory time (Ti), expiratory time (TE), mean inspiratory flow (VT/Ti), mean expiratory flow (VT/TE), duty cycle (Ti/TTOT), ratios Ti/TE, P0.1/(VT/Ti) and ventilation per minute (V'E= VT/Ti x Ti/TTOT x 60) were measured, before and immediately after, 30 minutes of water-pipe smoking or equal session in the smoking area without smoking (control-group, blind control was impossible). Wilcoxon signed rank and U-Mann-Whitney rank sum tests were performed for the statistical analysis.

Results: Immediately after 30 minutes of water-pipe smoking, TE and TE/TTOT were significantly reduced (-5.2%, p=0.041 and -2.84%, p=0.0003 respectively) whereas Ti/TE, Ti/TTOT, VT/TE, P0.1 and P0.1/(VT/Ti) were significantly increased (+7.67%, p=0.001, +4.12%, p=0.002, +7.12%, p=0.014, +10.6%, p=0.041 and +9.71%, p=0.022 respectively) in the whole population studied (n=50). In both subgroups (MRS, n=25 and NRS, n=25), only Ti/TE and Ti/TTOT were significantly increased whereas TE/TTOT was significantly reduced and no differences among the changes identified in the two subgroups were detected.

Conclusion: Water-pipe smoking has immediate effects on P0.1 and respiratory timing, regardless of atopic history, respiratory symptoms and mild peripheral airways obstruction presence.

PD-1185-21 Perception of young adults toward hookah use in Mumbai

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Background: The use of tobacco has been on the rise globally including in India, posing a grave public health

problem. Recently, tobacco use through hookah smoking has increased among young adults in India, Middle East, Southwest Asia, Africa, Europe and North America. Hookah prevalence of 0.4-15% has been reported in India. The aim of the study was to understand perception of hookah use among young adults in Mumbai.

Design/Methods: A total of 500 college students, with/without hookah habit, were given a self-administered questionnaire to indicate their perception of hookah use, using yes/no responses. The responses were analyzed in the users/non-users and considered significantly different at $P < 0.05$.

Results: Responses were received from 122 hookah users and 325 non-users. The perception of hookah use between users and non-users and males and females, showed significant differences ($P < 0.05$), with respect to hookah being injurious to health, causes cancer, is addictive, influence of a close friend, flavors, curiosity toward hookah use and willingness to prepare hookah at home. Whereas, differences in the groups perception of hookah as safer than cigarettes, harmful air quality, ambience, cool look and means of socializing, was not observed.

Conclusion: The perception of young adults in Mumbai, toward hookah use, indicates an increased trend to use hookah. We recommend deterrents for hookah use by display of health warnings on hookah assembly and the tobacco products, implementation of government policies on hookah and tobacco use and punitive measures for offenders.

PD-1186-21 Cigarette smoking and waterpipe use epidemics in the Arab world: recognising dual users among youth

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Background: In the Arab world, the collision of cigarette smoking and waterpipe (WP) use epidemics is alarming especially among youth. Until today, national estimates of tobacco use report the prevalence rates of each epidemic as a separate entity without any regard to dual-users. In this study we estimate the prevalence of dual users of waterpipe use and cigarette smoking among youth in 17 Arab nations.

Design/Methods: Adolescents' ($n=65221$) tobacco use data in 17 countries (Bahrain, Djibouti, Egypt, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates, Yemen, and Gaza Strip, West Bank and UNRWA sites) were obtained using Global Youth Tobacco Surveys. Datasets were combined and analyzed using Complex Samples design in SPSS. Participants' use of WP or cigarettes during the previous 30 days of sur-

vey administration was used to categorize tobacco use in youth into four groups, namely non-use, cigarette-only, WP-only or dual-use. Weighted prevalence rates (95% Confidence Interval [CI]) were reported by gender, grade, and country as well as by gender for each country.

Results: A total of 65,221 subjects were included in current study. Overall prevalence rates (95% CI) for cigarette-only, WP-only and dual-users were 3.3% (2.7%-4.0%), 6.5% (5.8%-7.2%), and 4.4% (3.7%-5.2%), respectively. More boys than girls, respectively, were cigarette-only (5.1% vs. 1.3%), WP-only (7.7% vs. 5.0%), or dual-users (6.1% vs. 2.3%). Dual-use prevalence rates ranged between 0.9%, in Yeman, and 15.9%, in the West Bank. In Saudi (5.7%) and Kuwait (9.2%), Youth were more likely to be dual-users than Cigarette-only or WP-only. The highest WP-only and dual-use prevalence rates, respectively, among girls were in Lebanon (6.4% and 25.5%) and the West Bank (4.7% and 17.5%) while 28% and 18% of boys in the West Bank and Lebanon, respectively, were dual-users.

Conclusion: This is the first study to estimate the prevalence rate of dual cigarette and WP use among youth in the Arab world. The study findings shed light on a new dimension of tobacco epidemic in the Arab states- "the dual cigarette-waterpipe epidemic". The scientific community and policy makers should consider the role of dual-users in future research studies or policy development.

PD-1187-21 Gender differences in the protective effect of developmental assets in cigarette and waterpipe tobacco use among youth in Lebanon

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Background: Smoking is still one of the major preventable causes of premature mortality and morbidity worldwide. Research on adolescent health has recently shifted from studying risky behaviors to understanding protective factors. The Search Institute's Developmental Assets framework is one of the most utilized conceptualizations of this approach. Developmental assets are grouped in 8 categories, 4 internal: commitment to learning, positive values, social competencies, positive identity; and 4 external: support, empowerment, boundaries and expectations, constructive use of time. Research has indicated a protective effect of developmental assets on smoking behaviour among adolescents. Most of the research has been conducted in the West where norms around smoking differ from those in the developing world. This research aimed to examine the effects of developmental assets on the adolescent tobacco use in Lebanon, and to assess gender differences.

Design/Methods: Data was collected through Arabic self-administered questionnaires, from 774 students in grades 6 to 12; and equivalent classes in technical schools, from 10 private and public schools, in 3 regions across Lebanon (2 urban and 1 rural).

Results: Among this sample, (47% being males, mean age: 15.38), 4% reported to be current cigarette smokers, 28% current waterpipe (WP) smokers and 7% as dual smokers. No significant difference was observed for exclusive WP smoking across gender, region (urban vs. rural), type of school (private vs. /public), and class (intermediate vs. secondary level). Youth of the older age group (≥ 15 years old) were significantly more likely to be exclusive WP smokers. Current smokers (whether cigarettes and/or waterpipe) had significantly lower mean scores - on all asset categories - compared to non-smokers. There were no differences by gender except for the "constructive use of time" which was non-significant for males.

Conclusions: Findings of this study add to the literature on the protective influence of youth developmental on smoking behaviour of adolescents. The result for constructive use of time belies the typical argument that males are smoking out of boredom. To prevent and control tobacco use, interventions aimed at enhancing assets of youth should be developed and incorporated into programs and policies of youth-serving agencies and Ministries in Lebanon and the region.

PD-1188-21 Assessment of knowledge and cardiovascular and respiratory health effects of waterpipe smoking (WPS) among Pakistani adolescent boys

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Background: The use of Waterpipe Smoking (WPS) has increased globally, especially among youth. The common perception is that WPS is not as harmful as cigarette smoking because the smoke passes through water, purifying harmful elements. However, studies show that WPS is just as harmful as cigarette smoking and can lead to diseases such as cancers, cardiovascular and respiratory illnesses. Because knowledge about health effects is not well-known among the general population, this study aimed to assess knowledge and health effects of WPS among Pakistani adolescent boys.

Design/Methods: A cross-sectional study with a sample of 200 adolescent boys aged 14-19 years was conducted in Gujrat Pakistan. Among 200 participants, 100 used WPS and 100 were non-users. For assessing knowledge, an Urdu questionnaire about attitude, perception and knowledge of WPS was used. To examine physiological effects of WPS, measurements of blood pressure, chest expansion, heart rate and respiratory rates were measured.

Results: Overall, the mean age of the participants was 17.32 (SD=1) and did not differ by group. Among users, 64% have more than 10 years of schooling whereas only 39% of non-users have more than 10 years of education. Among non-users, 83% of them had high knowledge about health hazards of WPS compared to 44% of users. Additionally, users had lower mean (SD) for blood pressure and respiratory rate with statistically significant p-value, but a higher mean (SD) for chest expansion {4.6(0.45)

vs. 4.5(0.54) $p > 0.327$ }, pulse pressure {39.61(8.68) vs. 38.11(7.46)} $p < 0.19$ and heart rate {79.3(8.12) vs. 75.3(8.17)} $p < 0.001$. However p-values were insignificant after adjusting for age and other types of tobacco smoking.

Conclusion: In spite of having more schooling, the knowledge about health hazards of WPS is very low among users; social acceptability and perception of being less harmful than cigarette smoking can be possible reasons for the use of WPS.

PD-1189-21 Narghile (Shisha) smoking is a new alternative for the tobacco industry: Is it really less harmful?

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Background: Narghile (water-pipe, Hubble Bubble, Hoo-kah or Shisha) smoking [NS] is mistakenly believed to be less harmful than cigarette smoking [CS] but this misperception is challenged on several grounds and sufficient research data now suggest that NS is equally or even more damaging than CS.

Methods: Computer searches of the largest databases-PubMed, MEDLINE, Google Scholar, and Quertle[®]were made using Mesh words for identifying and retrieving relevant articles published in English, peer-reviewed journals over the last 20 years.

Results: Converging evidence suggests that the prevalence of current NS range from 6 to 34% among Middle Eastern adolescents, 5%-17% among American adolescents, and that NS is increasing globally. Profile of Narghile smokers include young age, female, illiterate, previous history of CS, and increased liability to develop severe addiction and potentially more dangerous adverse health effects. NS contains higher concentrations of a variety of toxic chemicals including carbon monoxide and polyaromatic hydrocarbons (PAH) than in CS. NS interferes with oxidation, damage to genetic poisoning, increased risk of malignancies, infectious diseases, cardiovascular diseases, ear diseases, damage to the fetus and newborn, and comorbid exposure to commonly abused substances. Independent predictors of interest in quitting included being married, having smoked for fewer years, and not increasing the frequency of smoking over time, no family permissiveness, and having family members who do not smoke NS and disapprove of its use. Public health strategies for controlling the emerging trendy epidemic of NS smoking include carrying out epidemiologic and toxicological research; implementation of laws to limit acquisition and use; and health education and awareness campaigns especially targeting adolescents.

Conclusion: The prevalence of NS is increasing among young population worldwide with alarming rate and NS is more damaging than CS. Public health preventive strategies directed against CS should also include NS. .

PD-1190-21 Correlation of cigarette and waterpipe use among university students in Istanbul

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Background: There is wide awareness about the health hazards of cigarette smoking. However little is known about health effects of water-pipe use among youth. Misinformation of youth about the contents and toxicity of the product, may lead to higher consumption. The study was carried out to find out the perception and attitude of the university students in Istanbul.

Design /Methods: This is a descriptive study. During the training program at various universities of Istanbul a written questionnaire was carried out among the participating students. The questionnaire was prepared with a selection of questions adapted from WHO/CDC Global Adult Survey.

Results: 226 students ages ranging 18-34 years (mean age 21) from law, medical, chemistry faculties participated in the study. 17 % were regular smokers, 21 % occasional smokers, 62 % non-smokers. 54 % had never tried smoking cigarettes in their lives. However, when asked about all tobacco products, only 20 % reported not to be using any. Usage of water-pipe was found to be % 30 (25% among females, 45 % among males). 22 % used water-pipe but did not smoke cigarettes. 16% of those who reported not to use any tobacco product, were using water-pipes 1.7 times per month on average, which showed that they did not know that water-pipe contained tobacco. In total 43 % of the medical students used either water-pipe or cigarettes or both which was a similar rate than other students.

Conclusion: The study implies that total tobacco consumption may be much higher among Turkish university students than previously anticipated. Turkish success in tobacco control depended mostly on prevention of cigarette smoking. Increase in public awareness about health hazards of cigarette smoking was not seen for other tobacco products. It seems that "Aromatic and herbal water-pipe" concept cleverly developed by the industry keeps the youth addicted to tobacco. Public campaigns, enforcement of legislation should be pursued.

PD-1191-21 Gender differences in waterpipe smoking behaviours and withdrawal symptoms associated with nicotine

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Background: Nicotine in tobacco is known to cause addiction and waterpipe smoking provides an effective nicotine delivery mechanism. The purpose of this study was to examine gender differences in smoking behaviors (puff topography) and withdrawal symptoms in nicotine

nondependent waterpipe smokers within 48 hours after smoking waterpipe.

Design/Methods: This study utilized a repeated measures design including a repeated factor representing tobacco condition (nicotine (0.75 g) and non-nicotine (0 g placebo)). Random allocation of conditions was used. The target total smoke volume was pre-determined at 80 liters. Twenty-two participants completed the Questionnaire of Smoking Urges and the Minnesota Nicotine Withdrawal Scale-Revised at pre, immediately post, 24 hours, and 48 hours after smoking to assess for withdrawal symptoms.

Results: Smoking behaviours differed by gender. On average, during the nicotine condition, women compared to men took shorter puffs (M (SD): 2.34 (0.71) vs. 3.35 (2.30) secs), inhaled less volume per puff (0.42 (0.14) vs. 0.67 (0.64) liters), took less puffs (159 (42) vs. 205 (167)) and took more time to reach the target volume (48.56 (14.99) vs. 41.63 (15.06) mins). Using analysis of variance, these differences were not statistically significant due to the small sample sizes (underpowered). Using a full factorial model including effects for time, condition and gender, analysis of withdrawal symptoms experienced after smoking, 24 hours, and 48 hours when compared to pre-smoking data demonstrated significant differences in dizziness across time between males and females for the nicotine condition (gender*time*condition interaction (p = 0.011, eta-squared (ES)= 0.304). For the nicotine condition, immediately post-smoking, women reported higher levels dizziness (M = 38.750, SD = 40.138) compared to men (M = 8.583, SD = 13.668). At 24 and 48 hours post smoking, reported levels of dizziness for men and women were similar and returned to levels reported prior to starting the smoking session (pre-smoking, 24 and 48 hour M (SD): men – 3.33 (2.535), 2.75 (2.137), 3.42 (3.697); women – 2.25 (2.816), 2.75 (2.964), 2.00 (2.204), respectively). Under the placebo condition, no differences in dizziness across time by gender were found.

Conclusion: Waterpipe smoking behaviours differ between women and men. Also, female nicotine nondependent waterpipe smokers experience higher levels of withdrawal symptom after smoking waterpipe compared to men.

PD-1192-21 Hookah service industry: economic environments and business models

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Background: Hookah service businesses provide ready to use hookah directly to consumers. They are widespread in the Middle East and growing in New York City. Yet the operations and economics of these businesses are poorly understood.

Design/Methods: We conducted a quantitative survey to describe the economic environment of the hookah service industry, which included data on the business model, hookah products, and customer demographics in New York City, Abu Dhabi and Dubai. We identified hookah bars using Yelp and Google Places. We approached a random sample of businesses identified, as well additional businesses noted nearby the ones we visited. We approached 128 businesses but 31 declined to be interviewed, with the most common reason for refusal being too busy. Survey data was entered into Qualtrics and then analyzed with SPSS.

Results: We completed interviews with 97 businesses (NYC 32, Abu Dhabi 33, Dubai 32). Businesses that served hookah included cafes, restaurants, bars, and clubs; businesses were either freestanding or located within hotels. Franchises made up 29% of businesses. Franchises were most common in Dubai, and the New York City market mostly consisted of small independent businesses. Business operators reported 38.5% (SD=24.3%) of revenue comes from hookah sales. Promotional strategies, including fliers, radio or TV ads, and social media, were reported by 84% of businesses. A total of 11% of operators reported knowledge of non-adherence to hookah regulations (19% NYC, 8% UAE). Flavoured shisha accounted for over 90% of sales across all regions. Overall, hookah smoking is relatively affordable with base prices at the low end from 7.50 dirham (\$2.00) per pipe in Abu Dhabi and \$10.00 in New York City. Customers were reported as young (20-29) and 42% (SD=16%) female. Regular customers make up a large portion (60%) of patrons.

Conclusion: At one third of the market, franchises may differ from independent businesses in several important ways, such as size and level of promotional activity. Businesses show a great deal of variation in the level of dependence on hookah sales with pricing unlikely to be a barrier to use. The high level of reported promotional strategies raises concerns about increased demand, particularly among children and young adults. Consistent with other studies, young adults and females are well represented among hookah users. The high prevalence of regulars is concerning for hookah addiction among business patrons.

PD-1193-21 Understanding factors that influence waterpipe smoking uptake among those who have never smoked: a cross-sectional study of 6th and 7th graders in Lebanon

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Background: Waterpipe tobacco smoking (WTS) is highly prevalent in the Eastern Mediterranean region. While several studies have identified socio-demographic factors differentiating smokers from non-smokers, factors that may influence non-smokers to start smoking are unknown.

Design/Methods: We analysed responses of 1164 6th and 7th grade students in Lebanon to a cross-sectional WTS questionnaire. Logistic regression models identified knowledge and attitude statements that were significantly associated with ever WTS. This was used to create a risk score, and a linear regression model among never waterpipe smokers identified factors that were significantly associated with an increased risk score and thus put them at risk of initiating WTS.

Results: Of thirty knowledge and attitude statements, knowledge that WTS caused oral cancer, and attitudes that addiction to WTS was good or not important, and that smoking waterpipe helped to relax, and to have a good time, significantly predicted ever WTS. Summing the adjusted odds ratios of these produced a risk score for each student. Over half of the sample (54.4%) had never smoked waterpipe, of which 20.1% had a risk score greater than four. Among never waterpipe smokers, factors associated with an increased attitudinal risk score included increased socioeconomic status, reduced religiosity and current cigarette use.

Conclusions: This study provides insight into key knowledge and attitude statements significantly associated with ever WTS, and a set of student demographics that place never smokers at risk of initiation. Health promotion initiatives and health policy should aim to combat these attitudes in order to prevent further uptake.

52. CESSATION IN HEALTH CARE SETTINGS

PD-1194-21 Tobacco addiction and its treatment in clinical practice guidelines (CPG) in Armenia

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Background: Armenia has one of the highest male smoking rates in the European region (59.6%). Though physician's advice to quit smoking is a proven cost-effective approach to reduce smoking, barriers exist to providing cessation advice and counseling, including insufficient skills and knowledge. Clinical practice guidelines (CPG) can serve as an important tool for filling this gap. This study aims to assess to what extent the CPG in Armenia are addressing the assessment and treatment of tobacco addiction.

Design/Methods: We searched the existing guidelines at websites of Ministry of Health and the Republican Scientific Medical Library and through contacts at the National Institute of Health and the Yerevan State Medical University. The CPG for medical professionals published since 2007 were selected for the review. Those for acute conditions, infectious diseases and pediatric care were excluded. A brief checklist was used for the review, the data were entered and analyzed using Stata 12.0.

Results: In total, 36 CPGs approved by the Ministry of Health were reviewed. Only 12.5% were available online. The vast majority (72.32%) were developed for family physicians with support from the international donor organizations in 2007-2008. The majority of guidelines referred to smoking as a risk factor and contained a general recommendation for patients to quit. However, only 11.1% provided some information on how to assist the patient to quit smoking. Nine (25.0%) of the reviewed guidelines did not mention smoking at all. Two guidelines mentioned SHS exposure as a risk factor. More recently published guidelines had covered the issue of smoking more intensively. Thus, the number of guidelines mentioning smoking as a risk factor and recommending to quit increased from 50.0% and 53.9% in 2007-2008 to 90.0% and 80.0% in 2009-2014, respectively. About 30.0% of the newest guidelines had information on how to assist the patient in quitting compared to 3.9% in those published before 2009.

Conclusion: This study suggests that the majority of CPG in Armenia contained information on smoking as a risk factor and a recommendation for patients to quit. However, information on the treatment of tobacco dependence was found in an alarmingly low number of the guidelines. Thus, despite the observed progress in covering the issue of tobacco addiction in the CPG in Armenia, there is still a significant place for their improvement, especially as related to its treatment.

PD-1195-21 Interventions for tobacco cessation among tuberculosis patients for better treatment outcomes in Dhaka, Bangladesh

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Background and challenges to implementation: Tobacco smoking has increased substantially over the past few decades, especially in developing countries like Bangladesh. BRAC an international organization started integration of smoking cessation intervention into Directly Observed Therapy (DOTS) programme of Tuberculosis (TB) in 17 DOTS Centers of Dhaka peri-urban since May 2011. Tobacco smoking is associated with tuberculosis (TB) and tobacco use may decrease the effectiveness of TB treatment. The objectives of the initiative are to identify current smokers among TB patients and to see the effectiveness of smoking prevention and cessation on TB outcomes.

Intervention or response: BRAC supported 17 DOTS centers of Dhaka with 2.8 million populations were se-

lected for intervention. TB programme staff was trained on tobacco control with particular focus on harmfulness of tobacco use specially smoking, second-hand smoking and its impact on TB, introduce counseling methods and documentations. All the tools were based on the guideline "Smoking Cessation and Smoke-free environment for TB patients" by the Union. The tools were translated in Bengali and shared with staff. Counseling is given to TB patients for smoking and tobacco cessation during initiation of treatment and subsequent visits to DOTS centre. A brief counseling is done by Shasthya Shebika (front line community health worker) during daily intake of medicine.

Results and lessons learnt: From May 2011 to December 2013, a total of 9,680 TB patients were enrolled in the intervention areas. Among them, 22% patients were smokers. The level of addiction was high in 29% cases and low in 71% cases. Among the TB patients registered from May 2011 to December 2012, 21% was smokers and among smokers 68% quitted smoking. Treatment success rate was 90% among the smokers whereas 93% among the non-smokers. All the 17 health centers were declared as smoke-free and 'No smoking' signage is placed at the entrance of these centers. However challenge remains to know the relapse rate of smoking after completion of TB treatment as we could not follow-up beyond 6 m-8 months of TB treatment period.

Conclusions and key recommendations: Patients with TB need and should receive counseling and assistance in stopping tobacco use. Health professionals working in TB care can do cessation counseling systematically within a TB DOTS-based programme. It is found to be effective to help people to stop smoking in the context of TB treatment.

PD-1196-21 Smoking cessation among diabetes patients in Kerala, India: 2 year follow-up results from a pilot randomized-controlled trial

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Background: The Indian State of Kerala has the country's highest reported diabetes prevalence in rural areas (21%) in 2010. Given data strongly associating diabetes complications with smoking, the International Diabetes Federation has recommended that smoking cessation be included as an essential part of diabetes management. The present study documents the effectiveness of doctor's quit

messages and smoking cessation counseling by a non-doctor health professional on quit rate and harm reduction in diabetics.

Methods: Using a parallel group randomized controlled trial; we interviewed 224 diabetic smokers aged ≥ 18 years selected from two diabetes clinics in South India. We randomized the patients into two groups, intervention group-1 and intervention group-2. Both groups received a standard diabetes specific tobacco cessation message from a doctor and education materials on smoking and diabetes complications.

Intervention: group 2 received four additional diabetic specific smoking counseling sessions (each session about 30 minutes) by a trained and certified non-doctor health professional up to six months after recruitment. We contacted the participants during clinic visits, by telephone and house visits. Follow up data were available for 87.5% of patients at two year. The primary outcomes were quit rate (abstinence of smoking for at least seven days) validated by salivary cotinine test and harm reduction (reduction of smoking more than 50% of baseline use).

Results: Two years post intervention, a quit rate of 45.5% in intervention-2 group was three times higher [Odds Ratio (OR) 2.91, 95% CI 1.62-5.19] than intervention-1 group (22.3%) based on intention to treat analysis. In intervention-2 group 71.4% had either quit or achieved harm reduction after two years compared to 56.3% in the intervention-1 group ($p=0.026$). Quit rate was similar even among high level smokers (those who smoked >10 cigarettes/bidis per day).

Conclusions: This is the longest reported follow up study of a smoking cessation intervention for diabetes patients. Two year post intervention, quit rates were nearly as high as six months post intervention. These finding suggest that diabetes patients are motivated to remain quit once smoking's relation to serious complications are explained and they are offered supportive counseling. Strong doctor's messages and follow up cessation counseling can have a huge positive impact on reducing diabetes complications due to smoking.

PD-1197-21 Tobacco use patterns among patients referred for cessation treatment outside of Mizoram

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Background: Tobacco use is a major preventable cause of premature death and disease. Statistical Abstract of Mizoram (Directorate of Economics and Statistics, 2011) highlighted that majority of deaths in Mizoram are caused by tobacco related diseases. The aim of the present study is to assess the pattern of tobacco use among patients referred outside Mizoram for treatment, to examine their perceptions of tobacco in relation to their illnesses and to find out their level of awareness regarding the health ef-

fects of tobacco.

Design/Methods: 78 patients referred outside Mizoram for treatment from Civil Hospital, Aizawl during a two months study were selected as participants. Their age ranges from 8 years – 80 years old. A questionnaire consisting of 21 close ended questions was framed which included a number of background information. Analysis was done using SPSS 19.

Results: Out of 78 participants, 54% are male and 46% are female. 69% live in urban area while 31% live in rural areas. 36% of participants were above 50 years, 19% between 41-50 years, 22% between 31-40 years, 14% between 20-30 years 10% below 20 yrs. 61.5% were ever user and 38.5% have never used tobacco, 75% of ever user were current users and 25% have quit. 52% use smoked forms of tobacco, 17% use smokeless form and 31% use both forms of tobacco. 67% of ever user have used tobacco for more than 10 years, 17% have used it for more than 5 years. 99% of current user has the desire to quit, 86% have tried and only 1% have sought for professional help. 88% have tobacco user in first degree relative in which 69% used smoked forms of tobacco. 25% of ever user believe that tobacco is responsible for their health and 8% were not sure. 60% of ever users regret having used tobacco while 40% have no regrets. Noteworthy is these referred patients seem to be more motivated than other users in quitting because out of the 61.5% users, 25% quit completely after they realized their illness. All cancer patients in the study were tobacco users.

Conclusion: Majority of tobacco users believe that tobacco is responsible for their illness and they regret having used it. Result shows that these patients seem to be more focused and motivated on getting better. Those patients who do not believe tobacco is harmful for their health and refused to quit seems to be less accepting of their illnesses.

PD-1198-21 Smoking among hospitalised patients in a tertiary level hospital in India

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Background: Smoking related diseases account for a large proportion of hospital admissions, especially in developing countries like India. Patients hospitalized for smoking related illnesses are more motivated to quit smoking and hence are more receptive to cessation interventions.

Objectives:

- To assess the extent to which doctors implement the two A's (Ask and Advise) to in-patients.
- To document smoking behaviour of hospitalized patients who smokes inside the hospital.
- To assess patients' readiness to quit smoking while in the hospital and interest in receiving advice.

Methodology: A cross sectional study was conducted among 150 male patients admitted for at least three days to Internal medicine department of a tertiary care hospital. A pilot tested, validated and structured questionnaire was administered to the eligible patients. Data were analyzed using MS excel and Epi info.

Results: The mean age of study participants was 51.6 years. 96.1% patients were asked about smoking by their doctors, while 63% were both asked and advised. 10.5% patients resorted to smoking during their hospitalization among whom 43.5% were advised to quit by their doctor. Majority (81.3%) went outside the hospital to smoke. Smokers who experienced withdrawal symptoms were significantly more likely to continue smoking in the hospital compared to those who did not experience ($p < 0.05$). The cigarettes/ bidis were procured from shops outside the hospital by 92.3% smokers while it was provided by a visitor for remaining. 51.7% of the respondents experienced withdrawal symptoms. Doctors failed to enquire about withdrawal symptoms in all the cases. The vast majority of patients interviewed (93%) expressed a desire to quit smoking with most of them citing health problems as the major reason (78.3%).

Conclusion: Health professionals not only need to ask and advise all patients admitted to the internal medicine department of the hospital but also assist patients to quit and to overcome withdrawal effects. Illness is a teachable moment and the motivation to quit smoking is high when a patient is in the hospital and it is made clear to them how smoking affects their illness prognosis and the effectiveness of medication. This study was supported of Project Quit Tobacco India.

PD-1199-21 Integrating tobacco treatment into a tertiary care hospital in Mumbai: a case study

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Background: India suffers the highest loss in potentially productive years of life due to deaths from cardiovascular diseases, and rise in new cases of cancer (800,000) every year, with majority being tobacco related (lung, oral cavity, oesophagus) among men and women. The rising epidemic of cancer and cardiovascular diseases makes an indisputable case to incorporate tobacco cessation within healthcare settings. Hospitalization offers an ideal 'teachable moment' to address tobacco use among patients.

Methodology: Based on established international models 'LifeFirst'-a tobacco treatment service was initiated in a tertiary care hospital, specializing in cardiology and cancer care in Mumbai. This inpatient service was encouraged by the hospital's governing board and executive committee, and monitored by key hospital management. Orientation for doctors, nurses and ancillary staff was conducted. Resident Medical Officers (RMO) were given detailed trainings and refresher sessions for screening tobacco use at admission, providing brief advice and referring patients for specialist services. The treatment protocol had

brief advice, detailed counselling session before discharge, and 6 follow-up sessions over 6 months on phone after discharge from hospital. One RMO, trained as Tobacco Treatment Specialist at Mayo Clinic (USA) was engaged full-time to provide the service.

Results: (Table 1) The service has been fully integrated into the hospital's IPD protocol. RMOs screen all patients for tobacco use, update status in medical records and refer to the TTS. Induction training of all new nursing staff includes instructions on the tobacco dependence service protocol. The phone follow-ups were developed and demonstrated as in-person follow ups were not possible. Now, the hospital's tobacco treatment department is ISO 9001 certified and the hospital management is working to introduce a "tobacco free hospital" policy.

Table 1: Results of implementing the LifeFirst Tobacco Treatment Service from January 2103 to May 2014

Indicator	No. of patients	%
Total number of eligible patients admitted to hospital	11155	
Patients screened for tobacco use by TTS	8391	75%
Current tobacco users identified (tobacco use within past 6 months)	1445	17%
Brief advice given to current users	1344	93%
Patients interested in joining LifeFirst service	539	40%
Patients provided detailed counseling	357	66%
Outcome at 6 months of follow-up:		
Patients who completed 6 months in service after discharge	211	59%
Patients who were provided 6 follow-up sessions	122	58%
Patients lost to follow-up	52	25%
Patients opted out of service	18	9%
Patients died during follow-up	19	9%
Outcome among those who could be followed up:		
Quit (not using)	93	76%
Relapsed	17	14%
Reduced	5	4%
No change	7	6%
Quit rate at 6 months in service after discharge:	93/211	44%

Conclusion: Tobacco use in India, particularly smokeless is culturally ingrained and availability at a low cost makes quit attempts and intent to quit very challenging. LifeFirst has been well integrated into the hospital's services with support from hospital management and promotion by individual champions. The model may be adapted to other tertiary care hospital settings.

PD-1200-21 Smoking cessation as a component of cancer prevention measures in Kazakhstan

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Background and challenges to implementation: The Programme of development of cancer service for population of Kazakhstan was adopted by the government in 2012. The main indicator of the Program is reduction of cancer mortality. Cancer prevention is one of the key ways of the mortality reduction. Smoking cessation service is an important aspect in cancer prevention.

Intervention or response: Smoking prevalence in Kazakhstan is 26.5% (National study, 2012). Approximately 80% smokers are wanted to quit. However in Kazakh-

stan separate quit service is absent, with the exclusion of services, provided by physicians of private practice. The drug-abuse clinics concentrate their facilities for cessation of drug addiction and alcohol abuse. Smoke free national legislation and increasing population knowledge on tobacco harm promote the need to develop the network on smoking cessation. Approaches for smoking cessation on primary health care level have been developed. These activities represent an algorithm of actions for medical workers to reduce tobacco use. First step: a survey including an assessment of smoking duration, number of cigarettes smoked, the first cigarette of the morning and having experience in smoking cessation. The second step - to develop motivation and brief advice to quit smoking. The third step - a detailed consultation with the elaboration of a plan of action for 2 months. Nicotine replacement therapy is prescribed when indicated. physician provides recommendations on diet, physical activity, breathing exercises, and psychological support. Evaluation of intervention carried out in 1.5-2 months. In case of failure, the patient is sent to the School of Health, where he received detailed advice and skills training. The next stage of control - 4 months. If the patient continues to smoke and he retains the desire to quit, Referral or anti-smoking center or a specialist drug treatment.

Results and lessons learnt: Implementation of the program in the pilot health clinics showed the effectiveness and allowed annually to reduce smoking rates by 1.6% among outpatients.

Intervention is conducted amongst patients who are applied for medical help regardless of purposes of their visit. Each medical worker of primary health care level is obliged to give the advice and to direct to Health School.

Conclusions and key recommendations: Implementation of this program in its entirety will reduce the level of smoking and in the future - to reduce the incidence of cancer.

PD-1201-21 Long term effectiveness of free-of-charge smoking cessation services in a tobacco treatment center in Iasi, Romania

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Background: Actually, there is enough available evidence to advocate higher effectiveness of smoking cessation, when delivered free of charge. In 2007, Romania implemented a national program to provide smoking cessation medication and counseling, entirely for free. Aim: To evaluate the long term effectiveness of the program, in both successful and unsuccessful participants.

Material and method: Long term telephone follow-up (LTFU) of 220 patients, treated for 3 months by either bupropion, varenicline or nicotine patch and 4 counseling sessions, was done, to assess present smoking status (at 12 months post quit date), abstinence duration and the need for relapse prevention counseling. Retrospective re-

view of medical records was conducted to interpret smoking and cessation profile.

Results: Among 185 LTFU respondents, overall 12 months post quit date abstinence rate was 33.5%. By treatment regimen, we found 48.4% % abstinent (varenicline) vs. 19.3 % (bupropion), vs. 29 % (nicotine patch). In non-successful subjects, abstinence duration ranged between 2 weeks and 4 months. 55.1% of LTFU respondents asked for relapse prevention counseling. High program compliance was reported both in the treatment phase (79.5 %) and in long term follow-up (84 %). Cessation profile showed higher quit smoking rates in low income men, being at the first quit attempt, with average < 20 cigarettes/day consumption and Fagerstrom dependence score < 7.

Conclusions: High abstinence rates and program compliance were demonstrated in long term follow-up of free of charge smoking cessation, compared to previous data from non-reimbursed cessation programs in our tobacco cessation center.

PD-1202-21 Supporting patients with COPD in smoking cessation: can a new assessment instrument improve counseling effectiveness?

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Background: Despite the fact that chronic obstructive pulmonary disease (COPD) is primarily caused by cigarette smoking, almost 50 % of smokers suffering from COPD do not quit. Previous studies have indicated that nurses felt frustrated, powerless and insecure when trying to help these patients. There is a wide range of instruments used in the clinical setting to predict the outcome of a quit attempt, cigarette and nicotine dependence, expectancies regarding abstinence from smoking. None of these instruments seems to fully explore the difficulties patients with COPD deal with when they try to quit smoking. The study was conducted with the objective to test the factor structure and the predictive value of the brief questionnaire "Trying to quit smoking" (TTQ) in naturalistic conditions. This 19-item instrument was developed based on a theoretical model in order to measure factors that negatively influence quit attempts specifically among patients with COPD, for instance pressure-filled states mental states and corresponding pressure-relief strategies. .

Design/Methods: The TTQ was tested among 109 Swedish patients with COPD, of which 63 were in the stage of taking action to quit smoking. Among these, the psychometric properties of the instrument were analyzed by Exploratory Factor Analyses (EFA). The patient sample was re-surveyed three months after baseline, when 7-day abstinence from cigarettes, quit attempts, and decrease in number of cigarettes were assessed. The association between TTQ score at baseline and smoking outcomes was analysed with ordinary logistic regression.

Results: The scale items' internal consistency assessed with Chronbach's alpha was 0.71. Preliminary results indicated

that in crude analyses increasing TTQ was associated with a lower probability of quit attempts (OR= 0.90, 95% CI= 0.83-0.98); of 50% reduction of cigarettes smoked per day from baseline to follow-up (OR= 0.97 95% = 0.89-1.05); and of 7-day total abstinence (OR= 0.91, 95% CI = 0.82-1.01).

Conclusion: TTQ is a promising novel instrument set to identify factors influencing smokers with COPD when they try to quit. It could be usefully employed in the clinical setting to optimize the use of professional resources for smoking cessation. .

PD-1203-21 Tobacco cessation in patients with NCDs: the initial outcomes of a pilot programme launched by the Thai Physician Alliance Against Tobacco (TPAAT)

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Background: The effect of smoking on the development of chronic complications in patients with NCD is well recognized. In 2012, the TPAAT launched a pilot program for tobacco cessation in patients with NCD who are willing to cease. A total of 1479 patients from 16 general hospitals representing six regions of Thailand have registered to the program.

Design/Methods: Data from 413 patients in 4 subgroups of NCD from 7 hospitals comprised of 56 COPD, 63 DM, 129 CVD and 165 patients with psychiatric disorders who spent at least 3 visits with the exhale carbon-monoxide (Coexhale) measured at entry and 6 months follow-up (6-m F/U) at the tobacco cessation clinic were subjected for the analysis using pair t-test, Yate's correction chi-square test and Pearson's correlation coefficient (Pcc).

Results: Most patients are male (93.7 %), over 40 years old with the mean age of 52.03±14.33. Over 90% of patients have long duration of smoking history >10 years with 70.7% and 44.3% >20 and >30 years, respectively. Among these, only 4.6% are heavy smokers, 58.4% and 37.0% are mild and moderate smokers, respectively. However, 88.6% of patients desired the first cigarette within 60 minutes upon awakening whilst 70.4% and 40.4% of patients smoke within 30 and 5 minutes, respectively. No wonder that 40%, 56.4% and 3.6% of patients fell into mild, moderate and heavy nicotine dependence (ND) on the Fagerstrom Test (FTND), respectively. Smoking cessation medication was prescribed in 81.6% of patients while 17.7% had verbal counseling only. The mean levels of Coexhale measured at entry are well correlated with the number of cigarettes smoke and time to the first cigarette of the day, Pcc's r = 0.258 and -0.224, respectively, p<0.01. The success rates of tobacco cessation were significantly higher among patients taking medication compared to none, 62.3% vs 32.9%, Yate's Chi-sq = 20.039, p<0.0001.

Though the cessation rates was lower in patients with heavy (33.3%) compared to 57.0-58.8% in mild-moderate ND, the levels of Coexhale measured in both success and failure smoking cessation subgroups were significantly reduced at 6 m F/U, pair t-test = 9.821, 13.025 and 2.915; with p<0.001, p<0.001 and p<0.01 for mild, moderate and heavy ND, respectively.

Conclusion: Though the outcome of smoking cessation is not so high but the significant reduction of the Coexhale in all sub-groups of patients with NCD is highly encouraged. A larger program to cover most NCD is now implementing.

PD-1204-21 Reducing hospital readmission rates by implementing an inpatient tobacco cessation service

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Background: In 2012, the Joint Commission (JC) which sets quality standards for hospitals in the United States recommended that all current smokers identified upon hospitalization receive tobacco cessation services as an inpatient and be followed up after hospital discharge. However, few hospitals implement JC standards due to extra costs, the voluntary nature of the standards, and the lack of evidence demonstrating financial benefits to the hospital and insurers. The Medical University of South Carolina (MUSC), a major tertiary care hospital in South Carolina, recently implemented an automated in-hospital smoking cessation program using interactive voice recognition (IVR) technology to follow-up with patients after discharge consistent with JC standards. This study uses an interrupted time series design to examine monthly trends in hospital readmission rates before and after implementation of the smoking cessation program, allowing us to test the hypothesis that the automated in-hospital smoking cessation program service will reduce hospital readmissions.

Methods: Monthly rates of unplanned hospital readmission were tracked at 30, 90 and 180 days for patients during both the pre and post program periods. A multiple poisson regression was used to analyze the effect of the IVR program on the number of unplanned hospital admissions per month.

Results: Initial data based from the first 3 months of the program show that 1,157 adult smokers were referred to the tobacco cessation service. A total of 305 inpatients (26%) were visited by a bedside tobacco cessation coun-

selor, with the remaining patients (N=853) discharged into the IVR follow-up system without being seen by the bedside counselor. Of the patients seen by the bedside counselor, 48% were not smoking at 30-days compared to 29% in the group not seen by the bedside counselor. Unplanned 30-day hospital readmission rates were 9.1% for patients seen by the bedside counselor as compared with 15.7% for patients who did not receive bedside counseling.

Results will be updated at the time of the WCTOH to include 12-months of data collected from the period before the inpatient hospital program was implemented (01/01/13-12/31/13) as well as additional data collected after program was implementation in January 2014.

Conclusions: Data suggest that an automated tobacco cessation service reduces unplanned hospital readmissions.

53. GAME CHANGERS USING MASS MEDIA CAMPAIGNS

PD-1205-21 Translating data into Government action: the fall and rise of smoking rates and reinstatement of a terminated anti-tobacco mass media campaign

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Background: There is strong empirical evidence supporting the use of anti-tobacco mass media campaigns to reduce smoking prevalence. In response to this evidence, the South Australian Government deliberately made a substantial investment in anti-tobacco social marketing campaigns (700 Television Audience Rating Points (TARPs) per month). Budget cuts saw this investment terminated in July 2013, after a three-year period of intense television advertising. This study reports on the process of using data in evidence-based policy advice that resulted in the reinstatement of the anti-tobacco mass media campaign.

Design/Methods: Smoking prevalence data were collected via face-to-face interviews in annual cross-sectional representative population surveys of South Australians aged ≥ 15 years from 2010 to 2013. Interviews were conducted between September and December each year and each survey had a sample size of approximately 3,000 respondents. South Australian Quitline calls were also monitored from July 2010 to June 2014.

Results: The following smoking behaviour data were used by Non-Government Organisations (NGOs) to advocate for the reinstatement of anti-tobacco mass media campaigns: During the three-year high intensity anti-tobacco mass media campaign, annual smoking prevalence significantly declined from 20.5% (2010) to 16.7% (2012), and following the termination of mass media advertising, annual smoking prevalence significantly increased to 19.4% (2013). There was a corresponding statistically significant decline in the proportion of smokers who saw the dangers of smoking advertising 'very often' from 2012 (70.3%) to 2013 (63.9%). The average number of Quitline calls per week during the advertising period (i.e. July 2010 to June

2013) was 170. In the following year, with zero advertising, the average number of calls dropped to 98, a 43% decline in average weekly calls.

Conclusion: Terminating the social marketing campaign coincided with increases in smoking rates and the decrease in Quitline calls in South Australia. Through good tobacco control monitoring systems, and mature relationships between researchers, policy makers and NGOs, evidence-based policy advice was effective in reinstating the anti-tobacco mass media campaign in South Australia from July 2014, even in a climate of budget cuts.

PD-1206-21 Supporting passage and implementation of tobacco control legislation in Vietnam through mass media: educating, motivating, and mobilising public engagement

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Background and challenges to implementation: In Vietnam, around half of adult males currently smoke, while two-thirds of non-smokers report exposure to SHS in the home and around a half report SHS exposure in the workplace. Mass media tobacco control campaigns can contribute to increasing knowledge about tobacco-related harms, influencing attitudes, reducing social acceptability of smoking, and motivating behavior change. Importantly, mass media campaigns can also play a significant role in building support for effective tobacco control policies.

Intervention or response: Vietnam ratified the FCTC in 2004 and in June 2012, the National Assembly of Vietnam passed the country's first comprehensive tobacco control legislation, framed in line with the FCTC. The lead-up to this landmark public health achievement in Vietnam involved a large-scale, coordinated approach by government and by local and international NGOs. As part of these efforts, World Lung Foundation has worked with the Vietnam Steering Committee on Smoking and Health (VINA-

COSH) to develop and implement five phases of national mass media campaigns to educate about the harms associated with tobacco smoking and SHS exposure, and to build support for passage and implementation of the comprehensive tobacco control law. The first two campaign phases, in December 2010-January 2011 and November-December 2011, were primarily national television campaigns. The third phase, directly leading up to the National Assembly vote on the tobacco control legislation, also incorporated 'new media' channels (SMS, website, Facebook) to actively mobilize the public for passage of the law, with the strong support of the Vietnam Youth Union. Phase four in 2013 continued with mass media public education on national television as well as digital media, to focus on implementation of smoke-free components of the law. Phase five in 2014 had the additional focus of amplifying new pictorial health warnings, which were introduced on all cigarette packs by February 2014.

Results and lessons learnt: Each of the campaign phases has demonstrated high target population reach (56% to 70% prompted recall), increased knowledge, and raised concerns about harms from smoking and the risks from SHS exposure, particularly for children.

Conclusions and key recommendations: Tobacco control campaigns incorporating mass media and social media strategies can play a critical role in supporting passage and implementation of tobacco control policies.

PD-1207-21 Using cinema rooms for the fulfillment of Article 12 of WHO FCTC in Brazil

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Background: The tobacco industry uses the media to promote concepts, market their product and circumvent local and international restrictions for their benefit, which led to their inclusion in the Article 13 of the WHO Framework Convention on Tobacco Control (FCTC), which consists in banning advertising, promotion and sponsorship of tobacco products. With the increasing regulation of promotion on their products in traditional media, the industry evolved its marketing, approaching stakeholders and consumers in many ways. According to the theories of Jean Baudry (1970), when a viewer watches a movie in the theater, he creates a strong emotional bond towards the characters of the film, and its plots. Therefore, this media should be valued as an educational resource for consumers

Methods: An analysis on the use of this strategy by the Brazilian film industry, using the keywords health, cinema and tobacco control in Brazil, in the LILACS database was performed. Then we used these same terms to look for information on gray literature and base PUBMED, to identify the potential impact of Short Films and examples of countries that implemented these measures.

Results: In Brazil, more than 140 million people went to the movies in 2012, twice the volume of spectators compared to 2001, and is a path that the tobacco industry has used for many years to reach consumers. We didn't find examples of movie theaters being used in the country, to publicize the consequences of smoking. Internationally, we identify some examples of audiovisual contents used against tobacco, such as the movie, "Smoking Kid, in Thailand, and the "Truth" campaign, in U.S.A.

Conclusion: This study shows the need for greater dialogue with film distributors, companies looking for space and introduction of this type of information in cinemas of Brazil, and the need of measures to exhibit short films in between "trailers" and movie sessions, by producers and distributors. In contrast to the strategies of the industry, the film should be used to give messages against tobacco use, in accordance with Article 12 of the WHO FCTC. Keywords: Health, Cinema, Tobacco control

PD-1208-21 Tobacco advertising/promotions and adolescents smoking risk in low- and middle- income countries

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Background: Comprehensive tobacco advertising/promotion bans are effective against adolescent smoking in high-income countries; however, many low- and middle-income countries lag behind. The study utilizes a case-study approach of adolescents in West Africa to examine the association of advertising/promotions exposure with cigarette smoking risk, and possible mediation of this association by parent or peer smoking.

Design/Methods: Adolescents' (n=35315) tobacco use data in nine West African countries (Cape Verde, Cote d'Ivoire, Ghana, Guinea, Mali, Mauritania, Niger, Senegal and Togo) were obtained using Global Youth Tobacco Surveys. Smoking risk outcomes included current smoking and susceptibility, while advertising/promotion exposures included media and in-person contacts. Weighted logistic regression models were used to estimate the association of advertising/promotion exposures with adolescents' current smoking and susceptibility, respectively adjusting for potential confounders. Sobel test was used to test for mediation of parental and peer smoking on the association.

Results: Current smoking prevalence ranged from 4.7% (Ghana) to 23.6% (Cote d'Ivoire) among boys, and 0.8% (Niger) to 8.6% (Mauritania) among girls. Susceptibility ranged from 6.6% (Togo) to 22.5 (Senegal) among boys, and 5.2 (Cote d'Ivoire) to 18.8 (Senegal) among girls. Approximately 42% and 15% of adolescents reported exposure to advertising/promotions by media and in-person

contact. Compared to adolescents not exposed to advertising/promotion, those exposed to advertising/promotion had increased odds of smoking (adjusted odds ratio [aOR]: 2.10, 95% confidence interval [CI]: 1.16-2.74) and susceptibility (aOR:1.60 95% CI:1.25-2.05), respectively. Parental and peer smoking mediated these associations ($P < 0.05$).

Conclusion: Study findings support ongoing efforts in developing and implementing comprehensive tobacco advertising/promotion bans consistent with the Article 13 of the WHO Framework Convention on Tobacco Control.

PD-1209-21 The Game Changers: alerting journalists to research reports as a strategy for increasing news media coverage of tobacco and health in India

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Background and challenges to implementation: The news media is recognized as among the world's most influential and powerful elements. They are irreplaceable as a mechanism for turning a problem into a solution. Tobacco control advocates now recognize the value of influencing news coverage of tobacco; news coverage influences attitudes and behavior as well as policy progression. Understanding the need of the hour to use media tools in a way that results into policy action; several interesting strategies are often put into play. Our data represent the first systematic comparison of press coverage of tobacco issues. Strategies for increasing news coverage of health issues, and thereby contributing to policy advocacy, are well recognized, yet under-explored in health promotion research. The media in general and even health correspondents and reporters in particular consider tobacco control to be a minor health issue and not as a serious initiative which deserves more attention in the media. A large part of the electronic and print media does not give front page/breaking news coverage to tobacco control news and developments. Hardly any news on this issue makes it to page 1 as compared to the corporate sector, which often makes headlines on trivial issues. Shifting priorities of media houses which receive huge amounts of revenue through tobacco company advertisements is another area of concern. A constant challenge faced is keeping the media's interest sustained over a long period of time.

Intervention or response: To increase news coverage on tobacco control by issuing media releases about research judged as newsworthy and important in contributing to tobacco control policy debates. Research reports selected for their potential newsworthiness were promoted in news releases and their news 'hit rates' in National Capital of India – New Delhi.

Results and lessons learnt: A total of 1500 media stories were generated from January 2013 to June 2014 as a result of VHAI media advocacy on the following tobacco control issues like pictorial health warning, TAPS, tax, smoke free, smokeless tobacco and tobacco industry interference.

Conclusions and key recommendations: News reportage of tobacco control and other public health issues can be increased significantly by the strategic use of news releases alerting journalists to research reports that embody recognizable news values. This is an inexpensive strategy with great potential to advance public health objectives.

PD-1210-21 Delivery of a tobacco awareness campaign through school-based prevention programmes

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Background: Approximately 80 percent of young children in Indonesia are exposed to secondhand smoke in public places. Moreover, more than 60 percent of children are suffered from the smoke at home. Second-hand smoke causes major health problems in children. Regarding these issues, tobacco awareness campaign held to educate young children to be the advocate to prevent and control tobacco use through school-based prevention programs. Schools provide the ultimate learning process for children, and school-based prevention programs have been evaluated as an effective method for children.

Intervention: The tobacco campaign activities held in Pembangunan Jaya Primary School, Jakarta. The purpose of this campaign is to create tobacco-free youth ambassador who can take a leading role to promote smoke-free environment. Over 600 students joined these actions. The activities such as, demonstration of the dangers of cigarette smoke using a giant cigarette model, drawing smoke-free signage competition, watching a short movie about the danger of smoking and learning about the consequences being around smokers. The students are also practiced to handle peer pressure, hence their decision making to have a healthy lifestyle enhanced.

Results: To commend the student's effort on building smoke-free culture, a declaration of "Tobacco-free Youth Ambassador" ceremony was held in hall of the school, attended by the parents and local media. The school is committed to support the sustainability of this program, including establishment of smoke-free regulation and support the smoking cessation effort to all school staff and students who use tobacco.

Conclusion: School-based prevention programs to prevent tobacco use are effectively creating the awareness of smoking hazards and also the consequences of being secondhand smoke. Highest effectiveness to prevent tobacco use will be achieved by the commitment of the school community to implement and sustain the programs.

PD-1211-21 The Unplugged smoking prevention programme in Poland: justification for the introduction of school-based biomarker testing for tobacco use among teenagers in schools

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Background: In Poland, it is estimated that about 20% of the population had a smoke the first cigarette in the sixth year of life. New preventive approach, gradually introduced by the school includes exercise behavior aimed at strengthening attitudes and learn teenagers assertive refusal. The main objective of the Unplugged program is tobacco smoking prevention among school teenagers by equipping young people in knowledge of the health consequences and the skills they need to resist social influences.

Design/Methods: The authors proposed evaluation of tobacco smoking among teenagers from Polish schools - about 4100 participants. The study protocol was approved by the Bioethical Commission No. 1085-1012, at the Poznan University of Medical Sciences at December 6, 2012.

After obtaining the approval of students, parents and school management, they were asked to fill out a author's questionnaire. The saliva samples were collected in an amount approximately 2 ml to the Salivette Sarstedt tubes. Cotinine in saliva was determined by high performance liquid chromatography with diode array detection (HPLC-DAD). The chromatographic analysis of test compounds in saliva was preceded by solid phase extraction (SPE).

Results: In tested samples the mean concentration of cotinine was 39.35 ng/ml of saliva. The results indicate that 11.1% of teenagers were smokers, and 88.9% were non-smokers (less than 10 ng of cotinine /ml).

Conclusion: Applied method high performance liquid chromatography with diode array - HPLC-DAD allows to determine the concentration of cotinine levels in smokers saliva. Saliva is a good, non-invasively, biological material, which can be used to determine the concentration of cotinine - the main metabolite of nicotine. In summary - almost 15% of the teenagers have hidden the fact that they are smokers in the survey. The determined levels of cotinine in students' saliva should be the basis for the prevention programs introduction in the field of smoking among teenagers.

PD-1212-21 The national profile and media habits of Saudi cigarette smokers

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Background: Understanding smoker profiles and habits is a crucial step in designing tobacco tobacco campaigns.

The aim of this study was to draw a profile, and study the media habits for cigarette smokers in Saudi Arabia

Design/methods: using the Target Group Index(TGI) sample , a household survey was conducted in 21 cities in Saudi Arabia. A sample of 7003 individuals aged 15 years or more, male and females, living in town and cities, were randomly selected using the multistage sampling technique. One individual per household was interviewed using a structured questionnaire covering socio-economic profile, media exposure, and cigarette consumer information.

Results: females represented 6% of the smokers in our sample. Smokers,7.2% smoked on average< 5 cigarettes per day,21.4% smoked 5-10 cigarettes/day,43.3% smoked 11-20 cigarettes/day,23.3% smoked 21-40 cigarettes/day,and 4.8% smoked >40 cigarettes/day.The percentage of light smokers (<10 cigarettes/day) was higher in females (52%) compared with males (27%), p=0.0001.Out of 1236 respondents,69.4% smoked regular flavored cigarettes,27.3% smoked light cigarette, and only 3.3% were using the ultra-light cigarette. Marlboro is the leading brand of cigarettes in Saudi Arabia at 52.4%, followed by LandM and Carlton. Out of the 1376 smokers, 303 (22%) tried to quit smoking but failed. Out of the 5627 current non-smokers, 52 (1%), were ex-smokers.Of the current smokers, 98% watched TV daily.The MBC,Al-Jazeera, Al-Arabia,were the top channels watched by the smokers. For radio, Quran (29%) was the favorite for the smokers, followed by MBC (15.4%), Saudi radio (11%). (Elsharg Alawsat) is the most common newspaper read by smokers (26%) ,followed by Okaz (24%). Health and medical news are at the seventh level of attention for smokers.

Conclusion: Our study shows that regarding the cigarette smoker profile in Saudi Arabia, a smoker is usually a middle class, middle aged male, living in Riyadh and Jeddah, smoking 10-20 regular flavored cigarettes per day. He watches TV daily. He usually notices the advertisements.

PD-1213-21 Exposure of teenagers to anti-Tobacco awareness: a cross-sectional study in schools of Sousse Tunisia

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Background and challenges to implementation: Nowadays, Tobacco use became a real social scourge. It threatens all ages even youth who have become a target of the tobacco industry. Objective: Evaluation of the exposure to anti-tobacco awareness among the schoolchildren of the area of Sousse Tunisia.

Intervention or response: We conducted a cross-sectional study in 15 schools of the three delegations of Sousse. We used a stratified and proportional sample of schoolchildren from 7th and 9th grade. For data collection the participants responded to a self-administered questionnaire written in Arabic and pre-tested in the presence of trained medical doctors. We collected socio-demographic data,

information about tobacco habits and about the anti-tobacco awareness.

Results and lessons learnt: We collected data from 4003 schoolchildren in 2010. Boys accounted for 48.3%. Almost the half of participants was in the 7th grade with 52.1%. The mean age was 13.3 ± 1.2 years. The mean age of the first cigarette was 10.6 ± 3.1 years. The global prevalence of tobacco use among schoolchildren was 6.2%. Otherwise it was 11.3% for boys and 1.5% for girls ($p < 10^{-3}$). In the 7th grade 4.2% were smokers versus 8.4% in the 9th grade ($p < 10^{-3}$). Comparing smokers to non-smokers, anti-tobacco sensitization was reported by 89.1% of smokers versus 92.5% of non-smokers ($p = 0.05$). Second hand smoking sensitization was reported by 63.6% of smokers versus 61% of non-smokers ($p = 0.6$). Sensitization messages were seen via television by 79.8% of smokers versus 85.3% of non-smokers ($p = 0.02$). It was a subject for Family discussion according to 70.3% of smokers versus 66.2% of non-smokers ($p = 0.19$). It was the topic of lessons presented to 58.8% of smokers versus 63.3% of non-smokers ($p = 0.15$). When it comes to advices, smokers reported that it was given by nurses in 4.5% of cases, teachers in 5.1% of cases, friends in 20.4% of cases and relatives in 14.4% of cases.

Conclusions and key recommendations: Anti-tobacco awareness could have a significant impact on schoolchildren's tobacco use. For this a closer collaboration between the family, the society, the educational institutions and the government could be more efficient for tobacco control and prevention.

PD-1214-21 Training healthcare professionals: building capacity online for key groups and encouraging completion

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Background: The online training "Global Tobacco Control: Learning from the Experts" (LFE) was created to build tobacco control capacity. Feedback on the length of the course (31.5 hours), low completion rate (13%), and requests for profession-specific lectures led to the development of a second training—"Learning from the Experts: A Course for Healthcare Professionals" (HCP) (http://hp.globaltobaccocontrol.org/online_training). This study assesses the characteristics of participants and the success of the course to date.

Design/Methods: HCP is a free, 2.5-hour course available in 8 languages. At enrollment, participants indicate their country, type of organization, job title and language of instruction, among other characteristics. An optional survey at the end of the course assesses participants' experience on a 4-point scale.

Results: The course launched in August 2013. In the first 11-month period, 1048 users (102 countries) started the course; 595 users (73 countries) completed the course—a 57% completion rate, compared with 3% in same pe-

riod for LFE, a common level of completion for other online courses. Top 7 countries enrolled included: India (29%); Brazil (11%); Pakistan (8.7%); U.S. (6.7%); Spain (3.4%); China (2.4%); and Taiwan (2.4%). 78.2% of participants took the course in English, followed by Portuguese (9.2%), Spanish (7.7%), Russian (1.8%), Chinese (1.2%), French (1%), Arabic (0.7%) and Vietnamese (0.1%). Most enrollees belonged to academic (25.9%); governmental (25.6%); hospital/ clinic (23.5%) and non-governmental (13.7%) organisations. Participants identified as dentists (9%); doctors (3.8%); health professional students (14.3%); pharmacists (2.8%) and nurses (1.3%). 95 participants evaluated the training. Ratings were high: overall rating: 3.78; valuable experience: 3.77; course helps address patient tobacco use: 3.73; participant expects to use info: 3.84; participant will refer module to colleagues: 3.85. Concerns include maintaining participation and completion rate, underutilization of certain languages, and lack of interactivity.

Conclusion: Targeting healthcare professionals and creating a shorter course resulted in significant reach of the training, providing health professionals with the knowledge to advocate for tobacco control. However, more needs to be done to expand uptake among all healthcare professions.

PD-1215-21 Tips from former smokers: a hard-hitting campaign that continues to motivate millions to quit

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Background and challenges to implementation: In 2012, the U.S. Centers for Disease Control and Prevention (CDC) launched the first federally-funded, national tobacco education campaign to encourage smokers to quit. A graphic and emotional approach was chosen, featuring stories of real former smokers who quit after suffering serious health consequences. As a result of the campaign, an estimated 1.6 million smokers tried to quit with 100,000 expected to quit for good. The campaign continued in 2013 and 2014 with new ads featuring additional stories and health conditions. Campaign results continued to be strong. Challenges included refining approaches in the media buy to effectively reach the target audience and keeping interest in the campaign year after year.

Intervention or response: To increase 2014 Tips' impact, new elements were employed:

- 1) refocusing the media buy to reach low socio-economic (SES) audiences
- 2) broadening physician outreach to include more health care providers (HCPs) including dentists, nurses, pharmacists;
- 3) outreach to faith communities;
- 4) highlighting of new health conditions caused by smoking, such as pre-term birth, complications of smoking with HIV, and gum disease/tooth loss.

Results and lessons learnt: The low SES media buy included placements in gas stations, bus shelters and neighborhood convenience stores, reaching additional low SES smokers. The expanded healthcare provider outreach resulted in 6 new HCP partnerships, reaching an estimated 20 million HCP patients with messages and materials. Outreach to faith communities through 8 organizations will potentially reach 20 million people with Tips messages. Focusing on new health conditions resulted in pro bono magazine ads in HIV and maternal health magazines and homepage ad placement on aahivm.org and pharmacist.com. Learnings: campaigns can efficiently reach and influence smokers through placing messages in their neighborhoods, reaching out to faith communities and healthcare providers, and educating on an array of smoking-related health conditions.

Conclusions and key recommendations: Initial results from Tips 2014 indicate the campaign remains relevant to smokers. Learnings are very applicable to other countries, given that in most countries media placements can be tailored, faith leaders and healthcare providers want to help people improve their health, and smokers appreciate learning about health consequences of smoking and can be motivated to change as a result.

PD-1216-21 Warning about the harms of tobacco in 22 countries: Global Adult Tobacco Survey, 2008-2013

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Background: Knowledge about the harms of tobacco use deters initiation and is associated with cessation. Most studies on this knowledge in the general population have been conducted in high-income countries, but the tobacco

burden is increasingly in low- and middle-income countries. We sought to estimate levels of knowledge about tobacco-related diseases in 22 countries, and determine the factors associated with differences in knowledge.

Design/Methods: We used data from the Global Adult Tobacco Survey (GATS), a nationally representative household survey of persons ≥ 15 years. We analyzed data from standardized, in-person GATS surveys conducted between 2008-2013 in 22 countries from all 6 World Health Organization regions (Argentina, Bangladesh, Brazil, China, Egypt, Greece, India, Indonesia, Malaysia, Mexico, Nigeria, Panama, Philippines, Poland, Qatar, Romania, Russia, Thailand, Turkey, Ukraine, Uruguay, and Viet Nam). Information was gathered on demographics, tobacco use, tobacco-related knowledge, and exposure to anti-smoking mass media messages and health warning labels on cigarette packages. We constructed a knowledge scale based on four questions and performed multivariate regression analyses.

Results: Median country values for the proportion of adults who believed smoking causes a specific illness were 95.9% for lung cancer, 82.5% for heart attack, and 74.0% for stroke. Knowledge scores ranged from 2.1 (China) to 3.8 (Egypt). In multivariate regressions, demographic factors generally had small effects on knowledge, with former smokers and never smokers having significantly greater knowledge compared to current smokers (19 countries). Adults scored significantly higher on the knowledge scale if they noticed anti-smoking media messages (22 countries) or health warning labels (17 countries).

Conclusion: Anti-smoking media messages appear effective for warning the public in all 22 countries about the harms of tobacco use, while health warning labels are effective in the majority of these countries. Our findings suggest opportunities to enhance information about the harms of tobacco within the MPOWER strategies, which are urgently needed to prevent tobacco initiation and promote cessation so to reduce the burden of non-communicable diseases.

54. TOBACCO CONTROL AND NCDs: CONNECTING THE DOTS?

PD-1217-21 Sex-stratified and age-adjusted social gradients regarding tobacco use in Argentina and Uruguay: evidence from the Global Adult Tobacco Survey (GATS)

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Background: Uruguay is now regarded as being at the forefront of tobacco control policy and Argentina although has not ratified the FCTC, has passed comprehensive anti-tobacco legislation at the national level, supplementing previously existing local legislation in many areas of the country. Argentina and Uruguay are known to currently have similar prevalence of tobacco consumption among adults (22.1% and 25.0%, respectively) but recent analyses emphasized that the social patterning of smoking can vary significantly from country to country and between groups of low- and middle-income countries. The aim of this study is to examine social gradients in tobacco

use in Argentina and Uruguay, using newly available directly comparable datasets.

Design/Methods: Secondary analysis of Global Adult Tobacco Survey data from Argentina (N = 6,645) and Uruguay (N = 5,581). Social gradients in current tobacco use, exposure to second-hand smoke, and cessation attempt were examined with sex-stratified and age-adjusted logistic regression.

Results: Among males, there is evidence of higher odds of being a current smoker among respondents with lower levels of education, but the association is only significant for respondents with less than primary education in Uruguay (OR = 2.15, 95% CI = 1.22 – 3.77). Similarly, women with lower levels of education have higher odds of being a current smoker in Uruguay. The association between education and exposure to second-hand smoke is broadly similar for both sexes in both countries, with generally higher odds among groups with low education, though the relationship is only significant among males in Uruguay (OR = 1.77, 95% CI = 1.08 – 2.92). In both countries, respondents with lower levels of education in general have higher odds of having attempted to quit smoking in the past year, although these associations did not attain significance.

Conclusion: Social gradients in tobacco use, exposure to second-hand smoke, and cessation attempts are broadly similar in both countries. Efforts to evaluate the long-term effects of tobacco control efforts in these countries should monitor how policies affect not only national averages, but also the social gradients that are embedded in aggregate data.

PD-1218-21 Characteristics of tobacco cessation in Argentina: findings from the Global Adult Tobacco Survey

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Background: In Argentina in 2009, 43.5% of smokers aged 18 and older had made a quit attempt in the previous year and 84.4% planned to do so in the future. GATS Argentina, not only revealed trends in the cessation indicators, it also contributed to an unprecedented level of understanding of this issue in the country. The objective was to describe tobacco cessation characteristics in Argentina

Design/Methods: In the context of the Global Adults Tobacco Survey implementation in Argentina in 2012, tobacco cessation characteristics were analyzed. We included questions about the length of time respondents had refrained from smoking, the methods used to quit among who had quit last year, whether any health care provider had advised them to quit smoking, and their interest in quitting in the next 12 months.

Results: A total of 48.6% of smokers and former smokers had made a quit attempt in the previous 12 months. The highest levels of quit attempts were observed in the age group of 65 years and older (59.9%). 51.5% of those who had made a quit attempt in the past year had quit for 1 to 3 months and 27.9% had quit for 11 months. Overall, 89.9% of smokers and former smokers who reported that they had made a quit attempt in the past 12 months, had done so without assistance. The rate of use of other cessation aids was very low and pharmacotherapy was the second most common method used (4.1%). Among those who had consulted with a health care provider in the past 12 months, 80.1% had been asked whether they smoked tobacco, but only 60.5% had been advised to quit smoking.

Conclusion: Despite the available cessation services, most quit attempts were made without support from the health care system. Women had managed to stop smoking for the longest periods of time. A gap between health care professionals identifying smokers and actually counseling them to quit smoking was observed.

PD-1219-21 Smoking prevalence and associated factors in a tobacco farming rural area of Dom Feliciano, Brazil

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Background: Although smoking prevalence in Brazil has been reduced over the years, the country is still the second largest producer of tobacco in the world. Dom Feliciano city, localized in the South region of Brazil, is responsible for more than 80% of tobacco production.

Objective: Estimate the smoking prevalence and associated factors in a tobacco farming rural area.

Design / Methods: A survey with 869 Dom Feliciano's residents aged above 18 years old was conducted in 2012. The criteria adopted to calculate the sample size were green tobacco sickness prevalence of 18.4% (Accury, 2008) and a 5% confidence level. It was also used a stratified random sample by gender and micro regions. In order to identify the prevalence of tobacco consumption and associated factors it was employed a tested questionnaire. Qui-square test and Exact Fisher Test were used in statistical analyses.

Results: It was identified a smoking prevalence of 29.3%. Smoking prevalence was statistically different among genders (men: 40.3%; women: 18.3%; p-value < 0.001). For both, daily cigarette consumption reached until twenty per day (89.8%). Rolled cigarette was the most common type of cigarette smoked among males (73.7%) as well as females (67.7%). The majority of the population analyzed work or used to work at tobacco farming (82.3%). Seventy seven per cent have been worked in tobacco cultures for more than ten years. All of them tried to stop working in tobacco culture at least once in their lives.

Conclusion: We observed that smoking prevalence at Dom Feliciano was higher than the national prevalence. These results suggest that we should investigate the social determinants of tobacco consumption in tobacco farming rural areas.

PD-1220-21 Willingness to quit: a major determinant of treatment uptake in treatment-seeking smokers

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Background and challenges to implementation: Instead of being universal, the willingness-to-quit (WTQ) is more likely to differ among attempted smokers who seek treatment. Up to date, studies rarely examine smoker's WTQ and its effect on cessation outcome in real world practice. This study addressed two questions of interest: to understand the extent to which the level of WTQ varies among treatment-seeking smokers, as well as its possible impact on the uptake of treatment by smokers.

Characteristics	All (n=114)	Willingness to Quit		P value
		Low (n=33)	High (n=81)	
Willingness to Quit (SD)	4.0 (1.0)	2.6 (0.7)	4.6 (0.5)	
Sex				
Male	96 (84.2)	22 (66.7)	74 (91.4)	0.001
Age on enrollment				
Averaged age (SD)	49.6 (12.2)	50.8 (13.4)	49.2 (11.8)	0.5324
Subjects aged 18-50 y/o	58 (50.9)	15 (45.5)	43 (53.1)	0.4598
Duration of smoking				
Averaged in years (SD)	28.1 (12.0)	28.8 (10.7)	27.8 (12.6)	0.6789
1-10 years	9 (7.9)	1 (3.0)	8 (9.9)	0.5343
11-20 years	28 (24.6)	7 (21.2)	21 (26.0)	
21-30 years	41 (36.0)	14 (42.4)	27 (33.3)	
≥31 years	36 (31.6)	11 (33.3)	25 (30.9)	
FTND score (0-10)				
Averaged score (SD)	6.6 (2.2)	6.5 (2.3)	6.7 (2.1)	0.8098
Level of nicotine dependence				
Mild to moderate (FTND score 0-5)	35 (30.7)	11 (33.3)	24 (29.6)	0.825
High (FTND score 6-7)	57 (50.0)	15 (45.5)	42 (51.9)	
Extremely high (FTND score ≥8)	22 (19.3)	7 (21.2)	15 (18.5)	
Heaviness of smoking index (0-6)				
Averaged score (SD)	4.2 (1.5)	4.2 (1.6)	4.2 (1.5)	0.9601
Mild (score 0-2)	18 (15.8)	6 (18.2)	12 (14.9)	0.8788
Moderate (score 3-4)	41 (36.0)	11 (33.3)	30 (37.0)	
Severe (score 5-6)	55 (48.2)	16 (48.5)	39 (48.1)	
Expired CO concentration on enrollment				
Averaged value in ppm (SD)	10.4 (5.9)	8.8 (5.1)	11.1 (6.0)	0.0623
Previous quit attempts				
Yes	55 (50.9)	16 (51.6)	39 (50.7)	0.9278
Comorbidity				
Yes	62 (54.4)	20 (60.6)	42 (51.9)	0.3947
Type of pharmacotherapy used				
Nicotine replacement therapy only	27 (23.7)	10 (30.3)	17 (21.0)	0.5443
Varenicline only	70 (61.4)	18 (54.6)	52 (64.2)	
Others *	17 (14.9)	5 (15.2)	12 (14.8)	
Subjects with second course of SCT service				
Yes	12 (10.5)	3 (9.1)	9 (11.1)	0.2577
Hospital of enrollment				
Taipei VGH	71 (62.3)	20 (60.6)	51 (63.0)	0.8138
Duration of drugs dispensed				
≥6 weeks	51 (44.7%)	9 (27.3)	42 (51.9)	0.0167

* Including subjects who changed medicines during treatment course and received combined therapy with two NRTs or bupropion + NRT.

Intervention or response: We recruited 114 smokers receiving Taiwan Cessation Treatment Service at two hospital-based outpatient clinics in Taipei from Jan to Sep 2013. All subjects reported their WTQ based on a 5-point Likert scale and completed a questionnaire in the first session of visit. Subjects with scale ≥ 4 were categorized as "high WTQ", and those ≤ 3 as "Low WTQ". Then, they had weekly or biweekly face-to-face follow up for a period of 8 weeks, and were allowed to extend the period to 16 weeks if necessary. The primary outcome was the proportion

of subjects who dispensed at least 6 weeks of prescribed pharmacotherapy. The variable of interest was the subject's category of WTQ. The controlled variables including demographics, smoking characteristics and treatment context. Logistic regression was used for analysis.

Results and lessons learnt: Of 114 subjects, 81 (71.1%) were "High WTQ" and 33 (28.9%) "Low WTQ. Male predominated in High WTQ (91.4% vs. 66.7%; $p=0.001$). There was no significant difference between WTQ groups for the other variables. The proportion of subjects who dispensed ≥ 6 weeks of pharmacotherapy significantly differed between WTQ groups (High vs. Low: 51.9% vs. 27.3%; $p=0.0167$). Logistic regression showed High WTQ group had greater likelihood to dispense more drugs than their counterpart (OR=6.23, 95% CI: 2.04-18.96; $p=0.0013$). Subject receiving treatment at an affiliated community hospital correlated with higher proportion of dispensing 6-week medications (OR=4.42, 95% CI: 1.75-11.11; $p=0.0016$).

Conclusions and key recommendations: This study illustrated the diverse level of willingness to quit in treatment-seeking smokers, which in turn impacted the treatment in way that High WTQ group dispensed longer duration of drugs for abstinence. Understanding the diverse WTQ and identifying those with low WTQ must be treated as important issues to provide effective cessation treatment.

PD-1221-21 Tobacco control awareness among future health professionals in India

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Introduction: Tobacco use by health profession students and even qualified health professionals reflect the failure of health care system in protecting not only the people utilizing the service but also the health care provider. While they are regarded as role models in tobacco cessation programs, their tobacco addiction will carry a negative impact in this endeavour. Even a brief inquiry about smoking status of a patient and a simple advice by health professionals may substantially increase the rate of cessation among patients. Purpose of this paper is to describe the role and issue of involvement of health professionals in tobacco control using data from Global health professional student survey (GHPSS), and Global Adult Tobacco Survey (GATS) India.

Methods: The GHPSS, India has been conducted among third year students attending medical and dental (2009), nursing (2007) and pharmacy (2008) schools during regular class session. GHPSS follow an anonymous, self-administered format for data collection.

Results: Cigarette smoking and other tobacco use ranges from 3.4-13.4% and 4.5-11.6% respectively in the four health professional schools with highest number in medical schools and male. Enforcement of smoking ban in medical school was low (53%) compared to nursing (86.4%) pharmacy (85.5%) and dental (90.8%) schools. Ninety percent student thought health professionals have role in giving smoking cessation advice to their patients. Three out of five current smokers wanted to quit. However one out of two reported receiving advice to quit. Although all expressed the need, 29.1-54.8% students received cessation training in their schools. Data from GATS India saw that among smokers and users of smokeless tobacco visited the health care provider, 46.3% of smokers and 26.7% of users of smokeless tobacco were advised to quit by health care provider.

Conclusion: Tobacco use is high among health professionals of India. They are willing to provide smoking cessation counseling but lack training. The Ministry of health, Public health Organization and Ministry of education should work together for developing, testing and implementing successful patient counseling training programs for health professionals.

PD-1222-21 Tobacco control and NCDs: connecting the dots

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Background information: The objective of this initiative was to identify and connect the linkages between vertical programmes for the control of diseases by engaging media, health experts, partner organisations and government officials, and to promote adoption of healthy lifestyle among youth by conducting orientation workshops.

Design/Method: CNS started a 'Vote For Health' campaign in collaboration and partnership with individuals, organizations and government agencies to do advocacy on the objectives of the campaign. This is being done through a series of interrelated activities like: Documenting voices of the affected community people, health experts and government officials; engaging journalists of English and vernacular languages newspapers by organizing 'Media Dialogues' on specific health related issues; filing applications under Right To Information (RTI) Act 2005 to seek information regarding collaborative activities of different vertical programmes; organizing regular school based interactive programmes on changing life style and substance abuse; and conducting week long Rights and Responsibilities Training Camp every year for fostering youth leadership in tobacco control.

Results: In the last two years, we have organised more than 40 media dialogues on health issues, which generated more than 400 news coverage in print and online media in vernacular and English languages. A recent RTI

application (filed by a trainee correspondent of CNS) response received from Ministry of Health and Family Welfare, revealed that the government of India has connected two very important but hitherto vertical programmes-- National Tobacco Control Programme (NTCP) and National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS). Under the new directive, the state/district nodal officer for tobacco control is also the nodal officer for the state/district NPCSDS, to ensure collaborative activities on the ground. To date youth participants of our Rights and Responsibility Training camps have filed more than 100 RTI applications into different government departments.

Conclusion: It is critically important to address linkages between specific health and development issues. Unless we address structural drivers for public health and gender justice through these linkages, it will be impossible to have sustainable and significant positive health outcomes from single-health (or single-disease) vertical programmes.

PD-1223-21 Tobacco consumption and its association with NCDs in Ahmedabad: a cross-sectional study

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Background: Tobacco consumption is a serious public health problem in the South East Asia Region where use of both smoking and smokeless form of tobacco is widely prevalent. Tobacco consumption is one of the risk factor for Non communicable diseases (NCDs). Wide spread use of tobacco products might be responsible for high prevalence of non-communicable diseases in India. Present study was conducted to describe prevalence of different forms of tobacco products and association of tobacco consumption with NCDs.

Design/Methods: This study is part of diabetes prevalence study, a cross sectional community based study, in Ahmedabad. About 904 people of above 20 years of age from all the six zones of Ahmedabad city were selected by stratified random sampling according to population proportion to the respective zones. Information about socio-demographic profile, tobacco consumption, Anthropometry, Blood pressure measurement and other related detail was collected in predesigned and pretested proforma by house to house survey. FBS estimation was done after written informed consent. Qualitative and quantitative data was analyzed using appropriate statistical methods.

Results: Prevalence of smoking and smokeless tobacco was 7.5% and 14.7% respectively. Mean age of smokers and non-smokers was 51.62±14.5 and 43.7±15.8 years respectively ($Z=4.32$, $P<0.001$). Mean age of smokeless tobacco users and not users was 42.11±13.2 and 44.6±16.2 years respectively ($Z=1.96$, $P>0.05$). Proportion of male and female of smokers was 97.2% and 2.9% respectively while for smokeless tobacco users male and female proportion was 99.2% and 0.8% respectively. Prevalence of diabetes, hypertension and obesity was 13.8%, 25.3%

and 42.6% respectively among study population. Smoking is independently associated with age group, SE status, weight, Height and diabetes while not independently associated with hypertension, FBS level and BMI. Tobacco chewing is independently associated with hypertension and SE status while not independently associated with Diabetes, FBS level, age, weight and BMI.

Conclusion: Prevalence of tobacco consumption and NCDs is high in Ahmedabad. More research should be directed to explore the association between tobacco consumption and NCDs which may help in prevention and control of NCDs. Integration of tobacco control with broader population services in the health system framework is crucial to achieve control of NCDs.

PD-1224-21 Tobacco cessation through oral health care providers in Kenya

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Background: World Health Organization (WHO) Global Oral Health Program has identified the implementation of tobacco use prevention and cessation (TUPAC) counseling guidelines as one of the priority goals in dentistry. Involvement of dentists in this role activates a previously underutilized cadre of health workers in the campaign to reduce tobacco use in Kenya. This paper reports on an assessment of the current clinical practice of TUPAC among oral health care providers in Kenyan dental clinics.

Design/Methods: A descriptive cross sectional survey of undergraduate Bachelor of Dental Surgery and Community Oral Health students in the clinical years, post-graduate dental students, dental interns, dentists and community oral health officers was conducted in the 47 counties in Kenya. Knowledge, attitudes and behaviors of oral health care workers concerning TUPAC was assessed using a structured, pre-tested and self-administered questionnaire. Ethical clearance to conduct the study was obtained from Kenyatta National Hospital Ethics and Research Committee and all respondents were recruited on the basis of informed consent. Data was analysed using the Statistical Package for Social Scientists (SPSS) program, Version 20.0 (IBM Corporation, New York, USA).

Results: A total of 105 oral health care workers participated in the study. Dentists and community oral health care workers in both public and private health care facilities had high levels of knowledge, with the majority (>90%) relating tobacco use with increased risk of oral and systemic diseases and reporting willingness to participate in tobacco control efforts. Confidence to counsel tobacco users to quit was however generally low, with perceived barrier scores higher than 80% in all cadres. Oral health care workers in Kenya have limited exposure to TUPAC training, resulting in extremely low levels of efficacy in patient management for reduction or cessation of tobacco use.

Conclusion: Kenya, like most countries in sub-Saharan Africa has no policies for the integration of TUPAC in the

training of oral health care workers, resulting in poor participation in tobacco interventions. This study provides an evidence base to inform policies for training of oral health care providers in TUPAC counseling.

PD-1225-21 The situation of tobacco control in Kyrgyzstan: progress and gaps

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Background: The Kyrgyz Republic ratified the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) on 2 March 2006. The Convention entered into force for the Kyrgyz Republic on 23 August 2006.

Objectives: To study progress and gaps of the implementation of the WHO FCTC in Kyrgyzstan during eight years

Methods: Were analyzed key elements of tobacco control measures before and after ratification of the WHO FCTC by Kyrgyzstan and related with them the level of tobacco use prevalence during eight years

Results: The National Tobacco Control Law was adopted and entered into force at end of 2006. The key elements of National Tobacco Control Law were: increasing tobacco taxation; ban of tobacco advertising, promotion and sponsorship; protection from exposure to tobacco smoke; implementation pictorial health warnings etc. A new tax code was adopted on 17 October 2008. On 1 January 2009 the excise tax was increased by 30%. The new tax rates was adopted in 2011, with increases in rates set for 2012 and 2013 that are higher than projected inflation. The level of total tobacco taxation in Kyrgyzstan (excise and VAT of 12%) on cigarettes in 2012 ranged from around 10% of the maximum retail sales price for the most popular non-filter cigarette, to 33% on the same price of domestic filtered cigarettes and 21% on the simple average of the most popular imported cigarettes. The level of total tobacco taxation was increased to 17% of maximum retail sales price for most popular non-filter cigarettes in 2014, to 46% for the most popular domestic cigarette with filter and to 34% for the most popular Import cigarette with filter.

Conclusion: The Government will continue to increase excise taxes on tobacco and tobacco products up to 70% of the maximum retail sales price for cigarettes by 2020 on a regular basis to take inflation into account and ensure a real increase in price, in order to reduce tobacco consumption.

PD-1226-21 Strengthening health information systems for tobacco use among NCD patients attending public health institutions in Mauritius

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Background: The health information system (HIS) in Mauritius has a long tradition with a core set of indicators derived from a solid system of high quality data collection from different health service levels. However, there is no systematic collection, compilation, analysis and use of data related to tobacco use. It is essential that such data be made available to support the government's plan to set up smoking cessation clinics in public health care settings. The present study was conducted with the objective to assess and strengthen the present HIS regarding data collection, compilation and analysis on tobacco use by patients attending the Non-Communicable Disease (NCD) clinics in public health institutions.

Design/Methods: The assessment included an overview of HIS in Mauritius with reference to NCD, a SWOT analysis of existing tobacco use data management system in public health service and an examination of 200 case files of patients attending two NCD clinics in one of the five health regions of Mauritius. In light of the situation analysis, new tools and guidelines were developed and pilot tested for strengthening tobacco use data management.

Results: The situation analysis of the present HIS system has confirmed the inadequacy of information pertaining to tobacco use. Additionally, there is a strong need to review the existing data collection methodology including formulation of data management procedures and guidelines. Revised tools have been developed and used on a pilot basis in one health region of the island. The pilot exercise highlighted the potential of linking tobacco use data with morbidity and the importance of additional data to support smoking cessation service.

Conclusion: A strengthened HIS is mandatory to guide policy actions, mount effective interventions, particularly smoking cessation programme and carry out strong advocacy against tobacco.

PD-1227-21 Tobacco and the oral potentially malignant disorder screening program (PMD) in 6th Regional Health Service Network, Thailand

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Background: Dentists are involved in various areas of tobacco intervention such as tobacco cessation activities and prevention of tobacco induced oral lesions. Since tobacco consumption is considered a major risk factor of oral cancers, Thai Dentist against tobacco network has established a "Dental Clinics Help Smokers to Quit Smoking" project. Oral potentially malignant disorders (PMD) screening program was included in this project to prevent progression of tobacco induced oral lesions and risk of developing oral cancer. Aim of this study is to share experience in networking of screening program in eastern Thailand.

Design/Methods: The study was conducted from October 2012 to September 2013 in 535 dental care units in 5 provinces (population of 1,174,358) under responsibility of 6th Regional Health Service Network. Patients aged 40 years or more who visited these dental clinics were asked to participate. Risk factors such as smoking, drinking, betel chewing history and cancer history of their relatives were collected. Oral examination was performed by dentists, who then referred the patients with suspected oral lesion to secondary hospital that provide specialists to biopsy. Patients who were diagnosed with PMD were treated and followed up, while who were diagnosed with oral squamous cell carcinoma (OACC) were referred to tertiary hospitals for further treatment. For patients who have smoking history, dental staff provided advice for quitting smoking through a method of 3A or 5A.

Results: 55,065 patients were participated in this project. Fourteen PMD and eleven OSCC were found (five were stage I and II, six were stage III and IV). The occurrence rate of PMD and OSCC is 1.27:1. Rayong province has the highest rate of PMD (26.2 per 100,000 population aged 40 and over). The diagnoses of PMD and OSCC in this study reflect the successful integration of primary and secondary health care in early detection and prevention of oral cancer. Since the data collected from patients are separated among results of oral examinations and history of risk factors, it should be systemically collected for further use in term of a primary prevention.

Conclusion: Dental healthcare personnel should be aware of the opportunities within dental practice to prevent and control tobacco induced oral cancers such as smoking cessation and routine oral PMD screening. However, it is necessary to improve dentist's education about management of PMD by providing manuals or continuing courses.

55. ASSESSING THE HEALTH AND ECONOMIC IMPACTS

PD-1228-21 Characteristics of tobacco use in Argentina: Findings from the Global Adult Tobacco Survey

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Background: Tobacco use is responsible for 40,000 deaths annually in Argentina. Tobacco use has been monitored in a population based approach from 1999 in Argentina but never with the Global Adults Tobacco Survey (GATS) depth. The objective was to describe tobacco use characteristics in Argentina and monitor the prevalence evolution.

Design/Methods: In the context of the GATS implementation in Argentina in 2012, tobacco cessation characteristics were analyzed. We included questions on frequency of use (daily, occasionally, or never), the type of tobacco used (smoking or smokeless), and the type of smoked tobacco (manufactured cigarettes, hand-rolled cigarettes, pipes, cigars, or water pipes). Other questions included the age of initiation, the time to first cigarette after waking, and whether the person had quit smoking

Results: A total of 22.3% of respondents reported using tobacco, with a higher prevalence among men (29.6%) than women (15.7%). Of tobacco users, 22.1% were current smokers (99% smoked manufactured cigarettes) and 17.1% reported smoking on a daily basis. They smoked a daily average of 12.2 cigarettes (men smoked 13.1 and women 10.9 cigarettes) The average age they began to smoke daily was 16.2 years and no significant differences were observed based on gender, income level, or educational level. With regard to nicotine dependence, 6.9% of respondents reported smoking their first cigarette within 5 minutes of waking up. There was a higher dependence among men than women (7.4% vs. 6.1%), and in people over 65 years of age (10.6%)

Conclusion: GATS gave the opportunity to monitor tobacco use and showed a decrease of 700,000 people in Argentina, from the last population based survey in 2009. The vast majority smoked manufactured cigarettes on a daily basis.

PD-1229-21 Prevalence of smoking among physicians in Bangladesh

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Background: Despite the clear evidence of harmful effect of smoking on health and the leadership role taken by physicians to curb tobacco use, studies have shown that large number physicians still smoke. The present study

was conducted to determine the prevalence of smoking among physicians in Bangladesh. It also explores their attitude towards issues related to tobacco control.

Design/Methods: A cross sectional study was conducted among physicians working in 21 different tiers of hospitals selected from seven divisions of Bangladesh in 2013. One teaching hospital, one district hospital and one upazila (sub district) health complex from each of the seven divisions of Bangladesh were purposely selected for the survey. A self-administered questionnaire was sent to all physicians working in selected hospitals inquiring about their tobacco use habit and knowledge about current tobacco control strategies including tobacco cessation.

Results: Questionnaires were sent to 1975 physicians and 1580 (male 1232, female 348) physicians returned completed questionnaires with a response rate of 80.0%. The mean age of the respondent physicians was 34 years. Over all there were 29.2% ever smoker. Among them 23.9% were current smoker and 5.3% were ex-smoker. However, smoking differed sharply between male and female physicians. Among male 25.0% were daily smoker, 5.7% were less than daily smoker, 3.4% were ex-smoker who quit > 12 months ago, 3.2% were ex-smoker who quit ≤ 12 months ago and 62.7% were never smoker. Among female, there were no current smoker, only 0.3% was ex-smoker who quit > 12 months ago and rest were never smokers. Most of the smokers initiated smoking between the ages of 16 to 20 years either before entering medical college or at their early part of medical college study period. Current smoking rate among male respondents age ≤30 years, 31 to 40 years, 41 to 50 years and ≥50 years were 31.9%, 31.6%, 34.3% and 12.2% respectively. Among the respondents 91.9% were never trained in tobacco cessation.

Conclusion: Nearly one fourth male physicians of Bangladesh were current smoker. Most of them initiate smoking at early stage of medical education. Appropriate measures should be taken to prevent initiation of smoking at early stage of medical education. Tobacco related training and measures should be taken to train the physicians of Bangladesh.

PD-1230-21 The impact of tobacco growing in the livelihoods of female tobacco growers in a Brazilian Municipality

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Background: Tobacco is grown in 124 countries throughout the world. Agricultural household is the basis of tobacco farming. Tobacco cultivation affects negatively human

health, environment and social life. This study aimed to understand female tobacco growers' knowledge, attitudes and behavior related to impacts of tobacco growing on their livelihood, health and environment. Furthermore, it intended to look for reasons that hinder the transition to alternatives to tobacco crops.

Design/Methods: In this qualitative study, focus group methodology was used to data collection. Group discussions were held until saturation of new information was reached. DPSEEA (Driving forces-Pressure-State-Exposure-Effect-Action) framework was employed to systematize the result of discussions. In analysis process, some categories described tobacco growers' experiences and future expectations. Ethical approval was obtained from Ethics Committee of National School of Public Health of Oswaldo Cruz Foundation (Fiocruz).

Results: The study was conducted in a municipality of the South Region of Brazil in 2013, involving 71 participants that took part in six groups of discussion. Data saturation was reached by the sixth group. Outcomes showed the distinct role of women in tobacco growing activities, besides domestic affairs and family care. All groups highlighted the complexity of the problems, with concerns raised on: the heavy workload in tobacco farming; harmful health effects due to exposure to pesticides, solar radiation and nicotine on tobacco leaves; unfair working conditions and child labour; insufficient land area devoted to alternative crops and unstable markets to trade other products. They also pointed out issues related to the hegemony of the tobacco industry in tobacco growing areas, which increases the dependency of tobacco growers due to the integrated production system. The results allowed the construction of Framework DPSEEA, representing all existing relations of interdependence in the chain of tobacco farming.

Conclusions: This study highlighted that an integrated approach is necessary to address the problems of tobacco growers, considering a balance between farmers' beliefs and policy decisions by different sectors (such as health, economics and agriculture). This integrated approach, in line with recommendations of WHO Framework Convention on Tobacco Control, could result in strengthening policies and actions to promote health and local sustainable development.

PD-1231-21 Prevention of risk factors for chronic diseases through a protocol of comprehensive health care for tobacco growers

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Background: Brazil is the second largest producer and the main exporter of tobacco leaves in the world. Tobacco farming involves several health risks to growers, such as exposure to pesticides, solar radiation, and others. Acute

and chronic exposure to pesticide cause poisoning that can be either mild or severe, and can result in chronic neurological disorders and cancer. Likewise, green tobacco sickness is an outcome of exposure to wet tobacco leaves. Then, considering tobacco growers' profile of morbidity and mortality, the Center for Studies on Tobacco and Health (Cetab), of the National School of Public Health Sérgio Arouca, of Oswaldo Cruz Foundation (Fiocruz), developed an integrated health care protocol to assist populations in tobacco growing areas.

Design/Methods: The process of development and implementation of the health care protocol covers three stages: elaboration, negotiation and implementation. First stage, which is presented in this abstract, encompasses the process of elaboration of protocol. This guideline was developed considering a systematic review on health risks on tobacco farming; outcomes of a project research carried out in a tobacco growing area in Brazil, on beliefs, attitudes and practices of women in tobacco farming, and the principles and guidelines of the Brazilian Unified Health System (SUS).

Results: According to the results of interviews with focus groups, which indicated the multiplicity of health risks involved in tobacco growing, supported by evidence in the literature, the structure of the protocol was based on the peculiarities of the population and work activity. The protocol involves issues related to individual susceptibility, such as gender, age, comorbidities. Its structure covers clinical features, diagnostic methods, therapeutic conduct and follow-up recommendations to health effects of tobacco farming. Health surveillance and educational actions also are included in the guide. The document is grounded on the principles and guidelines of the SUS in order to ensure access of growers to public health services. **Conclusion:** Considering the issues of surveillance of the protocol, its adoption is an important step to ensure the implementation of the article 18 of WHO Framework Convention on Tobacco Control. But, due to the importance of tobacco farming to worldwide economy it continues to be necessary to provide health care to population exposed to risks in the productive chain of tobacco.

PD-1232-21 The Cuban cigarette market and the decision between tobacco or health

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Background: The market studies, at characterising consumption and its relation to price and commercialization of cigarettes, give elements to fundament proposals of public policies that contribute to the reduction of tabaquism and the welfare of population. The aim of this study was to describe the consumption of cigarettes in 2013, its association with the price and the forms of commercialization, the elasticity of demand, economic and social aspects, cigarettes market characterizes and market segmentation research.

Design/Methods: A descriptive and observational study was performed, using time series added data. The series of per capita consumption of the Cuban population aged 15 and over 1980 to 2013, the forms of commercialization, the average price, the elasticity of the demand, the price/consumption ratio, as well as the factors associated with the changes produced, were analyzed, comparing the information with the region and the world, according to WHO statistics.

Results: When compared with the 2012 consumption, the per capita consumption of cigarettes in 2013 increased by 4.8 %, the average price rose by 1.7 %. The increment of the cigarette prices would result in a reduction of demand in the consumer segment of less income, with a lesser effect on those of higher income.

Conclusion: The Program of Tobacco Prevention and Control, must center its strategy in reinforcing the actions that increment the synergy of the economic measures favoring the reduction of cigarette consumption in the population and especially among young people.

PD-1233-21 Obstacles to diversification: an analysis of actor networks and power relations in Malawi's tobacco sector

L Graen¹

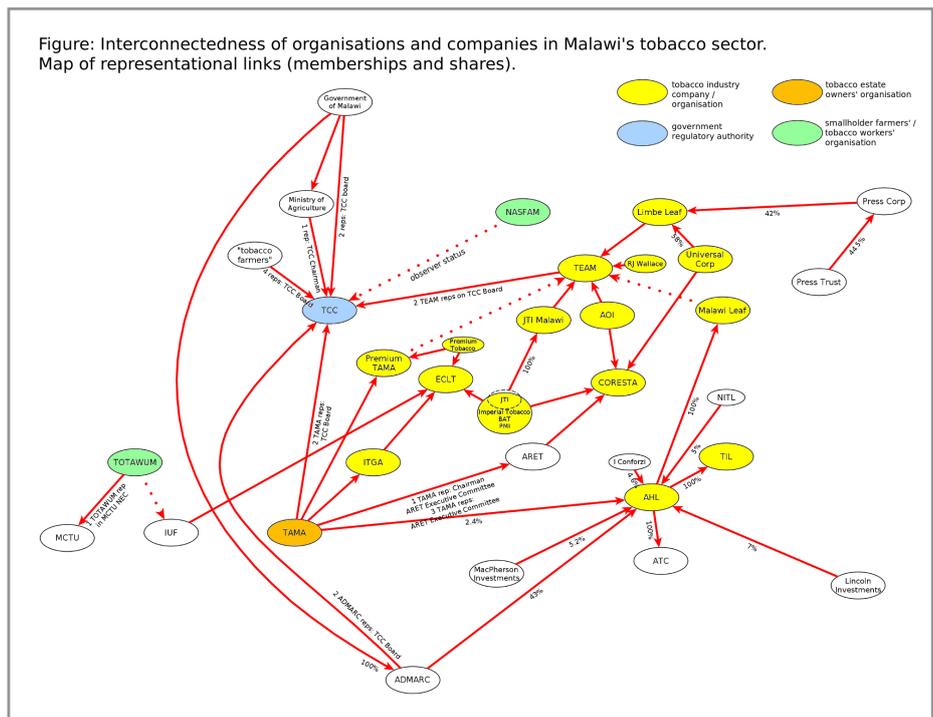
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Background: Malawi's tobacco sector is beset with challenges such as child labor, bonded labor, poor tobacco smallholders and collusion on prices by leaf buyers. The country's huge dependancy on tobacco production (50% of foreign exchange) causes economic instability. Never-

theless, the tobacco sector is seemingly stable and is supported by government. Up to date, studies on alternatives to tobacco growing concentrate on crops and other economic livelihoods rather than how change can be introduced or which socio-political obstacles might be opposed to the transformation. This presentation looks at the latter and provides an analysis of the power relations and actor networks that provide stability to Malawi's tobacco sector.

Design/Methods: The research extensively relies on analysis of newspaper articles and documents such as companies' and organisations' annual reports, press releases and websites. It is also based on anthropological fieldwork as well as expert interviews in Malawi.

Results: The analysis shows a close interconnectedness of the collective actors in Malawi's tobacco sector. Competing actors work together in organisations such as state regulatory authority Tobacco Control Commission (TCC) that has representatives of tobacco companies on its board of directors or the Eliminating Child Labour in Tobacco Growing foundation (ECLT). While competing with each other on the market, here companies and other organisations pursue mutual aims. Links between collective actors shape the power relations in the sector: the more links to other actors an organisation has, and the more stable the links (e.g. membership, shareholding), the more powerful the organisation becomes. The analysis also shows that actors representing tobacco workers and child laborers (TOTAWUM) as well as smallholder farmers (NASFAM) are under-represented and have much less links than leaf buying companies and the associations that represent estate owners (TAMA, ITGA). As a consequence, organisations that represent the most important problems of the sector have less opportunities to challenge tobacco growing and campaign for alternative livelihoods.



Conclusion: An analysis of actor networks helps to identify partners and design interventions that are supposed to introduce alternative livelihoods or help tobacco workers and child laborers change power relations against landlords and multinational leaf buyers. The method used for this research is transferable to other settings and countries.

PD-1234-21 Burden and trend of smokeless tobacco use among adults in India

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Background: India is home for over 70% of global adult smokeless tobacco users. In the present study, an attempt is made to understand the burden and trend of smokeless tobacco (SLT) use among adults in India by drawing on national as well as state specific data utilizing the Global Adult Tobacco Survey (GATS) and comparing with data from other sources.

Design/Methods: The data from GATS conducted in India during 2009-10 was the primary source for understanding prevalence and patterns among adults. Other datasets used were those from the National Family Health Surveys (NFHS) conducted during 1998-2005 and STEPS NCD surveys conducted in seven states of India.

Results: Prevalence of use of SLT. Although using different methodology and tools, information on prevalence of SLT products at national level is available from national surveys. According to Global Adult Tobacco Survey report, a quarter (26%) of all adults aged 15 years and above in India uses SLT. One third (32.9%) of men and one in five (18.4%) women used SLT in India (GATS). The prevalence of SLT was higher among males, less educated and poor in all surveys. Wide variation in the prevalence of SLT use was found in all surveys and was matching not with much difference. Variation is reported much wider among females in other national surveys. Trends of SLT use in India in India, although repeated national surveys using the exact same methodology do not exist, if available national survey data are compared over the last decade, an increase in the prevalence of SLT is apparent. In national family health surveys, among males, there was a narrow gap in prevalence of smoking and SLT use which widened in later survey. However, among females gap was wider with more SLT use and remained the same.

Conclusion: The prevalence of SLT use is higher in males as compared to females. the SLT prevalence is higher among poor and uneducated. There is wide variation in prevalence of SLT products among different states. Currently, there is no comparable data to monitor the trend of SLT use among adults in India. India needs to use standard Questions for Tobacco Surveys (TQS).

PD-1235-21 Predictors of smoking behavior in poor adolescents in Semampir District, Indonesia

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Background: Smoking behavior has increased on adolescents at this time, especially who living in low income family. There are two factors that influence smoking behavior on adolescents. There are internal factors and external factors. Internal factor derives from their own and external factors derive from outside influences, for example parent's and peer's. in the low income family, smoking has become a habit, so it makes them easily effected. The purpose of this study was to analyze which were predictors of smoking behavior on adolescents of the low income family in Wonokusumo Village, Semampir District, Surabaya.

Design/Methods: This research was an observational analytic, used cross sectional design. The sample of this study were 96 male each group (child, father and peer) taken randomly. This study were done toward parental influence to smoking behavior, peer's influence to smoking behavior and influences of their own to smoking behavior was predictors toward smoking behavior on adolescents. The result will be analyzed by Statistic Pearson Test.

Results: The result of analysis showed that there was a correlation between the invited of peers to smoking behavior ($p=0,000$), knowledge of adolescents to smoking behavior ($p=0,000$), adolescents attitudes to smoking behavior ($p=0,000$), parent's permissive attitude to smoking behavior ($p=0,001$), parent's attitudes to smoking behavior ($p=0,000$), smoking behavior of peers to smoking behavior ($p=0,000$), knowledge of peers to smoking behavior ($p=0,000$), peer's attitude to smoking behavior ($p=0,000$) with smoking behavior on adolescents but there was no correlation between smoking behavior on adolescents to parental smoking behavior to smoking behavior ($p=0,441$), parental invitation to smoking behavior ($p=0,113$), parental knowledge to smoking behavior ($p=0,716$), and the invitation of adolescents to smoking behavior ($p=0,198$) with smoking behavior on adolescents.

Conclusion: The conclusion of this study is that the most influence adolescents smoking behavior is smoking behavior of peers. Therefore there have to be preventive measures to prevent the escalation of adolescent smoking behavior.

PD-1236-21 FCTC ratification, economic conditions and smoking prevalence: a cross-country comparison

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Background: Framework Convention on Tobacco Control (FCTC) is a treaty or convention on tobacco control which is internationally legal instrument that binding to

those countries that ratify it. The FCTC is the first international treaty negotiated under the auspices of the World Health Organization (WHO). As of June 2013 there were 177 Parties to the FCTC. Indonesia is one of the countries in Asia Pacific that has not signed and ratified the FCTC. The major arguments for not signing FCTC are economic argument such as employment concerns both in tobacco farming and cigarette manufacturing. The objectives of this research are to explore the impact of ratifying FCTC to economic condition in several countries.

Method: Lesson learnt drawn from 15 countries (see Table 1) that ratify FCTC and its impact on social, economic, and health of the people after FCTC entry into force in selected countries.

- Economic impact: tobacco farmers' profit, land for tobacco cultivation, switching tobacco farmers, number of tobacco farmers, cigarette workers, cigarette manufactures, other cigarette related business, tax/ VAT revenue, excise tobacco revenue, GDP, inflation.
- Health Impact: Cigarette prevalence, number of smokers, and cigarette consumption among youth and women.

Results: Summary of Tobacco Related Indicators Among Ratified Countries

No.	Indicators	Fact	Conclusion
1.	Smoking prevalence	7 countries, the growth rate increase 14 countries, the growth rate decrease	FCTC affect smoking prevalence
2	Number of smoker	15 countries, the growth rate increase 5 countries, the growth rate decrease	FCTC does not affect number smoker
3	Tobacco leaves production	11 countries, the growth rate increase 6 countries, the growth rate decrease	FCTC does not affect tobacco leaves production
4	Cigarette production	11 countries, the growth rate increase 4 countries, the growth rate decrease	FCTC does not affect cigarette production
5	Tobacco industry workers	5 countries, the growth rate increase 4 countries, the growth rate decrease	Inconclusive
6	Land for growing tobacco	7 countries, the growth rate increase 9 countries, the growth rate decrease	Inconclusive

PD-1237-21 Food expenditure pattern, tobacco expenditure and nutritional status of children under five

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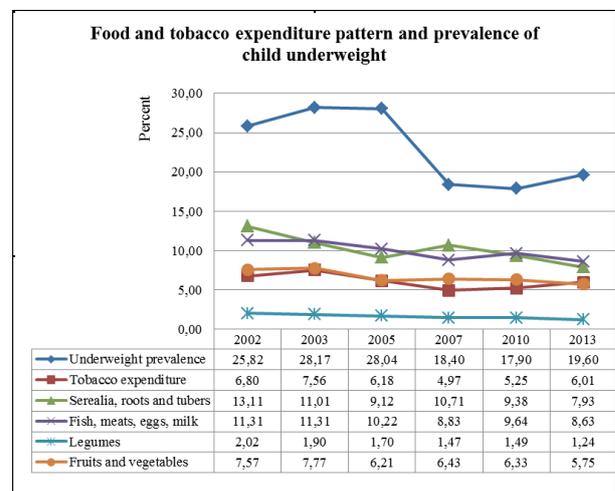
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Background: Analysis from the Indonesian Central Statistical Bureau data which select three different period (1999, 2002, and 2005) and stratify the data based on household food security status, found that the proportion of cigarettes expenditures in all periods of time among food insecure households were higher than among food secure households. This indicates that smoking not only threaten health condition directly but also indirectly threaten food provision among poor households due to "competition" between spending the money for foods or for buying cigarettes. This paper is aimed to describe the Indonesian household food expenditure pattern compared to tobacco expenditure and prevalence of child malnutrition (underweight) during six period of time.

Design/Methods: secondary data analysis from the Indonesian Central Statistical Bureau. Six period of time was selected (2002, 2003, 2005, 2007, 2010 and 2013) based the availability of data for all indicators.

Results: In all period of time, the percentage of food expenditure on calorie source (cereals, roots and tubers) and protein source (fish, meats, eggs, milk) were the highest. Expenditure on tobacco tends to compete with fruits and vegetables expenditures, indicating that this may threaten the sufficiency of micronutrient source. Expenditure for tobacco even much higher than for legumes (as plant protein source). The pattern of tobacco expenditure were similar with the pattern of child malnutrition prevalence (underweight), in which as the tobacco expenditure increased, child malnutrition prevalence also tend to increase.

Conclusion: This analysis recommends advocating poor household to reduce cigarette expenditure and allocate it to improve food quality for their children



PD-1238-21 Development of the Korean Antismoking Campaign Evaluation Index (KACEI)

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Background: To develop the Korean Antismoking Campaign Evaluation Index (KACEI) and present practical implications and applications for how to use KACEI.

Design/Methods: Based on reviews and analysis of domestic and foreign research trends and past antismoking campaigns in Korea, we developed KACEI and refined it based on in-depth interview with experts in the area of antismoking campaigns and tobacco control.

Results: KACEI includes:

- 1) Development of measurement tools for smoking prevention, smoking cessation, and smoke-free policy campaign valuation by the public;
 - 2) Development of measurement tools for evaluating objectives, goals, and program input-output-outcome (IOO) processes by experts.
- The measurement tools for smoking prevention, smoking cessation, and smoke-free policy evaluation can be specified as message general index and message specific index.
 - The measurement tools for campaign evaluation among the public includes smoking susceptibility index for smoking prevention, quitting intention based on the stage of change model for smoking cessation, and a subset of smoking policy index for smoke-free policy.
 - The measurement tools by experts include specific items that evaluate objectives, strategies, and program input-output-outcome in the entire process of the anti-smoking campaign program.

Conclusion:

- Uses of the IOO measurement tools for experts: by involving experts from the process of the program input, antismoking campaign programs can be evaluated in a consistent and long-term form.

- Uses of the KACEI measurement tools for the general public: Audience surveys after antismoking campaign can be conducted to measure smoking susceptibility for nonsmokers (particularly adolescents and youths), stage-of-change quitting intention for smokers, and support for smoke-free policy for all audiences. The measurement can be compared every year and over the long term.
- Through calculation of the KACEI scores, antismoking campaign effectiveness can be more easily compared across years.

PD-1239-21 Economic impacts of tobacco vis-à-vis rice farming and its implications in agricultural development planning in the Philippines

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Background: The study examines the economic impacts of tobacco (as cash crop) vis-à-vis rice. It reviews legislations, policies, and programs to understand the framework governing agriculture in general, and tobacco in particular. Additionally, the study looks into the tobacco excise revenues to see whether it benefit tobacco-farming communities in the Philippines as recipients in the selected study area.

Design/Methods: The study compares the crops' profitability by subjecting household incomes derived from these crops to cost and returns analysis, and measures household-level food security through subsistence level carrying capacity analysis.

Results: The study shows that tobacco farming as an agricultural activity has many economic impacts. While not consumed for food, it generates income and employment but is not enough to attain household food security. In comparing net incomes between crops, the study shows that tobacco farmers are on the same footing as rice farmers. The average cost of tobacco production is significantly high that evens out average farm income derived from the crop.

Conclusion: All in all, tobacco farmers are not better off than rice farmers. The study concludes that tobacco production in the Philippines is declining; which could be attributed to decreasing productivity of farms, land use change in these areas, and/ or farmers shifting to other crops.

56. CESSATION PATTERNS AND PATHWAYS

PD-1240-21 Tobacco control in Brazil: an evaluation of the impact of tobacco control policies on smoking prevalence

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Background: Brazil ratified the Framework Convention on Tobacco Control (FCTC), in November 2005, but since 1986 adopted comprehensive measures to reduce smoking prevalence. The objective of this study is to evaluate public health policies implemented for tobacco control since 1986 and their impact on smoking prevalence.

Design/Methods: The FCTC timeline recommendations implemented in Brazil that affect smoking prevalence were drawn up. Research was performed in Brazil to observe the prevalence trend: Comparison was made between the National Survey of Health and Nutrition (PNAD-1989) and the Brazilian module of the World Health Survey (WHS/Br-2003), both with probabilistic sampling of households aged > 18 years. The Special Smoking Survey (PETab) conducted in 2008 was based on the GATS (Global Adult Tobacco Survey), among smokers \geq 15 years of age. Telephone-based System for the Surveillance of Risk and Protective Factors for Chronic Diseases (VIGITEL) in the population \geq 18 years of age in 27 Brazilian capitals, with a comparison between 2006 and 2013. The tobacco experimentation among teenagers, between ages 13 and 15 was analyzed through the comparison of two periods (2009/2012) of The National School Health Survey (PENSE).

Results: There was a decline of 35% in the prevalence of adult smoking over a 14 year period, an average of 2.5% per year, when comparing PNAD-1989 (34.8%) to WHS/Br-2003 (22.4%). The 2008 GATS/PETab revealed a 17.1% prevalence, corresponding to 24.6 million of smokers. Among teenagers the PENSE survey revealed that the experimentation prevalence reduced from 24% (95% CI, 23.6-24.8) to 19.60% (95% CI, 17.0-22.1), between 2009 and 2012 respectively. Between 2006 and 2013 VIGITEL showed a decrease of 3.82% among smokers \geq 18 years of age. (Figure 1)

Conclusion: The educational measures and the total ban of tobacco advertising can explain the significant decrease in smoking prevalence in Brazil from 1989 to 2003. The cigarette prices and tax increases between 2006 and 2013 may have had an impact on smoking prevalence in the same period of VIGITEL research. Brazil has already implemented many of the articles recommended by the FCTC. To decrease smoking prevalence more, it is necessary to overcome other challenges, such as the proper implementation of smoke-free laws, the ban of all flavors in tobacco products and mandating that 30% of every cigarette package's front side is covered with a health warning.

Figure 1: Timeline of Brazil Tobacco Control Policies and Prevalence	
1986	First federal law on tobacco control created the "National Day Against Smoking (29 August) to alert the public about the harms of tobacco use"
1988	Health warnings placed on every package of tobacco products "The Health Minister warned smoking is harmful to health"
1989	Created National Tobacco Control Program (NTCP) to prevent initiation with educational measures, smoke-free environments and smoking cessation
1989 PNAD – 34.8% * (1)	
1996	Federal law for smoking restrictions in public places, health warnings and advertisement restrictions
1999	Created National Health Surveillance Agency (ANVISA) to regulate smoking products derived (or not) from tobacco.
2000	Banned all tobacco advertising except point of sale (POS); banned sponsorship
2001	Banned terms: light, mild, smooth. First round of pictorial warnings (100% of one side pack and in POS). Maximum limit of tar, nicotine and carbon monoxide (10:1:10 mg per unit)
2002	Forbade food that resembles tobacco products
2003	Added mandatory phrase "Sale under 18 is forbidden" "This product contains more than 4.700 toxic substances and nicotine, which causes physical and psychological dependence. There are no safe levels for consumption of these substances"
PNAD 1989 (34.8%) vs WHS/Br 2003 (22.4%) reduction 35%* (1)	
2004	Second round of pictorial warning labels. Nicotine dependence treatment in Unified Health System (SUS)
2005 – Brazil ratified the FCTC	
2006 VIGITEL – 15.72% * (2)	
2008 PETab – 17.2% * (3)	
2009	Prohibited electronic cigarettes. Third round of pictorial warnings. Taxes increased to 65% of retail prices
2009 PENSE – 24% * (4)	
2011	Banned tobacco advertising at POS, tobacco products can be exposed. Tobacco taxes increased over the 4 years
2012	Banned menthol and all flavors in tobacco products by 2013. Not yet implemented
2012 PENSE – 19.60% * (5)	
2006 to 2013	In this period Brazil increased cigarette taxes by 116% coinciding with a 32% drop in cigarette sales
2013 VIGITEL – 11.30% * (6)	
2014	Brazil becomes a smoke-free country. Will be enforced by December 2014
2016	Health warning to cover 30% of the front side of cigarette packs

* Prevalence:
References: 1. Monteiro CA. 2007; 2. Vigitel 2006: http://bvsms.saude.gov.br/bvs/publicacoes/relatorio_vigitel_2006_marco_2007.pdf; 3. PETab/PENSE: http://www.fggt.gov.br/home/mapa_site/mapa_site.php?populacao; 4. Vigitel 2013: <http://pt.slideshare.net/MinSaude/lançamento-vigitel0316>

PD-1241-21 Do people aged 65+ find it easier to quit smoking than those aged 18-64?: evaluation of a 3-year follow-up study in Taiwan

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Background: The purpose of the study was to compare 3-year long-term smoking abstinence rate between older people (age 65 or above) and adults (age 18 to 64) in a smoking cessation clinic in a medical center in Taiwan.

Design/Methods: All participants were recruited at Kaohsiung Veterans General Hospital between September 2002 and Jul 2007, the participants were 18 years or above, legally covered by the Public Health Insurance Program, and reported either reaching or exceeding 5 of Fagerstr m Tolerance Questionnaire (FTQ) score or 4 of Fagerstr m Test for Nicotine Dependence (FTND) or the daily consumption of 10 or more cigarettes. Every subject received facilitated tobacco cessation education, brief individual counseling and 24-h nicotine patch; the standard treatment course was 8 weeks. Subjects were encouraged but not required to visit the follow-up clinic every 1 or 2 weeks. Self-reported seven-day point abstinence rate

was evaluated by telephone participants at 3, 6, 12, and 36 months from the first visit. Participants loss to follow-up were counted as smokers.

Results: 1096 smokers were recruited, 31 were excluded for their death during follow up period, a total of 1065 subjects (169 older people and 896 adults) were available for analysis. Demographic differences between older people group and adult group were: age (older people vs. adult = 73.8 ± 5.1 vs. 40.2 ± 10.9 years old, $p < 0.001$), smoking duration (older people vs. adult = 46.4 ± 13.5 vs. 20.3 ± 10.0 years, $p < 0.001$), cigarettes consumed per day (older people vs. adult = 21.6 ± 11.7 vs. 25.2 ± 12.1 , $p < 0.001$), and gender proportion (female in older people vs. adult = 6.5% vs. 12.7%, $p = 0.021$). Older people also have higher percentage of chronic disease (lung disease, heart disease, DM, cerebral vessel disease, cancer, hypertension and kidney disease). The seven-day point abstinence rates of older people vs. adult were 42.0% vs. 36.2% ($p = 0.149$), 37.9% vs. 32.5% ($p = 0.173$), 37.3% vs. 29.9% ($p = 0.058$), 37.3% vs. 26.5% ($p = 0.004$) in the 3, 6, 12 and 36 months.

Conclusion: The study show older people have higher seven-day point smoking abstinence rate in all time points but reach statistics significance difference only in 36 months. More participants and longer follow-up study is necessary in the future.

PD-1242-21 Assessing the pattern of tobacco use, motivating factors, and the effectiveness of cessation services among tobacco users in Mizoram, India

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Background: Mizoram has the highest rate of tobacco prevalence in the country. Two tobacco cessation centres (TCC) has been set up in Aizawl and Lunglei District from 2009. The tobacco cessation consists of a variety of approaches aimed at reducing the toll of tobacco by helping tobacco users to quit. The aim of the study is to assess the pattern of tobacco use, examine the motivating and influential factors responsible for tobacco initiation, continued use as well as attempts and motivation to quit. We also aim to find out the types of treatment received from TCC and its effectiveness among several clients.

Design/Methods: 322 clients who have visited the tobacco cessation centres of Mizoram during the past 5 years were selected as sample for the study. Telephonic interview was done to obtain the results. Descriptive statistics analysis was done using SPSS 19.

Results: The mean age of the participants is 41 years. 59.9% of the participants are male and 40.1% are female. 34.5% are from rural areas and 65.5% are from urban

areas. Majority of the clients (21.7%) studied till Middle school. 57.8% of participants use smoked form of tobacco and 42.2% use smokeless form. Majority of the clients (50%) first use tobacco out of curiosity. The average age of onset is 17.1 years and the mean for years of regular tobacco use is 20.6 years. 33.9% of clients smoked more than 10 cigarettes a day and 16.5% of clients use more than 5 sachets of smokeless tobacco per day. The most influential factor for continued tobacco use and relapse was addiction. 87.6% of the participants has attempted to quit and 11.4% have succeeded. Advice from health professionals played the most significant role in motivating them to quit. The types of treatment received from TCC were, 45.3% received Behavioural Counselling, 9% received Behavioural Counselling and Medication and 53.7% received Behavioural Counselling and NRT. Clients reported counselling and will power was most important in helping them quit. 100% of the participants found the service provided by TCC to be helpful.

Conclusion: Results show that TCC continued to play an important role in making tobacco users more receptive to undertaking an attempt to quit. Understanding of the factors responsible for tobacco use and tobacco abstinence plays the most fundamental role in effective cessation. Intensification of FCTC measures to provide better and more effective access to treatment for tobacco dependence is extremely important in influencing target group

PD-1243-21 Effectiveness of mobile-based messaging to promote tobacco cessation: intervention development, practicalities and user reactions

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Background and challenges to implementation: GATS 2009-2010 report that 67.2% of people in Mizoram use tobacco. Existing cessation strategies have faced challenges in terms of clients failing to turn up for follow-up appointments and lack of cost effective follow-up strategies. Innovative tobacco cessation interventions with relatively low-cost, personalized and interactive, tips and encouragement were required to appeal to those who are in pre-contemplation to reach contemplation and for those who have quit to maintain the abstinence. Two Tobacco Cessation Centres (TCC) in Mizoram therefore adopted the use of Mobile Health (mHealth) for the purpose of reaching out to those who have visited the cessation centre and maintain effective follow-up routines. The purpose of the study was to determine whether mobile phone based interventions were effective at helping people to quit and remain quit.

Intervention or response: mHealth was started in Mizoram from 8th March, 2013. Clients were sent messages on daily basis for up to 6 months counting from their day of visit to TCC. More than 1000 clients have been sent messages aimed at maintaining motivation to remain abstinent, preventing absent-minded and indulgent lapses as well as provide motivation. To find out the effectiveness of mHealth, telephonic follow-up was done on clients who have received mHealth messages. Clients rated intervention highly in terms of helpfulness and were highly satisfied with the messages received.

Results and lessons learnt: 12% of clients (as compared to 7% before mHealth) reported being continuously abstinent since their quit date. Apart from the behavioural counselling and NRT received, all clients who were abstinent at the 6-months follow-up reported that mHealth played a significant role in their quitting process. Clients commented that it helped them get back on track. It also prompted majority of clients to have another go at quitting. However, 1.2% of clients' finds the text messages annoying due to its frequency.

Conclusions and key recommendations: This type of intervention could be easily integrated into tobacco cessation services all over the country. Text messaging (short message service, SMS), being the most ubiquitous form of mobile communication, is a promising method for reaching the most individuals. So far, it has proven to be very effective in maintaining short-term quit rates but it will be practicable to test it can increase long-term quit rates (above 1 year).

PD-1244-21 A comparative gender study of levels of tobacco dependency and tobacco related illnesses among patients visiting a tobacco cessation centre in Aizawl, India

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Background: Mizoram has the highest tobacco prevalence in India with half of the population using some forms of tobacco. The tobacco cessation centre (TCC) in the state therefore plays an important role in providing tobacco cessation services. Tobacco dependence is one of the leading causes of morbidity and mortality in addiction treatment programs. The aim of the study was to compare male and female smokers and smokeless tobacco users on their level of tobacco dependency and presence of tobacco related illnesses. Understanding gender differences can increase knowledge of tobacco use dynamics and aid in the development of treatment regimens.

Design/Methods: 139 clients visiting TCC from January-April, 2014 were selected as participants. A comparative

analysis of Gender X Types of tobacco used (Male and Female Smoker, Male and Female Smokeless tobacco user) on levels of dependency (high and low using Fagerstrom Test for Nicotine dependence) and presence of tobacco related illnesses was done using SPSS 19.

Results: Of 139 TCC clients, 60% comprises of males and 40% females. Male smoker comprises of 94%, female smokers 25%, male smokeless tobacco users 6% and female smokeless tobacco users accounted for 74.5%. The mean score of male smokers on level of dependency is 1.41 as compared to the mean score 1.64 of female smokers, the mean score of male smokeless tobacco user is 1.20 as compared to mean scores of 1.27 of female smokeless tobacco users. 67% of clients i.e. 47.4% males and 19.4% females suffered from tobacco related diseases. Of this, male smokers with tobacco related illnesses comprises of 45.3% whereas female smokers comprises of only 5.8%. Male smokeless tobacco users with tobacco related illnesses comprises of 2.2% whereas female comprises of 2.9%. Female smokers have the highest level of tobacco dependency as compared to other users. Males, specifically; male smokers have the highest rate of tobacco related illnesses like respiratory, cardiovascular diseases, gastritis and ulcers as compared to other groups.

Conclusion: The study has given us baseline results for gender differences in levels of tobacco dependency and presence of tobacco related illnesses. Our understanding of these key areas will be a utility in individualizing and optimizing tobacco cessation interventions. Tobacco cessation needs to be strengthened in the State as it continues to play a major role in minimizing the prevalence of tobacco.

PD-1245-21 E Cigarettes: a blessing or a curse for tobacco control?

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E-cigarettes, patented in the USA in 1962, commercialised by Chinese, are being aggressively marketed all over the world, they are being increasingly used by smokers as well as new vapers because of the easy availability and no regulation on its sale or use. These gadgets come in nearly 250 varieties, namely the cigarettes, cigars, pipes, hookah, flutes etc. The promoters of e-cigarettes claim that it exposes the user and persons around them to much lesser degrees of Nicotine and other chemicals, which is definitely far less toxic than the cigarette smoke. It is less likely to cause the health hazards-mainly Cardiovascular, Cancer and Lung diseases as compared to cigarettes. However, no detail study has been done to clearly show the amount of Nicotine absorbed and the health hazards of these non-combustibles. 8 toxic substances have been found to be present in vapours of e-cigarettes, but again the level is very low. What is worrying is that this may become a starting point, the gateway of smoking in the young generation. The youngsters are easily attracted to newer, cool things and with no regulation on its advertise-

ments, the use amongst youth is definitely going to go up. Down the line these people just remain e-cigarette user or easily switch to smoking cigarettes, only the time will tell. But the likelihood of this is very high. Many are using cigarettes and e-cigarettes in tandem. Although, few articles have come up, which show a definitely higher rate of quitting in smokers by using these nicotine-vaporizing devices, its real role in quitting is still unconfirmed. Unlicensed e-cigarettes fail to meet standards of safety, quality and efficacy and therefore health professionals, as of now, do not recommend e-cigarettes for quitting.

PD-1246-21 A hospital-based 'systems approach' to treating tobacco use in LMICs

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Background: Low- and middle- income countries (LMICs) have dismally low quit rates that may be improved by adopting systems approach for treating tobacco use. The objectives of the study were to know: (1) whether tobacco treatment can be integrated in a hospital-system; and, (2) will it improve quit rate?

Design/Methods: A systems approach to tobacco treatment was implemented at SK Soni Hospital in Jaipur, India for one year (January- December 2013). In step 1, all registered patients (19,657) underwent screening for current- use of tobacco use. In step 2, out of 1213 current users identified (6.17% of total), tobacco treatment was delivered to 488 willing patients (37%) by either Minimal Intervention (MI) of 3-minutes (391; 32.2%) or as Intensive Intervention (II) for 40-minutes (91; 8%). The rest 725 (59.8%) either declined or did not receive treatment. The data regarding patient demographics for tobacco use, counseling details, use of cessation medication and follow-up plan was recorded in a study specific form. In step 3, scripted telephonic follow-up done after one month of counseling in those treated, averaged to 3 follow-ups in the majority at the end of the study, unlike once only in those untreated. It assessed the self-reported outcomes of quit success (30-day abstinence), failure to quit and relapse were assessed.

Results: The overall quit rate in the study (#1213 current users) was 24.7% (299), whereas 16.6% (202) failed to quit, 5.4% (65) relapsed, 0.9% (11) died and 52.4% (636) could not be treated. Amongst those treated- 488 (40.23%), the quit rate for those treated by MI (391 patients) was 54.9% and by II (91 patients), it was 86.6%. The % quit rates did not vary significantly amongst current smokers (706), smokeless tobacco users (239) and dual users (208) for an overall estimate (24.5; 24.3 and 26.5), MI (56.5; 54.3 and 49.3) and II (86.4; 90.0 and 82.6).

Conclusion: This maiden successful integration of TTP in a tertiary-care hospital system in India fulfilled both the study objectives. The key was an optimal support by the

management. The major challenge was suboptimal participation of the doctors. Its replicability is necessary to prove the desired efficacy in LMICs, regardless of geography and level of health care.

PD-1247-21 A comparative study on tobacco cessation methods: a quantitative systematic review

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Background: During recent years, there have been many advances in different types of pharmacological and non-pharmacological tobacco control treatments. In this study, we aimed to identify the most effective smoking cessation methods used in quit based upon a review of the literature.

Methods: We did a search of PubMed, limited to English publications from 2000 to 2012. Two trained reviewers independently assessed titles, abstracts and full texts of articles after a pilot inter-rater reliability assessment which was conducted by the author (GH). The total number of papers and their conclusions including recommendation of that method (positive) or not supporting (negative) was computed for each method. The number of negative papers was subtracted from the number of positive ones for each method. In cases of inconsistency between the two reviewers, these were adjudicated by author.

Results: Of the 932 articles that were critically assessed, 780 studies supported quit smoking methods. In 90 studies, the methods were not supported or rejected and in 62 cases the methods were not supported.

Nicotine replacement therapy (NRT), Champix and Zyban with 352, 117 and 71 studies respectively were the most supported methods and e-cigarettes and non-Nicotine medications with one case were the least supported methods. Finally, NRT with 39 and Champix and education with 36 scores were the most supported methods.

Conclusions: Results of this review indicate that the scientific papers in the most recent decade recommend the use of NRT and Champix in combination with educational interventions. Additional research is needed to compare qualitative and quantitative studies for smoking cessation.

PD-1248-21 Are second-hand smoke-related diseases in children associated with parental smoking cessation?

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Background: Little is known about whether smoke-related diseases of young children, such as asthma, are associated with parental smoking cessation during the early

child-rearing period. Our objective was to show the association between parental smoking cessation and second-hand smoke (SHS)-related diseases of their children.

Methods: In a population-based cohort of 47,015 families with babies aged 0.5 years in 2001 (response rate, 87.8%), 8,037 mothers and 28,486 fathers who smoked at baseline were followed for 4 years in Japan. The prevalence ratios for parental smoking cessation according to onset of SHS-related diseases of their children were calculated by multivariate log-binomial regression models, using inverse probability weight to account for non-response at follow-up.

Results: 16.7% of smoking mothers and 14.5% of smoking fathers had stopped smoking at follow-up. Onset of SHS-related children's diseases was not statistically significantly associated with either maternal or paternal smoking cessation after multivariate adjustments for both mothers and fathers.

Conclusion: SHS-related children's diseases were not associated with parental smoking cessation. More efforts on parental smoking cessation support may be necessary in their children's medical care setting.

PD-1249-21 The effects of transcutaneous acupoint stimulation in the treatment of tobacco addiction: a randomised controlled trial

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Background: To evaluate the effectiveness of Transcutaneous acupoint stimulation in treatment for smoking cessation.

Design/Methods: Sixty four tobacco addicted enrolled in 4 Smart Quit clinics were recruited and allocated by using a randomized, double-blind, block-of-4 technique. They were randomly assigned to experimental and control groups. The procedure involved acupoint stimulated by transcutaneous electric stimulation and auricular acupressure at different points in experimental and control group, twice a week by trained therapists. Each session takes approximately 30 minutes, and up to 15 sessions were done

Results: Post-treatment, success rate in smoking cessation was 70.3% and 18.5% in the experimental and the control group respectively ($p < 0.05$). Smoking cessation was achieved after the 6th treatment in control group. At the end of the Treatment, experimental group showed significant decrease in Fagerstrom Nicotine Dependence score and level of exhaled carbon monoxide. Both groups reported changes in cigarette taste and reduction in smoking without significant difference. Achievement was not related to types of cigarettes, duration of addiction, causes of addiction. Follow up at 1st, 3rd and 6th month, experimental group cessation rate didn't change throughout. Control group cessation rate remain 18.5% at 1st, 3rd and decrease to 14.8 % at 6th month.

Conclusion: Acupoint Stimulation have efficacy in smoking cessation. Combined acupoint stimulation with behavior counseling should be used in further smoking cessation trials to enhance the success rate.

PD-1250-21 Effectiveness of implementing a simplified smoking cessation 'EASE' protocol into the routine work of NCD clinics in Thailand

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Background: Despite the fact that tobacco use is one of the most important causes of non-communicable diseases (NCD), more than 90% of NCD clinics in Thailand do not provide smoking cessation service to their patients. Two major reasons included lack of knowledge and having high workload. A simplified protocol and guidelines in smoking cessation in NCD clinics are therefore essential. This study is aimed to assess the effectiveness of the protocol and guidelines that were developed.

Methods: A simplified smoking cessation protocol and guidelines for patients with NCDs were developed using Delphi technique. Two postal rounds and 2 consensus meetings were held. Protocol and guidelines were designed to be brief and simple enough to enable each personnel in the NCD clinics to provide cessation service on their own.

Results: "EASE" (Every visit-Ask-Support-Early follow-up) protocol was developed and implemented into each steps of routine work in the NCD clinics. Each patient will be asked and documented their smoking status in the front cover of charts upon his/her registration. Cessation support will then be provided step-by-step by nurses, physicians, pharmacists, and dietitians, respectively, in the clinics. Only DM, cardiac, COPD, and psychiatric clinics from 8 hospitals were recruited during the pilot phase to implement the guidelines. From July to December 2013, total of 847 patients were recruited. 804 (94.9%) of them were male. Mean age was 54.4 years old. 58.3% of patients had moderate nicotine dependence. Mean daily number of cigarette smoked is 14. 81.2% had time to first cigarette <30 minutes. Overall continuous abstinence rate (CAR) at 6 months was 39.3%. Of 4 NCDs recruited in the project, those with COPD had the highest abstinence rate (53.0%). All remaining patients had smoked less than half of the amount before recruiting.

Conclusions: A simplified smoking cessation protocol, "EASE", that was integrated into the routine workflow of NCD clinics was effective and feasible to operate. A larger scale implementation needs to be done.

PD-1251-21 Effective population-based smoking cessation interventions worthy of investment: an assessment of the Thai experience

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Background and challenges to implementation: According to the 2011 Global Adult Tobacco Survey, smoking prevalence in Thailand is 24%, and while 54% of Thai smokers reported intention to quit, only 36.7% tried to quit in the previous 12 months. This research reviews interventions that improve quit intention (QI), quit attempt (QA) and abstinence rate in order to provide recommendations to ThaiHealth and the Ministry of Health on investments for effective smoking cessation policy.

Intervention or response: We searched 2 electronic databases; PubMed and The Cochrane Library for systematic reviews of smoking cessation. The search was limited to publications from January 2000 through March 2014.

Results and lessons learnt: Of 54 relevant articles, 11 articles focused on population-based interventions. Healthcare financing with full coverage directed to smokers can potentially increase the use of smoking cessation treatments and abstinence rates (RR 2.45; 95% CI 1.175.12).

Mass media campaigns potentially increase QI and QA depending on their duration and intensity. Evidence shows that new initiatives including telephone hotlines, efforts to build tobacco control infrastructure, and technical assistance in establishing public place and work site smoking policies can sustain media effects after funding for them is diminished. Effective use of electronic health records increases QA. Including smoking status, tobacco treatment reminders, and treatment order forms in patient records, referral counseling in primary care clinic records and hospital admission forms can increase the proportion of smoking patients referred to cessation counseling, telephone-based counseling and prescribed medications. Interactive internet-based interventions can increase 6-months or longer abstinence by 17% when compared with static internet-based information. Online support for smoking cessation showed results similar to web-based, tailored, interactive smoking cessation interventions and was effective compared with non-interactive type (RR1.8; 95% CI1.4, 2.3). Advice on quit strategies or motivational text message support for quitting by mobile phone increases QI, intention to treat, and prolongs abstinence (RR 1.71; 95% CI 1.47, 1.99).

Conclusions and key recommendations: Various low cost population-based interventions boost effectiveness and merit investment for improved cessation results in Thailand and other resource-limited countries.

57. EXPANSION OF SMOKEFREE LAWS AND POLICIES

PD-1252-21 "I came to this event as a skeptic, but now I'm convinced": methods used to increase stakeholder support for a smoke-free policy

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Background and challenges to implementation: Thomas Embling Hospital is a high security forensic psychiatric hospital in Melbourne, Australia. Against a backdrop of increased tobacco control measures in the wider community, the Forensicare Council decided in 2013 to enact a hospital-wide smoke free policy on July 1, 2015. A strong smoking culture amongst staff and patients, a robust consumer consultation system and myths which validate people with mental health conditions continuing to smoke have made the process challenging.

Intervention or response: A steering committee has driven a number of engagement activities with stakeholders to provide opportunities for dialogue and to elicit concerns about the impending policy. A key component of the en-

agement strategy was a forum for carers, contractors, patients and staff. A panel was convened and after a short presentation from each panel member, questions were invited from the audience. The panel consisted of the CEO, a current consumer (an ex-smoker), and 2 guests - an interstate academic who has an interest in smoke free mental health environments and a manager who has driven a smoke free prison project. A second consumer (a current smoker), was also invited, but did not attend on the day.

Results and lessons learnt: A total of 69 people attended. Feedback regarding the smoke free policy and about the forum itself was elicited. Using staff and patient surveys, a shift in the level of acceptance of the smoke free policy, which may be attributed to a number of measures including the forum has been evident. Attendees found the forum worthwhile and several articulated their surprise at their shift in thinking that a smoke free policy would be beneficial. One carer felt there should be more effort to include a consumer who was a smoker on the panel. Other attendees felt it would be more relevant to include a project manager who had experience in driving a comparable project. Although questions from patients were received, feedback suggested an additional mode of engagement with patients was required.

Conclusions and key recommendations: With less than one year to go until a smoke free policy is enacted, the Steering Committee continues to seek ways to further en-

gage stakeholders. Members felt the forum was a worthwhile investment and seek to repeat this process in one year's time, using learnings from the 2014 forum.

PD-1253-21 Making homes smokefree by raising awareness among school children in Bangladesh

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Introduction: Globally, about 40% of children younger than 14 years of age are exposed to second hand smoking within their homes. In Bangladesh the smoking prevalence among adult male is about 44.7% very high and many of them smoke inside their own house. The aim of the study was to determine the outcome of school student led smoke free home program in a rural community of Bangladesh.

Method: A program for raising awareness among student about the harmful effects of smoking was implemented in the year 2010 in Ekhlaspur village of Chandpur district, situated about 60 km south-east of Dhaka city. Trained health workers hold several awareness meetings with students of Grade 7 to 10 of a local high school. Flip charts were used for detail explanation of harmful effects of second hand smoking. A structured questionnaire was given to students to collect data on smoking habit of household members and their habit of smoking inside house. Students were advocated to create a smoke free environment in their own house after discussing with their parents and other members of the family to reduce exposure to indoor smoking. After 5 months a follow-up survey was done among the same group of student to determine the indoor smoking status.

Results: Total number of students participated in the study was 314. Mean age of the student was 13 years. Initially we found that 50.3% guardians were smokers and among the smokers 25.8% smoked inside the house. After intervention through school children, smoking rate among guardians reduced to 48.7% and indoor smoking rate reduced to 9.9%. It is observed that indoor smoking rate was reduced by 15.9%.

Conclusion: This study suggests that by improving knowledge and awareness among school children it is possible to reduce the indoor smoking rate in a community. Complete elimination of indoor smoking is the only measure that fully protects children and women from exposure to second hand smoking and this can be obtained by utilizing school children at a low cost setting.

PD-1254-21 Tobacco control policy and the burden of smoking among doctors and nurses in Koprivnica-Krizevci County, Croatia

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Background: A comprehensive national smoke-free law in Croatia was put into effect in December 1999 and since then smoking has been prohibited in all health care facilities. The WHO Framework Convention on Tobacco Control was put into effect in October 2008 and since then smoking has been prohibited in the yard around health care facilities. Increasing our understanding of smoking patterns among the different professional groups in health care facilities will help inform the development of interventions for persons bearing the burden of tobacco use.

Design/Methods: A cross-sectional study of smoking habits via a self-administered questionnaire among doctors and nurses who were employed in health care facilities was performed across four points in time: 1998 (a year and a half before implementation of the Act), and 2002, 2006 and 2011 (2, 6 and 11 years after the implementation). By census, there were between 734 and 1,014 doctors and nurses and response rate were 50-69%.

Results: The surveys showed that the lowest smoking prevalence was among doctors and the highest was among nurses. During the study period, the smoking prevalence in all professional groups had a downward trend, although different professional groups showed different intensity of decline. The decrease was greatest among doctors (from 28.3% in 1998 to 19.4% in 2011) and nurses with junior college education (from 32.6% in 1998 to 25.2% in 2011). The smallest change was among nurses with a high school education (from 36.4% in 1998 to 30.4% in 2011). The greatest decrease in smoking prevalence was recorded among doctors and nurses with junior college education in the first two years since the Act came into effect and among nurses with a high school education after 2 to 6 years since the law came into effect.

Conclusion: Much progress has been made in reducing tobacco use in Croatia in the last decade by introducing comprehensive smoke-free legislation. A smoke-free workplace has a positive and long lasting impact on the smoking prevalence among health care professionals although higher education level and better knowledge about risk of smoking on health might have a role in that. However, increasing taxes and prices of the tobacco product, strengthening controls and comprehensive cessation programs are needed.

PD-1255-21 Statutory total school smoking bans in reducing the socio-economic differences in smoking

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Background: Socioeconomic inequalities in smoking begin to manifest in adolescence. Poor school-performance and non-academic orientation are known risk factors for smoking initiation. In Finland, inequalities are visible between the main educational tracks: daily smoking is multifold in vocational upper secondary schools (VUSS) compared to other school types. Smoking has been banned in schools for underaged students already since 1977. In 2010, age-based school smoking ban was amended to complete ban in school premises: smoking was prohibited regardless of school type, smokers' age or position in school. We study the effects of the total ban in different school types, to measure the social equity impact of this environmental-level intervention.

Design/Methods: National School Health Promotion (SHP) Study data of 14-16-year-old secondary school (SS) pupils, 16-18-year-old general upper secondary school (GUSS) students and 16-20-year-old VUSS students. Until year 2011, SHP ran in separate parts of the country in even- and odd-numbered years and years were paired for countrywide trend analyses. Since 2013, data collection covers whole country every second year. Current analyses run from 2008/2009 (N=199 757) to 2013 (N=182 864).

Results: Between 2008/2011 and 2013, daily smoking decreased in VUSS (from 39% to 36%), GUSS (10% to 8%) and SS (15% to 13%). The decrease was significant in all school types since 2010/2011. Viewing smoking allowed in school decreased in VUSS (86% to 61%), GUSS (75% to 56%) and SS (9% to 6%). Viewing school smoking restrictions rarely supervised decreased in GUSS (52% to 48%), VUSS (51% to 45%) and SS (22% to 18%) between 2008/2009 and 2010/2011, but increased up to 49% in VUSS, to 54% in GUSS and to 21% in SS in 2013. Among weekly smokers, smoking daily in school premises decreased in VUSS (74% to 47%), GUSS (39% to 28%) and SS (32% to 26%). Reports of personnel smoking daily in school area decreased in VUSS (46% to 24%), GUSS (11% to 7%) and SS (15% to 10%).

Conclusion: Total school smoking ban had a positive impact even in schools, where both student and personnel smoking were most common and in which previous partial ban had no effect. Hence, this environmental intervention has positive social equity impact. However, enforcement of the ban is not sufficient. Supportive elements, most importantly health education and smoking cessation support, are also needed in order to continue the positive development.

PD-1256-21 Socio-economic inequalities in secondhand smoke exposure in homes and workplaces in 15 low- and middle-income countries (LMICs).

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Background: Research shows poorer individuals, particularly women may be more likely to be exposed to secondhand smoke (SHS) despite existing smoke-free policies. This work aims to study the socio-economic inequalities in exposure to SHS at home and at workplace and explore the gender differences therein across fifteen LMICs.

Design/Methods: Secondary analyses of cross-sectional data from fifteen LMICs participating in Global Adult Tobacco Survey (participant age \geq 15 years; 2008-11).

Outcome measures: 'SHS exposure at home' and 'SHS exposure at workplace'. Country-specific analyses using regression-based methods used to estimate the magnitude of socioeconomic inequalities in exposure to SHS: (1) Relative Index of Inequality (RII) (2) Slope Index of Inequality (SII). Stratified analyses by gender were also conducted for each country.

Results: SHS exposure at home ranged from 24% in Mexico to 87% in China and Viet Nam; exposure to SHS at workplace ranged from 17% in Uruguay to 66% in Bangladesh. In India, Bangladesh, Thailand, Malaysia, Philippines, Viet Nam, Poland, Turkey, Ukraine and Egypt, exposure to SHS at home reduced with increasing affluence (overall, RII range: 1.13 [1.06 – 1.21] in Turkey to 2.97 [2.65 – 3.32] in Thailand; SII range: 0.05 [0.01 – 0.10] in Egypt to 0.44 [0.39 – 0.50] in Philippines). In these ten countries, and in China, exposure to SHS at home reduced with increasing education (overall, RII range: 1.18 [1.07 – 1.30] in China to 2.57 [2.24 – 2.94] in Thailand; SII range: 0.06 [0.00 – 0.11] in Ukraine to 0.44 [0.40 – 0.47] in India). In India, Bangladesh, Thailand and Philippines, exposure to SHS at workplace reduced with increasing affluence while in Viet Nam and Ukraine, this association was significant only among males. In India, Bangladesh, Thailand, Philippines, Viet Nam, Poland, Russian Federation, Turkey, Ukraine and Egypt, exposure to SHS at workplace reduced with increasing education. In Bangladesh, Viet Nam, Mexico, Turkey and Ukraine, this association was insignificant among females and in Egypt, among males.

Conclusion: SHS exposure at home in majority of the LMICs studied reduced with increasing affluence and education, with minimal gender differences. Socio-economic gradients in SHS exposure at work were evident in a few countries and among males. Smoke-free policies may need to be supplemented with targeted efforts for the poor and the lower educated groups to reduce inequalities in SHS exposure.

PD-1257-21 'Healthy Cities' in Russia: Creating smoke-free environments on the city level

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Background and challenges to implementation: Since June 2013 Russia has been in the process of implementing Smoke Free Federal Law with comprehensive ban on smoking in public places. All medical, educational, culture and sport facilities turned smoke free starting from June 1st 2013, and as from June 1st 2014 all hospitality business venues are Smoke Free. It is a very important step for a country with a very high smoking prevalence, of 40% of adult population (GATS, 2009). AS from 2014 The Union has been implementing the Smoke Free project in collaboration with Healthy Cities Association in 24 entities (jurisdictions) of 7 federal districts.

Intervention or response: The main components of the Union and Healthy Cities Association project include the following: implementing the model of the SF implementation, development of the inter-agency collaboration, capacity building in TC, raising and coaching regional/local experts and lawyers, development and implementation Union training program in TC, technical advice and support to the grants projects, national and regional governments, developing and implementing civic control mechanism. Working intensively and closely with regions helped us to promote the strong and comprehensive Law which meets all the FCTC requirements and represents one of the world's best SF legislation.

Results and lessons learnt: Working with WHO Association "Healthy Cities" well established by the governors and mayors and strong political commitment and power. All members of the Association are implementing the TC programs and getting very good administrative and political support for it. It is been well regulated from one center which is the executive office. All these guarantee high efficiency with project implementation, and coordination of programs in all members. It also helps to mobilize the economic, technical and financial recourses.

Conclusions and key recommendations: The multi-city project with healthy Cities Association can serve as a model for implementation, and ensure sustainability of the project.

PD-1258-21 Strengthening implementation of smoke-free law in Turkey

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Background and challenges to implementation: Smoke-free Law (SFL) creating 100% smoke-free areas has successfully been implemented in Turkey including the hospitality sector since July 2009. However to overcome the challenges in implementation including overcoming violations and for effective implementation, new amendments to the existing Law, raising awareness regarding the Law as well as a strengthened enforcement countrywide were needed.

Intervention or response:

1. Amendments of the SFL to strengthen it are as given under :

- Pictorial health warnings with the quitline logo 'ALO 171' have been made mandatory for all tobacco products, covering not less than 65% of the principal display areas of a unit packet of the tobacco product.
- Any kind of waterpipe and products imitating tobacco products like e-cigarettes even not containing tobacco are considered as tobacco products.
- Local governors instead of municipalities have been empowered to close down the private establishment in cases of violation of SFL.

2. To increase the awareness regarding harmful effects of second-hand smoke and tobacco products on health, nationwide media campaigns were undertaken. The media campaigns also covered benefits of cessation and the quitline to sensitize the public regarding support available for tobacco cessation. 3. For urgent interventions to deal with cases of violation of the SFL, Smoke-free Zone Inspection System was developed in 2012. It is based on the use of GPS mobile devices countrywide through the notifications from ALO 184 MOH communication center.

Results and lessons learnt: Through the above mentioned amendments, violations of SFL due to e-cigarettes and waterpipes have been prevented. Number of inspections have dramatically increased from 1.624.340 in 2012 to 2.534.917 in 2013 as well as amount of monetary fines from \$19.537.186 in 2012 to \$38.595.487. As a result, while adult tobacco prevalence decreased 4.1%, from 31.1% (2008) to 27.0% (2012), current smokers who wanted to quit after noticing video clips on TV increased from 46.5% in 2008 to 49.8% in 2012 which was consistent with the comprehensive implementation of SFL countrywide.

Conclusions and key recommendations: To implement SFL successfully, not only political will and commitment but also sustained enforcement without compromising is essential. Moreover, necessary amendments of the Law, monitoring and evaluation of the activities and regular effective and comprehensive media campaign are crucial.

PD-1259-21 The roles of men, women, and children in establishing and enforcing smoke-free home policies in Shanghai, China

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Background: Little is known about the differential roles of men, women, and children in establishing and enforcing smoke-free homes, particularly in countries with notable discrepancies in cigarette smoking prevalence among the genders. Thus, we examined perceived benefits to establishing smoke-free home policies, the process of establishing a smoke-free policy in the home, perceptions of the impact of implementing such a policy on smoking behavior, and the interactions among family members, particularly men and women, regarding smoke-free home policies and smoking cessation in Shanghai, China.

Design/Methods: In Spring 2013, we conducted 30 in-person semi-structured interviews to explore our study aims. Participants were recruited from urban and suburban schools in Shanghai. Eligibility criteria included being a male smoker living with a child or a female nonsmoker living with a smoker and a child. We assessed the aforementioned topics as well as sociodemographics. Qualitative data analyses were conducted to identify themes.

Results: The strongest theme regarding perceived benefits of smoke-free home policies was for the family's health. Other emergent themes included maintaining a clean environment, maintaining cleaner air, providing good role models for children, and the smokers in the home smoking less frequently. Among those households that had discussed whether to allow smoking in the home, the wife initiated the conversation most often. Women and children were most often reported as maintaining the decision-making authority related to home smoking rules. In terms of cessation, the most common messages were that smoking is bad for the smoker and that smoking is bad for the family, particularly children. The men addressed concerns regarding smoking and secondhand smoke exposure by agreeing not to smoke at home or in front of family members, agreeing to smoke less with varying results, promising or attempting to quit, expressing a desire to quit but blaming addiction for not succeeding, and ignoring the request.

Conclusions: The roles of men, women, and children in establishing smoke-free homes in China are distinct, as are the challenges in enforcing these policies. Public health efforts might address how family members can most effectively communicate regarding the implementation of smoke-free home policies.

PD-1260-21 Tobacco-free Sochi Winter Olympics legacy: Russian tobacco control legislation and international experience

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The Olympic Winter Games in Sochi are the twelfth in history to be free from tobacco smoke, protecting over 155,000 athletes, spectators and staff from the harmful effects of smoking. The Games also played an important role in the promotion of the new comprehensive Russian tobacco control legislation which includes 100% smoke-free public places adopted in February 2013. Moreover, the Olympics have helped to gain public support for SF implementation in the host region- Sochi City and on the national level. The Project has included three key elements: the tobacco free policy development, training and capacity building program and extensive communication strategy and evaluation. A special online course "Tobacco-free Sports, Training for Volunteers" was developed in Russian. Through this e-course, participants can learn about topics ranging from the importance of a smoke-free environment to how to interact with visitors – including those who violate the ban. In addition, mass media awareness campaigns on "Sochi's Smoke-free Olympics" and Russia's smoke-free legislation have been introduced on television, radio, billboards, posters and print media, as well as on public transportation mobile screens, in an effort to encourage compliance with the smoking ban. A comprehensive evaluation strategy was designed and carried out in order to evaluate the Tobacco-free Sochi Olympics implementation. Over 6 days and 36 hours of observations only 155 smoking incidents were observed at the Olympic venues. The public attitude survey of the Games spectators and Sochi city residents show high support for smoke free at the Games (84,8%) and for public places (75,6%). The Sochi Games is a critical international case-study for tobacco free sports or other big events, and offers an opportunity to promote it as a model for international mega sport events as well as a good case study to demonstrate a successful smoke-free implementation and enforcement nationally and across the World.

PD-1261-21 Support for smoke-free policies in 17 countries from the Global Adult Tobacco Survey (2009-2013)

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Background: Exposure to second-hand smoke can cause serious illness and lead to premature death. The WHO FCTC mandates all ratifying nations to implement effective 100% smoke-free policies. Implementing these policies may be difficult due to opposition from the tobacco

and entertainment industries. However, public support appears to be increasing for smoke-free policies among both smokers and non-smokers. This study provides estimates of public support from 17 countries for indoor smoke-free policies in various work and public places.

Design/Methods: Data were obtained from the Global Adult Tobacco Survey (GATS), a nationally representative household survey of persons 15 years of age or older. In addition to core questions that measure second-hand smoke exposure at home, work, and public places, countries can add optional questions that measure the public's support for smoke-free policies (potential and existing) in places such as hospitals, workplaces, restaurants, bars, public transportation vehicles, schools, universities, and places of worship. This study includes results from 17 countries that conducted GATS between 2009 and 2013 and included such questions: Argentina, Bangladesh, Cameroon, Egypt, Greece, Kenya, Malaysia, Nigeria, Philippines, Poland, Romania, Russia, Thailand, Turkey, Ukraine, Uganda, and Vietnam.

Results: In all of the countries that asked about healthcare facilities, public transportation vehicles, schools, universities, and places of worship, over 90% supported smoke-free policies for each of the locations. Support for smoke-free policies in workplaces ranged from 74% in Greece to 99% in Cameroon, with 9 out of 13 countries obtaining over 90% support. Support for smoke-free policies in restaurants ranged from 58% in Poland to 98% in Bangladesh and Uganda, with 8 out of 13 countries over 80%. Support was lower for bars, with estimates ranging from 37% in Poland to 91% in Uganda. Support was extremely high in the three countries—Argentina (92%), Philippines (95%), Turkey (96%)—that asked a comprehensive question about supporting a law prohibiting smoking in indoor workplaces and public places.

Conclusion: The results from GATS show relatively high public support for smoke-free policies in workplaces and public places. Strong support for prohibiting smoking in public places can help tobacco control advocates and policy makers push for new smoke-free policies and generate support for enhanced enforcement of existing policies.

PD-1262-21 Socio-demographic determinants of exposure to second-hand smoke in 27 European countries

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Background: The World Health Organization has identified implementation of smoke-free environments as a priority in an effort to reduce the impact of exposure to second-hand smoke (SHS) on health. The objective of the present study was to assess socio-demographic determinants of exposure to SHS among non-smokers in Europe.

Design/Methods: We analysed data from the Eurobarometer survey, wave 77.1, which was conducted in February-March 2012). The survey was conducted in the 27 European Union member states and included respondents aged ≥ 15 years. The samples were selected through a multi-stage sampling design in each country. SHS exposure in bars, restaurants and the workplace was assessed and multivariable logistic regression models were fitted to assess the determinants of each exposure. All analyses were weighted.

Results: Among non-smokers who had visited a drinking establishment ($n=14,386$) and an eating establishment ($n=15,828$) over the past 6 months, 25.3% and 12.7% respectively reported that they had been exposed to SHS. Among non-smokers working indoors ($n=8,198$), 24.4% reported that they were exposed to SHS in their workplace occasionally or more. Males were significantly more likely to report exposure to SHS in bars (OR=1.44), restaurants (OR=1.24) and the workplace (OR=1.88) when compared to women. In comparison to those of higher socio-economical status (SES), individuals of lower and middle SES had significantly higher odds of having been exposed to SHS in bars (OR=1.49 and OR=2.39 respectively), in restaurants (OR=1.59 and OR=2.56 respectively) and in the workplace (OR=1.76 and OR=1.61 respectively).

Conclusion: Males and young non-smokers, but especially individuals of lower SES were more likely to be exposed in SHS in the European Union in 2012. Strict enforcement of implemented smoke free legislations is necessary to protect vulnerable groups from the consequences of exposure to SHS.

PD-1263-21 Work toward the endgame: MPOWER in Hong Kong and the next steps

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Background: Smoke-free ordinance was first launched in 1980s and it has worked towards establishing Hong Kong a smoke-free society. Through the concerted efforts of the government, various sectors of the society and the general public, the smoking prevalence has dropped significantly from 23.3% to 10.7% in 2012. Not only a substantial decrease on male smoking is resulted, the female and youth smoking are kept in a comparatively low level. The results are also attributed by the steady implementation of MPOWER measures over the past three decades. Long before the ratification of China in 2006, Hong Kong has adopted comprehensive measures that generally in concordance with the principles of FCTC.

Achievements: The Government has taken a progressive and multi-pronged approach in tobacco control. Tobacco

use and smoking harms are monitored through researches and surveys. All indoor public places and many outdoor public places have been designated smoke-free. Health warnings with graphical images were imposed to deter smoking and encourage cessation. Tobacco advertisement, promotion and sponsorship have been banned and restricted. Various kinds of smoking cessation assistance are offered in free by the Government and local charities. Tobacco tax is periodically raised to discourage the use of tobacco.

Lessons Learnt: Although Hong Kong is one of the cities with the lowest smoking rate, there are still about 645,000 daily smokers. Enormous economic and life losses are incurred from active and passive smoking. Despite the tightened legislation and tobacco control measures in place, tobacco industry, with its huge financial backup to

the activities availing loopholes, is still a major challenge and barrier in building a smoke-free society. There are needs to further reduce the demand on tobacco by carrying out a long-term tobacco taxation policy, taking more complete and fierce ban on alternative forms of tobacco advertisement, stringent regulation on health warnings and packaging and expanding the smoke-free areas. More actions should be taken to strengthen the continuous collaboration between the Government, various sectors of the community and the public.

Conclusions: Hong Kong has been at the forefront of tobacco control, after the thirtieth anniversary of the smoke-free ordinance in 2012. We are standing at a crucial position to review our achievement and take further steps to reduce smoking prevalence to 5% and trigger the end-game for tobacco in Hong Kong by 2022.

58. TOOLS FOR ENFORCING AND REINFORCING HEALTH WARNINGS

PD-1264-21 Responses of cigar and cigarillo smokers to the Australian plain packaging policy: a qualitative study and online survey

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Background: To explore perceptions and experiences of cigar and cigarillo smokers under the Australian plain packaging (PP) policy with larger graphic health warnings (GHWs).

Design/Methods: In February 2014, in-depth interviews were conducted with 10 regular premium cigar smokers; two focus groups with occasional premium cigar smokers and premium cigarillo smokers (n=14); and four focus groups with non-premium cigarillo smokers (n=28). An online survey was conducted with a national sample of cigar and/or cigarillo smokers (n=268).

Results: Many premium cigar smokers had limited exposure to PP because they purchased fully branded cigars in boxes duty-free or online, and singles in non-compliant packaging but those exposed noticed and were concerned by the warnings, tried to avoid them by hiding cigars and boxes, and felt more like "dirty smokers". Changes in perceived taste, harm and value were minimal for this non price-sensitive group of experienced cigar smokers. Occasional cigar and premium cigarillo smokers reported lower PP exposure when purchasing singles and higher exposure when purchasing boxes. Participants with higher PP exposure perceived cigar/package appeal and value had declined, noticed the GHWs and tried to conceal them by decanting from boxes. Less experienced cigar smokers re-

ported less frequent trialing of brands since PP. Non-premium cigarillo smokers reported high PP exposure, greatly reduced perceived appeal, quality, taste, enjoyment and value, somewhat increased perceived harm, greater noticeability of GHWs and concealment of packs, and more contemplation of quitting. Online survey participants reported moderate exposure to PP and many reported increased noticeability of GHWs (33%), decreased appeal of packaging (53%) and reduced consumption of all tobacco products (34%-45%) since PP implementation.

Conclusion: Non-premium cigarillo smokers appear to have been most exposed and most influenced by PP, with cigar smokers less so, especially those in the regular premium cigar smoker group who have maintained access to fully branded products.

PD-1265-21 Mobile courts: effective tools for enforcement of tobacco control law in Bangladesh

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Background and challenges to implementation: Government of Bangladesh (GoB) signed FCTC on 16 June 2003 and ratified on 10 May 2004. Then passed 'Smoking and Tobacco Products Usage (Control) Act-2005' and this law was amended on 29 April 2013 for more befitting to FCTC and smooth enforcement. The GoB along with some NGOs working for TC identified that enforcement of TC Law was a big challenge. After that, Mobile Court Act-2009 was passed. Mobile Court is type of summary trial, conducted by Executive Magistrate at the place of offence by pronouncing spot punishment like imprisonment, fine etc.

Intervention or response: Executive Magistrate conduct Mobile Court with a prosecutor, member of law enforcing agencies at the Points of Sale, Public Places, Chain shops and Tobacco Industries etc to ensure the provisions of Law in Bangladesh. News-media, NGOs and mass-people also present while Mobile Court is executing. Mobile Court has a demonstrative effect for removing the banner, sign board, bill-board of Cigarette and tobacco products and destroying those materials publicly. News of Mobile Court is treated as a popular event both the electronic and print media. Therefore, Mobile court is recognized valuable in the whole gamut of enforcing laws in Bangladesh.

Results and lessons learnt: Mobile Court plays a significant role for compelling the people abide by the Law as well as creates public awareness. Mobile Court also faces interference from tobacco industries but success of Mobile Court depends on leadership of Executive Magistrate. Conducting Mobile Court at the HQ of British-American Tobacco Ltd-Dhaka may be an example. The presenting author, as Executive Magistrate of Dhaka was informed by an anti-tobacco activist, that BAT used to word "lights" on Benson and Hedges brand which created a public perception less-nicotine or less-harmful brand of cigarette. Then visited deferent point of sales and asks people and found the fact was true. Then, conducted Mobile Court at the head quarter (HQ) of British American Tobacco (BAT) on 20th January 2010 overcoming various obstacles by BAT. Afterwards, the instigating word lights no longer on cigarette pack of Benson and Hedges.

Conclusions: Mobile Court is conducting in everyday and disposing hundreds of cases on Tobacco Control litigation. Mobile Court might be globalized to ensure the rapid enforcement of TC Law and it obviously a legal weapon to encounter the challenges on Tobacco Control.

PD-1266-21 Tobacco package health warnings: international overview and report on progress

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Background: The WHO Framework Convention on Tobacco Control (FCTC) is revolutionizing health warnings on tobacco product packaging worldwide. There is tremendous international momentum on this issue. Package health warnings are a highly cost-effective measure to reduce tobacco use. Package warnings provide educational messages that reach the entire population of tobacco consumers many times per day. Governments determine the messages, and tobacco companies pay the cost. The low cost nature of this tobacco control measure is especially important in developing countries. The effectiveness of health warnings increases with their size, as the FCTC Guidelines recognize. Moreover, health warnings with graphic images of the negative health effects are far more effective than text-only warnings. A picture does indeed say a thousand words.

Intervention: This presentation will report on worldwide progress at increasing package warning size,

and requiring pictures as part of health warnings. In part, this presentation will present the results of the fourth edition of the report, Cigarette Package Health Warnings: International Status Report. Results More than 75 countries and territories have finalized requirements for picture warnings. More than 60 countries have finalized requirements mandating that warnings cover at least 50% of the package front and back. Further progress will be made as more countries implement new and enhanced measures, including implementation of the new European Union Directive requiring picture health warnings to cover 65% of the package front and back. Progress is also being made globally regarding package health warnings for products other than cigarettes, in ensuring warning requirements apply to cartons and in duty-free stores. Global progress is being made despite continuing tobacco industry opposition including, in some countries, legal challenges.

Conclusions and Key Recommendations: Countries worldwide should accelerate efforts to improve warnings by increasing the size of warnings, by requiring pictures, by enhancing the choice and rotation of pictures, and by responding to tobacco industry efforts to weaken health warnings.

PD-1267-21 Assessing the impact of tobacco warning labels on smoking behavior of young adults in Georgia

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Background: Warning labels have a significant impact on the smoking behavior. In Georgia the warning text-only labels were first required on cigarette packs in 2009. There is no any evidence from 2009 till now in the country, how the warning labels affect smoking behavior of Georgian people. The purpose of the study is to identify how the warning text-only labels effect on smoking behavior in the perceptions of Georgian adults.

Design/Methods: The qualitative study was conducted in 2013 in the capital city of Georgia, Tbilisi, with the support of LEPL Drug Addiction and Mental Health Policy and Programmes Management Center. 30 adults in two groups (smokers and non-smoker groups), was recruited by snowball sampling and interviewed in depths, semi structured questionnaire was used during the interviews. Inclusion criteria were: (1) at least 1 year smoking experience for first group, (2) never smoking experience for second group and (3) 21-30 years age. This age group was named as young adults.

Results: In the perceptions of Georgian young adult smokers' warning texts-only labels do not increase motivation to quit smoking, especially if the texts of labels are not changed during the years. For smokers, warning labels less effective to raise knowledge of health harms of smok-

ing. For non-smoking respondents, labels can be effective for beginners, who thinking to start smoking and warnings can raise their awareness of health risks. For smokers group more effective labels to reduce smoking consumption might be warnings with fear arousing pictures and all time changing new and clear messages. In the perceptions of both group respondents, labels prevent nonsmokers from starting the smoke.

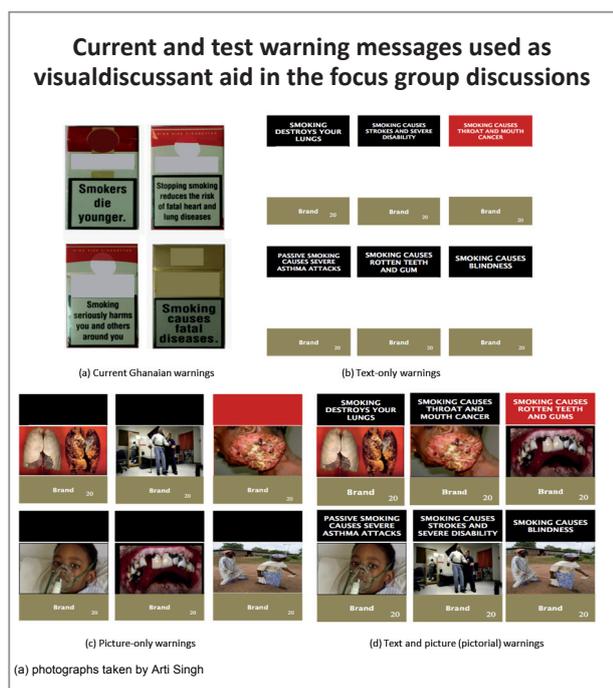
Conclusion: The text-only, unchanging labels less effective for Georgian smokers to quit smoking, but they can prevent smoking initiation. To raise awareness of health risks, increase motivation to quit smoking or reduce consumption, there is a need to change parameters of labels, make it more effective, large, with clear and changing messages. Further survey is needed in the country, to identify the gaps and necessities of future steps of effective warning labels and successful tobacco control in Georgia.

PD-1268-21 “Pictures don’t lie, seeing is believing”: exploring attitudes to the introduction of pictorial warnings on cigarette packs in Ghana

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Background: To compare perceptions of written and pictorial warning labels on cigarette packs among Ghanaian smokers and non-smokers, and explore their views on the introduction of pictorial warnings in Ghana.



Design/Methods: Qualitative study involving 12 focus group discussions with 50 smokers and 35 non-smokers aged 15 and over in Kumasi, Ghana. Semi-structured discussion guides were used to explore the perception, acceptance and potential use of pictorial warning labels in Ghana.

Results: Health warnings combining a picture and text were perceived by both smokers and non-smokers to communicate health messages more effectively than picture-only or text-only warnings. The effect of text-only warnings was considered limited by low levels of literacy, and those of any health warning on the pack by the common practice of single stick sales. Of the six health warnings tested, lung cancer, blindness, stroke and throat and mouth cancer messages were perceived to have the most impact on smoking behaviour, including uptake and quit attempts

Conclusion: Warning labels combining pictures and text have the potential to reduce smoking uptake, increase quit attempts and reduce smoking appeal among smokers and non-smokers in Ghana. Measures to prevent single stick sales, or to promote health messages to purchasers of single sticks, are needed.

PD-1269-21 Perception of tobacco users regarding health warnings on packages of tobacco products in 3 districts of Karnataka, India

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Background: Health warnings on tobacco products are meant to discourage tobacco users and non-users from using tobacco products. Nonetheless, they should be large enough, clear and unambiguous to be effective. According to Article 11 of the WHO Framework Convention on Tobacco Control (FCTC) on “Packaging and labeling of tobacco products”, health warnings should cover 50% or more of the packaging’s principal display areas. The Government of India issued an undertaking in the Supreme Court mandating pictorial health warnings (PHWs) on packages of tobacco products from 31st May, 2009 under “Cigarettes and Other Tobacco Products Act” (COTPA) guidelines. The present study was conducted to know the perceptions of tobacco users regarding pictorial health warnings on packages of tobacco products in 3 districts of Karnataka, India.

Design/Methods: A cross sectional survey was conducted among 500 tobacco users in 3 districts of Karnataka, India

viz., Dakshina Kannada, Udupi and Chickmagalur using a self-administered, close ended questionnaire. The questionnaire was administered in the local language, Kannada.

Results: About 47% of the participants were using tobacco in the smoked form (cigarettes/beedis), 42% smokeless form (paan/ghutka/haans) and 11% were users of both forms. Majority of them (73%) have seen pictorial health warnings but only 54% had read the text warning on the tobacco packets. Most of them did not understand the picture of X-ray/diseased lung and felt that scorpion picture conveyed the message of being hazardous on the smoked tobacco. The picture of cancer of mouth was found to be more effective in conveying information of being harmful on the smokeless form. A vast majority (91%) felt that the pictorial warnings should be larger in size and placed on both front and back of the packets and 74% opined that the text warnings should be in the local language. A combination of both text and pictorial health warnings were preferred by all the participants.

Conclusion: Although most of the tobacco users have either seen/ read the pictorial/ text health warnings on smoked/ smokeless tobacco packages, they were not motivated enough by them to quit the habit. The purpose of health warnings is not served as they are not understood.

PD-1270-21 Tobacco/ smoking habits and awareness about anti-smoking acts among the general public in Gurgaon, Haryana, India.

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Background: Smoking in India has been known since at least 2000 BC when cannabis was smoked and is first mentioned in the Atharvaveda, which dates back a few hundred years BC. Fire offerings (homa) are prescribed in the Ayurveda for medical purposes and have been practiced for at least 3,000 years while smoking, dhumapana has been practiced for at least 2,000 years. India is the world's third largest tobacco-growing country. The Indian scenario as far as tobacco consumption is concerned is far worse because of the prevalence of the tobacco chewing habit which covers a wide spectrum of socioeconomic and ethnic groups and is spread over urbanized area as well as remote village. However smoking in public places was prohibited nationwide from 2 October 2008. There are approximately 120 million smokers in India. According to the World Health Organization, India is home to 12% of the world's smokers. This study was contemplated with an aim to assess tobacco / smoking habits and awareness about anti-smoking act among general public in Gurgaon, Haryana, India.

Design/Methods: A descriptive cross-sectional study was conducted among the general public who had the tobacco habit in any form. A structured questionnaire consisting of 14 questions related to tobacco/smoking habits and awareness about anti-smoking act were asked and their responses were recorded.

Results: The study population consisted of total 430 individuals, male 364 (84.65%) and females 66(15.34%) . Then the questionnaires were asked and statistically analyzed. Around 286 (78.57%) from 364 male were indulged in some form of tobacco usage (smoker =32.86% , tobacco chewer = 16.78% , both =11.18 % , alcohol + tobacco user =21.67%). In the present study , most common cause of tobacco use was pleasure 40.5% , inducing factor were friends 53.1% followed by parents and siblings . 36.20% patients used tobacco as second hand exposure in job places. 54.8% were aware about the anti-smoking act in public places, so only 8.6% people from all males enrolled, were smoking in public places.

Conclusion: Despite the facts, that the harmful effects of tobacco chewing and smoking are widely known, many young people start smoking during adolescence, largely because they believe that smoking will boost their social acceptability and image. Family influence also play a role, adolescents whose parents or siblings smoke are more likely to use tobacco.

PD-1271-21 Mounting a campaign for strong pictorial health warnings on tobacco packages through utilisation of the Right to Information Act in India

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Background and challenges to implementation: Right to Information is a part of fundamental rights under Article 19(1) of the Constitution of India. This empowers citizens to question the Government, inspect their files and take copies of government documents. The RTI has been used as a tool by public health community to get insider information related to pressure of the tobacco industry and exposing the industry interference, information on policy related matters and generating political support for Tobacco Control. RTI can be filed by any individual paying a nominal fee of Rs. 10 for seeking required information. VHAI is using the RTI as an advocacy tool to seek information about the policy related decisions, representation of the industry to Ministry of Health and Family Welfare, reasons quoted in Government files for delay and dilution of the implementation of the Pictorial Warnings, names /profiles of ministers pro and anti and with vested interests into tobacco control.

Intervention or response: To do so, VHAI filed 15 – 20 RTI's with the Ministry of Health and Family Welfare, Government of India from January 2010 – January 2012 to seek information on the pack warnings as and when major policy level changes were introduced for delay and dilution of the pack warnings.

Results and lessons learnt: The RTI initiative helped civil society to effectively strategize and mount a stringent campaign on tobacco control across the country, garner political support from select leaders, sensitize the media and seek general public support for compliance and implementation of pictorial warnings. The malafide in-

tentions of some Ministers who have vested interests in Tobacco Industry and no relationship with Public Health concerns were key players in deciding for the delay and dilution of the warnings were exposed.

Conclusions and key recommendations: The Government notified a completely new set of visuals to serve as pack warnings from April 1, 2013 to be depicted on tobacco product packs. Three sets of warnings each were notified for smoking as well as smokeless forms of tobacco product packages.

PD-1272-21 Is there any association between exposure to health warnings on tobacco products and intention to quit among users in India?

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Background: India is unique in tobacco usage as various kind of tobacco products are easily available in smoke and smokeless form in market. Health warning labels is prominent source of health information and has an impact role in tobacco control. In 2003, Government of India enacted cigarette and other tobacco product act 2003 (COTPA, 2003) which called for prohibition of advertisement and regulation of trade and commerce, production, supply and distribution. However in India, limited evidence exists on impact of health warning on quit intentions of tobacco product. The present study was conducted with objective to review the association between health warning and quit intentions of tobacco products. **Design /Method:** Secondary data analysis of Global Adult Tobacco Survey (GATS) India 2009 -2010 was done.

Results: Out of 24329 tobacco users, 10438 (43%) have intention to quit tobacco. Among those who have noticed warning labels, 66.38 % (n =4903) have intention to quit smoke form of tobacco and 65.77 % (n=6825) have intentions to quit smokeless form of tobacco.

Conclusions: Positive impact of health warning has been seen among tobacco users who have intentions to quit tobacco. This study provides the relationships between intentions to quit and health warning with socio-demographic characteristics, mass media. The findings of study is important to country like India where the tobacco consumed in large number of ways. In addition India is multicultural and multi linguistic settings as well high illiteracy levels warrants that the health warnings is robust enough to effectively convey the danger of tobacco use to people from different background

Table 1 : Logistic Regression analysis of tobacco users who have intention to quit.(GATS INDIA DATA 2009 -2010)

Area	Smoke			Smokeless		
	Adjusted OR	95% C.I for OR (Lower, Upper)		Adjusted OR	95% C.I for OR (Lower, Upper)	
Area						
Urban	1.40**	1.17	1.66	1.50**	1.31	1.72
Rural(RF)	-	-	-	-	-	-
Gender						
Male	2.74**	2.06	3.64	1.96**	1.67	2.28
Female(RF)	-	-	-	-	-	-
Age(Yrs)						
15-24	1.77**	1.14	2.74	3.23**	2.29	4.55
25-44	1.23	0.87	1.74	2.22**	1.64	3.01
45-64	1.11	0.78	1.56	1.60**	1.18	2.18
Above 64(RF)	-	-	-	-	-	-
Education						
No formal schooling	0.27**	0.13	0.58	0.59	0.34	1.01
Less than primary school completed	0.45*	0.21	0.96	0.63	0.37	1.09
Primary school completed	0.52	0.25	1.10	0.81	0.47	1.4
Less than secondary school completed	0.65	0.31	1.36	0.83	0.49	1.43
Secondary school completed	0.99	0.46	2.11	1.11	0.64	1.92
Higher secondary school completed	1.24	0.56	2.72	1.12	0.64	1.96
College/university completed	1.41	0.63	3.18	1.09	0.61	1.94
Post graduate degree completed(RF)	-	-	-	-	-	-
Occupation						
Government employee	1.50	0.76	2.93	1.95**	1.2	3.18
Non-government employee	1.54	0.84	2.82	2.17**	1.42	3.32
Self-employed	1.46	0.81	2.66	1.92**	1.26	2.91
Student	1.01	0.43	2.34	1.18	0.69	2.02
Homemaker	0.85	0.44	1.62	1.42	0.92	2.2
Retired	2.67*	1.18	6.02	2.57**	1.29	5.14
Unemployed, able to work	1.35	0.65	2.77	1.41	0.85	2.34
Unemployed, unable to work(RF)	-	-	-	-	-	-
Wealth Quintile						
Poorest	0.33**	0.24	0.46	1.07	0.83	1.38
Poor	0.61**	0.44	0.83	1.14	0.89	1.45
Moderate	0.76	0.55	1.04	1.17	0.91	1.5
Rich	0.64*	0.47	0.88	1.14	0.89	1.46
Riches(RF)	-	-	-	-	-	-

OR=Odd ratio, CI=Confidence interval, RF= Reference categories, **p<0.01, *p<0.05

PD-1273-21 The impact of cigarette packaging and health warnings on risk perception in young children in relation to their parents smoking status

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Introduction: Cigarette packaging is one of the most prominent forms of tobacco marketing in Malaysia. The current study examined the impact of pack design and health warnings on risk perception and brand appeal among children ages between 10-12 years. We also investigated this relationship with their parent's smoking status.

Methodology: A cross sectional study was conducted among students from standard four to standard six, in a primary school in Klang Valley. The total respondents were 281 child-parent pairs. We administered two separate sets of questionnaire for parents and their child on socio demographic, pictorial health warnings and their perception on the packaging, attractiveness, brand, health impact and purchase interest.

Results were analysed by multivariate regression analysis.

Results: Among parents, 33.5% of them believed in warning labels on cigarette packaging and 59.8% of them think that they will get disease as shown on cigarette packaging if they continue on smoking. Whereas, 89.0% of children believed that smoking will affect their health. However, only 50.5% of the children rated "highly believe" on the descriptors and pictorial health warnings on the packaging. In both groups, different designs and pictorial warnings gave different perception. Additionally, the children whose parents were smokers were significantly more likely to believe the descriptors and pictorial images shown on the packaging 31.16 (95% CI 2.78-37.01) compared to children whose parent/(s) were not smokers.

Discussion: Children whose parents are smokers have increased awareness on the danger of tobacco smoke. Hence, these children may act as a good motivator for their parents to start quitting smoking.

PD-1274-21 Tobacco brand presence and diversification across 14 low- and middle-income countries

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Background: Tobacco companies use market segmentation and line extension to diversify within existing brands and thereby offer many different packs within the same brand family. In 2009, Uruguay introduced restrictions

that limit each brand family to only one representation in order to cap brand diversification and therefore prevent misleading impressions that one is less harmful than another. We collected tobacco packages from 14 low- and middle- income countries and surveyed the numbers of packs available within each brand family to assess brand presence and diversification.

Methods: In 2013, we established TPackSS, a global tobacco packaging surveillance system. We purchased tobacco products in Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Pakistan, the Philippines, the Russian Federation, Thailand, Turkey, Ukraine and Viet Nam. In each country, we purchased one of every unique tobacco pack from a sample of vendors in 36 low, middle, and high socioeconomic areas of three major metropolitan areas. We coded the data to establish common brand families and examined these groups by country in which the packages were purchased.

Results: We collected 3,358 unique tobacco packages representing 703 brand families. The brand families with the greatest number of unique packs were: Marlboro with 196 packs purchased across all 14 countries, Davidoff with 114 across 12 countries, Dunhill with 91 across 13 countries, Camel with 90 across 10 countries, and Esse with 89 across 11 countries. However, high numbers of unique packs were not common beyond these brands: we found that only 63 out of 703 brand families (9%) across all 14 countries had more than 10 unique packs within a brand family. Despite representing a small proportion of all collected brand families, these 63 brand families made up the majority of our sample: 9% of all brand families were responsible for 59.3% of all packs collected. Half of the brand families in the collection (50.1%) had more than 1 pack within their respective brand families.

Conclusion: These findings provide information on brand presence and diversification across 14 low- and middle-income countries. Findings from this surveillance study can inform advocacy efforts for stronger packaging and labeling laws concerning brand diversification such as those introduced in Uruguay.

PD-1275-21 The association between pictorial health warnings and quit smoking intentions among male smokers in Vietnam

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Background: The new Vietnamese Law on Prevention and Control of Tobacco Harms, which requires printing the pictorial health warnings (PHWs) on cigarette packages, took effect in May 2013. The effectiveness of the PHWs on intention to quit smoking is hypothesized to be influenced by whether the smokers notice the PHWs or not and, if yes, that it will be further influenced by the level of smokers' cognition (the process and content of thinking,

remembering and communicating) related to the PHWs. The main objective of the present study was to assess the association between level of smoker's cognition related to PHWs and intention to quit smoking.

Design/Methods: A cross-sectional questionnaire-based household survey was developed and administered to 500 male smokers aged 18 to 35 years in Thai Binh Province and Khanh Hoa Province, Vietnam. Cognition was assessed as "high" or "low" according to the extent to which smokers reported noticing, paying attention to, thinking about and discussing the new labels. Logistic regression analysis was used to measure the association between high and low level of cognition related to PHWs and intention to quit smoking.

Results: The results showed a strong positive association between measurement of cognitive processing and smokers' intention to quit (OR=2.8; 95% CI: 1.8 - 4.3). In addition, the strongest predictor for a quit intention was "Ever made a quit attempt" (OR=7.03; 95% CI: 4.5 - 10.2) followed by being "Very worried about the health consequences" (OR=4.1; 95% CI: 1.5 - 11.3). Those who tried to "Avoid looking at or thinking about" the PHWs had an approximately two times higher likelihood of presenting with the intention to quit smoking (OR=2.2; 95% CI: 1.5 - 3.4).

Table 1: Odds ratios for intention to quit in relation to demographic, smoking characteristics and PHWs related variables.

Characteristic	No. individuals (% intend to quit)	Bivariate analysis		Multivariate analysis*	
		OR (95% CI)	P- value	OR (95% CI)	P- value
Level of cognition (main exposure) n= 476					
Low	280 (32.1)	1.00		1.00	
High	196 (64.8)	3.90 (2.64-5.72)	<0.001	2.67 (1.76-4.05)	<0.001
Ever made a quit attempt (n=478)					
No	273 (24.5)	1.00		1.00	
Yes	205 (73.7)	8.60 (5.68-13.03)	<0.001	7.03 (4.53-10.92)	<0.001
Worry about the health consequences of smoking (n=476)					
Not at all worried	89 (24.7)	1.00		1.00	
A little worried	214 (42.1)	2.21 (1.26-3.87)	0.005	1.86 (0.97-3.59)	NS
Moderately worried	125 (55.2)	3.75 (2.00-7.03)	<0.001	2.03 (1.00-4.14)	0.046
Very worried	48 (75.0)	9.14 (3.60-23.20)	<0.001	4.05 (1.45-11.30)	0.004
Made any effort to avoid looking or thinking about the PHWs in last month (n=477)					
No	326	1.00		1.00	
Yes	151	2.96 (1.98-4.41)	<0.001	2.23 (1.45-3.44)	<0.001

*) ORs have been adjusted for level of cognition, ever made a quit attempt, worry about the health consequences and made effort to avoid PHWs.

Conclusion: The new Vietnamese PHWs were associated with high levels of intention to quit smoking. Hence, PHWs may serve as an effective population based smoking cessation intervention in Vietnam.

PD-1276-21 'Plain Packs Protect': the first campaign of its kind in the Northern Hemisphere

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"Our final communication vehicle with our smokers is the pack itself. In the absence of any other marketing messages, our packaging... is the sole communicator of our brand essence." Internal Philip Morris presentation. Every year, another 340,000 children in the UK are tempted to try smoking. Research indicates they are more likely to be lured by highly designed and market-tested packs than by drab plain packs with graphic health warnings. Yet Smokefree South West research showed that there was still a lack of public awareness of the packaging tactics used by tobacco manufacturers – and the simple solution available to better protect our children. This is why Smokefree South West launched the Plain Packs Protect campaign in partnership with ASH, FRESH, Tobacco Free Futures, Cancer Research UK, British Heart Foundation and other leading health bodies and charities in the UK, to follow Australia's lead in making tobacco packs tell the real story about what they contained. The campaign continues through various channels for advocacy as Government consultation comes to a head, but the evaluation of the initial stages showed the campaign received more than 200,000 public pledges of support and an increase of 20% in the South West – equivalent to 840,000 people – favouring standardised packaging. While Australian laws are still being challenged by the tobacco industry, Smokefree South West and our partners are engaging with campaigners in Australia to counter false claims and data produced to undermine the public health case. We are continuing the advocacy to ensure the Government holds to its pledges to protect young people from the harms of smoking. Our ongoing work includes maintaining a high public and media profile for the issue and shoring up support across all political parties at a regional and national level, with the aim of making plain standardised packaging a reality in England before the general election in May 2015. Find out about the initial research and the challenges encountered; from campaign launch to the tobacco industry response, including the shift in language from 'plain' to 'standardised' packs. Hear about the first public health initiative of its kind in the Northern Hemisphere and how it continues throughout Government consultation and policy-making. Discuss how the campaign was successful, utilising traditional and social media and other influencing factors.

59. PROTECTING AND EMPOWERING YOUTH

PD-1277-21 A social network campaign to prevent youth from tobacco use and initiation: implementation and response

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Background and challenges to implementation: According to GYTS Argentina 2012, 22% of youth between 13 and 15 years old smoke. Although the number of tobacco users is decreasing it is still high. The National Tobacco Control Program designed social networks campaign to prevent youth from tobacco use and initiation, taking into account the language Argentinean youth use among themselves and also in social networks such as Facebook and Twitter.

Intervention or response: Facebook page and Twitter account had been created especially for this campaign in 2014, under the name "Don't smoke, #BeYourself" ("Si no fumás, #SosVos"), in order to spread messages showing that "when you smoke you have no chance to choose freely because you are addicted to a substance" and "to remind all the good moments you would lose if you had to go outdoors to smoke". It was launched in the beach during summer holidays. National celebrities (football players, actors and singers) had joined this campaign by taking pictures with the main messages of the initiative. These messages had been related to the hashtags adolescents used in the internet such as "#BeYourself" (#SosVos), "#StayIn" (#EstasAdentro) and "#Unsmokable" (#Infumable). The logo chosen for the campaign was the hashtag used as a non smoking banner.

Results and lessons learnt: The language used in the campaign adapted to youth language played a very important role as adolescents had felt empathy with it. The campaign reached 3.000 Facebook profiles and 12.778 accounts in Twitter. Besides, more than 200 photographs in which celebrities and people in general had been shared among youth through the internet, spreading the messages of the campaign. Additionally, 2 spots made for the campaign were reproduced 6963 times in YouTube. The presence of football players and artists who have direct influence in adolescents had shown a good result for the initiative.

Conclusions and key recommendations: This is the first time Argentina has made a social network campaign targeting youth, using adolescent's language and having celebrities support. Additionally, young people were not only who got involved in the campaign. The campaign had excellent response and acceptance of the slogans promoted, with active participation of young people in viralization messages, as well as in media impact.

PD-1278-21 Children's social representations of cigarettes: a photovoice project in Petrópolis, Rio de Janeiro, Brazil

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Background: Smoking is the main risk factor, after high blood pressure, for non-communicable diseases that are responsible for 63% of all deaths around the world. Despite successful smoking control policies implemented in Brazil, data show that prevalence of students that have ever smoked cigarettes is higher than 50% in many cities. Children's knowledge is often neglected when policy makers design public health programmes. The general aim of this research is to contribute for the development of tobacco strategies focused on children by assessing their social representations of cigarettes using the photovoice technique with students from Petrópolis, Rio de Janeiro, Brazil.

Design/Methods: In total, 27 children, 15 girls and 12 boys aging from six to 16 years old, took part in the project that involved taking pictures, writing essays and discussing in groups. Children participated in three meetings in the period of 15 days. Thematic network analysis was performed to examine the data.

Results: Findings suggest that the participants represent cigarettes as something easily accessible. Young children mentioned many times that they themselves had bought cigarettes for an adult even being prohibited to commercialize tobacco products for children in Brazil. They also mentioned non-official points of sale and both groups referred to negative outcomes from it. Cigarettes are also represented by participants as something highly addictive. This was one of the first representations that spontaneously came from children. Both groups used terms as 'addiction' and 'dependence' to explain why smokers smoke. Older children commented on how fast it is to become addicted when talking about peer experiences. Their opinions about parental control are controversial. Even while supporting it at times, they also questioned its validity facing what they believe to be incongruities between what is said and what is done by their parents.

Conclusion: Cigarettes are strongly present in children's realities appearing in many social encounters performed in spaces that included bus stops, bakeries, piazzas and their houses. In practice the research suggests that any program aiming to prevent children from smoking will need to be very comprehensive and participative, allowing children to express their opinions and dialogue about their doubts. Once this is the first study of children's social representations of smoking in Brazil, further research needs to be carried out.

PD-1279-21 Public attitude toward tobacco sales restrictions in Georgia

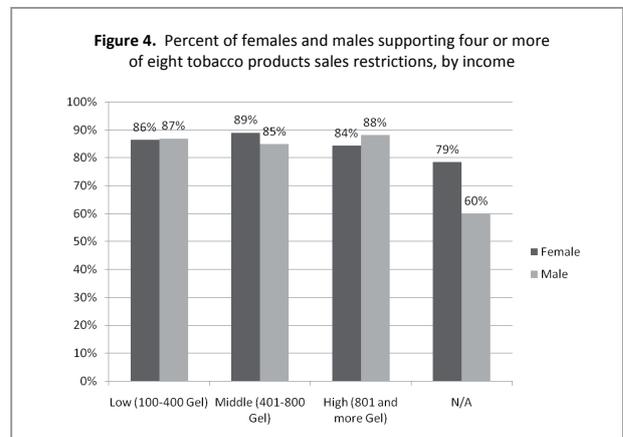
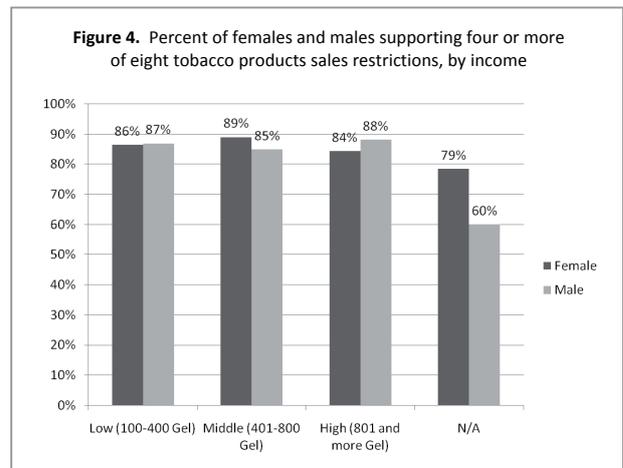
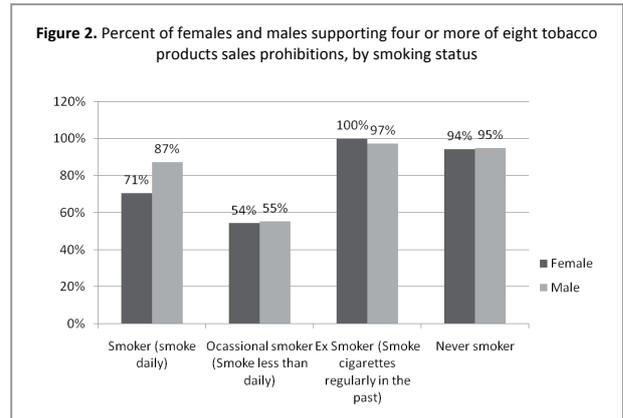
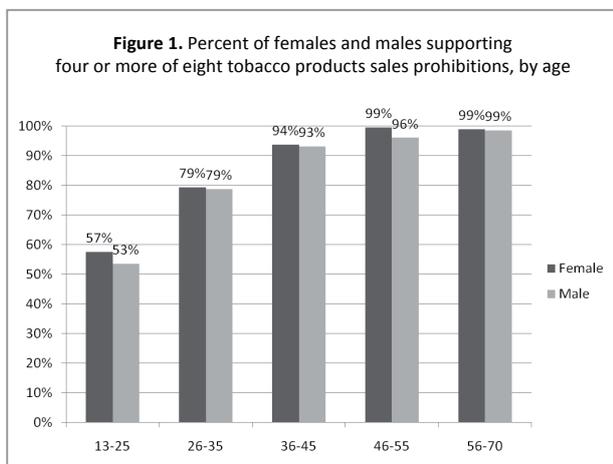
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Background: In Georgia, no data on public opinion regarding tobacco sales restrictions have been available until 2008. The aim of the study is to provide data from a nationally representative sample including non-smokers, ex-smokers and current smokers, on their level of support for restricting tobacco sales.

Design/Methods: 1,588 people aged 13-70 were interviewed at home about their level of agreement with eight possible tobacco sales restrictions, which were combined to create a dichotomous scale indicating low agreement (agree with none to three of eight restrictions) or high agreement (agree with four or more of eight restrictions). Levels of agreement were analyzed by demographic segments defined by age, gender, education and income and by tobacco use status.

Results: Across all eight forms of tobacco sales restrictions, the average support for tobacco sales restrictions was 85.2% which is a high level of support. Among smokers, 71% of women and 87% of men indicated a high level of agreement for restricted tobacco sales; among occasional smokers 54% and 55% respectively. Above 95% of female and male ex-smokers and never smokers expressed high level of agreement with sales restrictions. After adjustment for other predictors, agreement was significantly associated with age (more agreement with higher age) and smoking status (more agreement among never-smokers, less in current smokers), while there were no significant differences in agreement by gender, education, and income.



Conclusion: The present findings indicate to Georgian public health authorities that the support for tightened tobacco sales restrictions is high. It is of high importance for Georgia to fully implement the Framework Convention on Tobacco Control, including strong sales restrictions, and there is good evidence of public support for doing so.

PD-1280-21 Status of compliance to the law limiting access to tobacco products among students in Chennai City, India

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Background: Implementation of section 6b of the 'Cigarettes and Other Tobacco Products Act (COTPA)' that restricts sale of tobacco adjacent to educational institutions has been a challenge. The objective of this paper is to document compliance to section 6b of the law (prohibits sale of tobacco products within 100 yards of educational institutions) through an observational survey in Chennai city, India.

Methods: Trained investigators visited 316 educational institutions in Chennai city without prior intimation and recorded observational data using a structured pro forma on compliance to section 6b of COTPA.

Results: Sale of tobacco was found within 100 yards of 72.4% (229) of the educational institutions visited. Tobacco usage was witnessed inside the campus of 27.2% (86) of the institutions. One in five (21.8%) of the institutions had boards prohibiting tobacco use inside the campus and 19.9% had boards at the entrance gates prohibiting sale and use within 100 yards.

Conclusion: Tobacco products were being sold within 100 yards of three out of five of the educational institutions surveyed in Chennai city in violation of section 6b of the law prohibiting such sale.

PD-1281-21 Creating tobacco-free environments for students: advocacy on tobacco sales within 100 Yards of Mumbai schools

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Background: India is experiencing an epidemic of tobacco use – nearly one third of adults and almost 15% of youth use tobacco. One important measure to prevent tobacco use in India is to prevent sales within 100 yards of schools. The Cigarette and Other Tobacco Products Act (2003) prohibits the sale of all tobacco products within 100 yards of schools, but compliance with this law is low in Mumbai.

Methods: In 2011, the area surrounding 91 public schools in Mumbai was surveyed. Following analysis of the results, advocacy by public school students on COTPA compliance was conducted with municipal health and licensing officials.

Results: The survey found that 82.4% of schools (n=75) had tobacco vendors within 100 yards. The average of 2.9 tobacco vendors were operating within 100 yards of the schools. Nearly one third of the tobacco vendors were operating without a license (n=151). Almost 15% (n=32) of vendors reporting selling tobacco to minors.

Conclusions: The introduction of laws preventing sales of tobacco within 100 yards of Mumbai schools was not being enforced. As a result of a survey and advocacy conducted by staff and students, Salaam Bombay Foundation was able to get COTPA regulations prohibiting tobacco sales near schools included in Mumbai's Shops and Establishments License Act.

PD-1282-21 What circumstances will make bidi smokers quit smoking bidis?

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Background and challenges to implementation: Sustained increase in taxes which result in higher retail prices have the potential to prevent initiation into tobacco, leads to reduction in use and often motivates current users to quit tobacco use. Over time this will lead to reduction in adult prevalence of tobacco use. Data from both developed and developing countries have shown that if the price of cigarettes is increased by 10% roughly about 4% and 6% current users respectively will give up smoking in a developed and developing countries. In India, bidis dominate the smoking market. Nearly 10 bidis sell for every cigarette and cost on an average less one-sixth compared to a cigarette. Correcting the price of bidis has been a political challenge for several socio-economic reasons

Intervention or response: Through formative research we find out the key price and non-price factors which will make bidi smoking more difficult for current and future smokers. Since bidi is primarily smoked by poor people, the sample would be taken from the lower strung of cities and rural areas in ten states of India which will interview 1000 current bidi smokers (95% males, 5% female). Ethical approval and prior informed consent will be taken from local municipal and health authorities. The study will commence in September 2014 and results of the study are expected in December 2014.

Results and lessons learnt: The survey will present conditions and reasons under which current bidi smokers can be motivated to reduce or quit. This is the first of its kind study in India for bidi smokers

Conclusions and key recommendations: We shall know if price will lead to bidi smokers quitting smoking or another intervention will be needed.

PD-1283-21 Role of Municipal Corporation in tobacco control: a case study from Shimla Municipal Corporation in India

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Background and challenges to implementation: Shimla city (Pop: 2 lakh, Area: 25 km²) is a famous hill station in state of Himachal Pradesh in India. More than 2.5 lakh tourists visit this city each year. Tobacco use among local residents is widely prevalent as a part of their culture; GATS survey revealed that 22% of adult population use tobacco in one or other form. Similarly tourists were also frequently seen smoking in public places in the past. Although the Indian tobacco control legislation (COTPA) was in place since 2003, but implementation of the Act was sub-optimal. Knowing the gravity of the tobacco burden, Shimla Municipal Corporation (SMC) took a leadership stand to go for the implementation of COTPA in the city and protect the residents and tourists from tobacco harms. Our study aims to illustrate the action taken, experience and highlights of good practices adopted by SMC in their process of becoming smoke-free and implementing other tobacco control policies.

Intervention or response: SMC collaborated with HPVHA- a local NGO for creating community awareness and capacity building. Media was also sensitized. Corporation issued several circulars and notified a squad. Besides spreading awareness about the legislation, corporation used enforcement as a means to create awareness.

Results and lessons learnt: Municipal officials initiated enforcement of the all provisions of COTPA in true letter and spirit. A responsibility for complying with the legislation was fixed on the owners and in charges of the public places. All points of sale are now free from advertising billboards. First conviction in the country under for TAPS violations and pictorial health warnings on tobacco packs was carried out by SMC. Four retailers were fined with the fine amount of Rs. 1 lakh each for selling gutkha and khaini, which is a banned under Food Safety Act. Corporation is well aware of tobacco industries interference and didn't allow them to do any CSR with the corporation limit. There are virtually no tobacco vendors in and around educational institutions in Shimla city. Following an opinion poll and third party compliance survey in 2010, Hon'ble Chief Minister declared the city as Smoke free city.

Conclusions and recommendations: Municipal Corporation has tremendous potential for ensuring tobacco control as demonstrated by SMC. This model can be replicated in other municipal corporations in India or other developing countries with similar settings.

PD-1284-21 Local enforcement in the Philippines with expanded access restriction in zones of youth activity and health

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Background and challenges to implementation: Before the Philippines ratified FCTC in 2005 Tobacco Control is implemented under Republic Acts 8749 and 9211. Both restrict use but 9211 provided access restriction or sales for minors. In addition, 9211 provided zonal sales and ad bans. These bans radiate up to 100 meters from any point in the perimeter of the following: schools, public playgrounds or other facilities frequented particularly by minors. The brilliance in this lies in the broadness by which they can be interpreted, i.e. schools can refer to universities. Same applies for public playgrounds and facilities frequented by minors where we find these within church grounds, parks, gyms, and even fastfood chains. In 2009, the Department of Health (DOH) issued Administrative Order 2009-010 which also directed Local Government Units (LGUs or provinces/cities/municipalities) to include sales ban up to 100m from DOH offices and attached agencies, hospitals and health facilities. The zonal ban in both policies apply to both minor and adult. Simply put, the expanded ban is area-based rather than age-based, adding further dimension in scope. As 9211 only allow tobacco ads at point-of-sale, ads cannot exist in locations affected by the 100m ban. While this policy has not met legal impediments, it lacked enforcement and public awareness.

Intervention or response: LGUs are primary implementors but majority have ignored enforcement. But that has been changing since. FCTC Alliance Philippines (FCAP) introduced in December 2009 a template ordinance for LGUs with mixed coverage of smokefree, ad ban and access restriction, reiterating the ban on tobacco sales and ads within 100m reference points. The template is backed up by trainings/assistance to facilitate better compliance. More than 100 Philippine LGUs have since adopted this.

Results and lessons learnt: The inclusion of localized zonal access restriction has significantly decreased tobacco point-of-sale and thus reduced tobacco ads in general, which also limited impulse purchase, contributing to overall reduced prevalence of smoking in public. Some LGUs have reduced total point-of-sale to less than half.

Conclusions and key recommendations: Further studies on must be undertaken to fully realise its potential and encourage other LGUs to follow suit. Increasing the number of zones for youth and health can potentially slash supply chain opportunities and even decimate tobacco sales in certain areas.

PD-1285-21 Protecting minors from the harmful effects of tobacco use in Metropolitan Manila, PhilippinesL Yapchiongco,¹ ML Alzona,¹ Lisa Wood²¹Health and Public Safety, Metropolitan Manila Development Authority, Makati City, Philippines,²Department for Tobacco Control, International Union Against Tuberculosis and Lung Disease, Edinburgh, UK. e-mail: r_yapchiongco@yahoo.com.ph

Background and challenges to implementation: The 2011 Global Youth Tobacco Survey in the Philippines indicated that 13.7% of students, 13 - 15 years old, currently use any form of tobacco, comprising 8.9% who smoke cigarettes and 7.3% who use some other form of tobacco. Of the students who reported using tobacco, 50.1% buy cigarettes from stores. Although unlawful to sell tobacco to anyone under 18 years of age, 37.7% of students who bought cigarettes were not refused purchase because of age. These statistics highlighted the need to increase awareness, compliance and enforcement of laws relating to the sale of tobacco products to minors.

Intervention or response: The Philippine Tobacco Regulation Act of 2003 addresses access restriction to minors by prohibiting the sale, use and distribution of tobacco products to and from minors. This law requires proof of age verification and signage warning to minors to be posted at points of sale. Sale of tobacco products within 100m of school perimeters is also prohibited. Through a grant provided by The Union, under the Bloomberg Initiative to Reduce Tobacco Use, school vicinities in Metropolitan Manila were inspected for compliance to the access restriction law by enforcers of the Metropolitan Manila Development Authority. This commenced in June 2012.

Results and lessons learnt: 1,279 school vicinities were visited. 7,759 stores within 100m of school perimeters were inspected, including ambulant vendors. Inspections revealed 64% of stores within 100m of school perimeters had display of tobacco products visible to minors. 26% had tobacco advertisements posted and only 13% had warning signs for minors. Only 12% of storeowners indicated that they verified age of buyers and even less (10%) ask for identification from students. 903 students were caught smoking within the school vicinity inspected. As a result of inspections, 15% stores were warned about their law violations, whilst others were educated about what the law requires. Monthly reports were submitted to the 17 City Mayors, but only 2 so far had taken action.

Conclusions and key recommendations: More than half of the stores are not compliant to the law. Further advocacy to LGUs and schools is needed to build their support in instituting effective measures for tobacco access restriction to minors. Compliance and publicized enforcement of these laws is a critical complement to other strategies to increase student awareness of harmful effects of tobacco use.

PD-1286-21 Gender differences, changes in smoking prevalence, and predictors of tobacco smoking among Ugandan adolescents: 2007 and 2011O Ayo-yusuf,¹ P Ebusu^{2,3}¹Office of Director; School of Oral Health Sciences, Sefako Makgatho Health Sciences University, Medunsa, Pretoria, South Africa, ²School of Health Systems and Public Health, University of Pretoria, Pretoria, South Africa, ³Health Advocacy, Uganda National Tobacco Control Association, Kampala, Uganda. e-mail: ebusupaul@gmail.com

Background: A number of smoking studies have been conducted in Uganda, but little is known about predictors of smoking among Ugandan adolescents and changes in prevalence over time.

Objectives: The study sought to determine the prevalence of, and factors associated with smoking among Ugandan adolescents during 2007 and 2011 and explore any gender difference in smoking prevalence among adolescents during 2011 as compared to 2007 when Uganda ratified the FCTC.

Design/Methods: This was a cross-sectional study, involving secondary data analysis of the merged 2007 (n=4,071) and 2011 (n=3,434) Ugandan Global Youth Tobacco Surveys (GYTS) (N=7,505 emerged). The outcome measure – current smoker, was defined as having smoked at least once during the past 30 days. Other information obtained included friends and parental smoking status, among others. Data analysis included chi-square and multivariate logistic regression. The level of statistical significance was set at p< 0.05.

Results: Overall, there was a reduction in smoking prevalence from 8.2% in 2007 to 5.1% in 2011 (p=0.01). However, while boys experienced a statistically significant reduction in smoking between 2007 (10.8%; 95%CI= 8.5 - 13.7) and 2011 (6.1; 95% CI= 4.2 - 8.7) (p= 0.01) girls did not. Smoking prevalence among girls in 2007 (5.0%; 95%CI= 3.79 - 6.65) was not significantly different from that during 2011 (4.2%, 95% CI =2.6 - 6.6) (p= 0.48). Having both parents smoking (OR=7.51; 95%CI: 1.23-45.91), reporting exposure to secondhand smoke at home (OR= 3.69, 95%CI: 2.0-6.74) and having close friend(s) smoking (OR= 6.59, 95%CI: 3.70-11.74) were associated with adolescent's smoking in Uganda over the study period.

Conclusion: Study findings suggest the need for targeted interventions to curb smoking among adolescent girls. Furthermore, Uganda needs to promote voluntary adoption of smoke-free homes as part of larger effort to enforce current smoke-free policy and adolescents need to be given life skills to overcome peer pressure.

PD-1287-21 The implementation of India's Gutka Bans: What happens when an existing tobacco product is removed from the marketplace?

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Background and challenges to implementation: India has adopted more than two-dozen state-level laws that ban the production, distribution and sale of gutka, a form of smokeless tobacco. The objectives of these laws are to reduce gutka use and improve public health. This approach – banning a product with historic market presence – is rare in global tobacco control. Across India, the implementation of these laws has differed; early reports have identified that some regions/states in India have had successful implementation of laws, while other jurisdictions have not fully implemented their policies.

Intervention or response: It is important to understand policy implementation processes across different states in India in order to identify the strategies and processes that are associated with successful policy implementation. This study will help researchers and practitioners gain a

better understanding of how and why gutka bans impact use prevalence and the extent to which outcomes can be improved by enhancing implementation. This study uses a series of key informant interviews with individuals involved in policy implementation at the state level. Participants are from 3 different Indian states where early reports indicated that the laws banning gutka had been implemented (1) well, (2) somewhat well, and (3) poorly. The Framework Approach, a qualitative analysis process strongly informed by a priori reasoning and preset aims and objectives is used to analyze data and frame findings.

Results and lessons learnt: This study tests several critical factors related to successful policy implementation including political will and leadership within the State, a social 'readiness' among the population for regulation, and government and/or NGO capacity to carry out policy implementation processes including education/awareness of the new policy and compliance enforcement.

Conclusions and key recommendations: Policy implementation is an important area for further research. Understanding strategies and processes associated with successful policy implementation will be valuable as other jurisdictions consider policies, including laws that may ban or restrict existing tobacco products.

60. MAKING SMOKEFREE THE NORM IN CHALLENGING PLACES

PD-1288-21 Creating smoke-free restaurants beyond the requirements of the law: a success story from Bangladesh

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Background and challenges to implementation: Government of Bangladesh (GoB) was the first signatory country of the WHO FCTC in 2003, ratified in 2004, and passed national law 'Smoking and Tobacco Products Uses (Control) Act 2005'. According to this law; restaurants are not included as smoke-free public places. Since law is passed, anti tobacco activists or GoB officials are working to implement law including ensure public places and public transports smoke free.

Intervention or response: Pratysha is 100% voluntary organization started smokefree restaurants campaign in Dhaka through encouraging and engaging owners of restaurant to declare restaurants as smoke free. We collected all restaurants lists including numbers of worker, owner's contacts. Then group of volunteers met restaurants owners and showed them how smokers are taking extra time

for smoking after having meals, which is economical concern of owner. Many owners came forward to work with us for smoke free restaurants. Also it encourages workers to ensure smoke free environments for save themselves and customers from passive smoking. We also provided no-smoking signboards to restaurants and emphasized in each anti tobacco campaigns that restaurant should include as public places in next law amendment of tobacco control law.

Results and lessons learnt: Through an awareness meeting, 300 restaurants were declared by owners as smoke-free. Pratysha provided no-smoking sign, stickers, posters, and leaflet to 300 restaurants and organized regular motivational program for restaurants owners and employees. We have disseminated this outcome to most of policy makers, activists, media for sensitize them to include restaurant as public places in next amendment. We also organized couple of public sensitization meeting and other mass-media demonstrations in which we focused restaurant should be included as smoke free public places. As result, government amended TC law in 29 April of 2013 in which restaurant is included as smokefree public places.

Conclusions and key recommendations: Where public initiative become stronger to protect non-smokers' rights, government also come forward with support, especially when such efforts are part of a coordinated national campaign like smoke free restaurants. This idea can implement anywhere in world, particularly in those countries where restaurants are not included as smoke free public places.

PD-1289-21 Brazil: still challenging to have a 100% smoke free legislation?

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Background and challenges to implementation: The World Health Organization (WHO) recognizes banning tobacco second hand smoke (SHS) as a human right. The only way to protect people fully from SHS is to create 100% smoke-free indoor environments, with no exceptions. This would also ensure compliance with the WHO Framework Convention on Tobacco Control (WHO FCTC) article 8 guidelines. Brazil was the second country to sign the treaty in 2003, but was only the 100th to ratify it in 2006, due to the strong lobby promoted by the tobacco industry and its allies. As Brazil is one Party of FCTC, the country needs to ensure the accomplishment of this principle. Chronic non-communicable diseases (NCDs) such as cardiovascular disease, stroke, diabetes, cancers and chronic respiratory diseases are the number one cause of death and disability in the world. Tobacco use and exposure to SHS are major risk factors for 6 of the 8 leading causes of death, killing nearly 6 million people worldwide, more than 600,000 of which are non-smokers exposed to SHS. After 3 years discussing Bills of Law in the Senate, in December 2011, Brazil enacted a national smoke-free Law No. 12.546 forbidding smoking in collective areas. However, the Decree which regulates that Law was just released in June, 2014, and will be in force 6 months later, e.g. in December 2014. But, for an effective implementation, it is necessary a foster regulation which will be published by the Brazilian Health Surveillance Agency.

Intervention or response: The strong role played by civil society and media advocacy was crucial in order to help Brazil to comply with its obligation. This paper includes a analyses of the tobacco control legislation regarding the implementation of article 8 in Brazil and also the tobacco industry reaction and explores some challenges related to implementation of the legislation.

Results and Lessons Learnt: Brazil has experienced notable progress in terms of reducing the smoking rate of the general adult population, and this result can be linked to the legal tobacco control legislation enforced since nineties.

Conclusions and key recommendations: As a global leader in tobacco control, it can influence other countries to follow and adopt such a comprehensive law that it will help to reduce NCDs and their negative impacts on global health and economies.

PD-1290-21 Brief intervention to implement home bans on smoking: evaluating the findings from a randomised trial

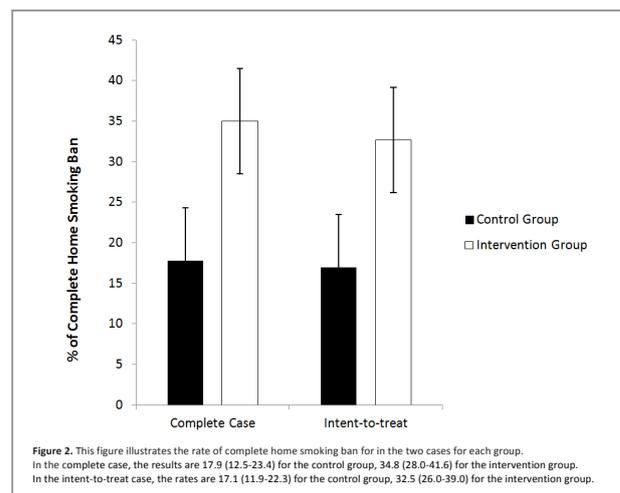
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Background: To establish home ban on smoking has been proven to be an effective way to protect nonsmokers at home. It possibly leads smokers to quit or reduce their cigarettes consumption. This trial tests the effect of a brief intervention of self-help materials and telephone counseling to establish complete home ban.

Design/Methods: Nonsmoking women who called Beijing 12320 Public Health Hotline, whose husbands were current smokers and whose family didn't have a complete home ban were randomly recruited. Three hundred ninety-eight subjects were selected during a period of 2 and half months. They were randomly assigned into the intervention group and the control group. The control group received reading materials, and the intervention group was offered self-help materials and brief phone counseling. Home ban status were assessed and compared between the two groups two months later. Logistic regression was used to calculate the effect of brief intervention.

Results: The average time of intervention calls were 18.5 minutes. In the intention-to-treat analysis, the rates of subjects implementing a complete home ban were 32.5% and 17.1% for the intervention group and the control group, respectively. The Odds Ratio for brief intervention alone was 2.47 (95% CI: 1.53-3.99).



Conclusion: A brief intervention is effective in helping nonsmokers to implement a complete home ban. The model of engaging surrogate as an instrument of change can have broad and general application in public health.

PD-1291-21 Attitudes toward smoking restrictions in Georgia

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Background: This study aims to provide data on a public level of support for restricting smoking in public places.

Design/Methods: A nationally representative multistage sampling design, with sampling strata defined by region (sampling quotas proportional to size) and substrata defined by urban/rural and mountainous/ lowland settlement, within which census enumeration districts were randomly sampled, within which households were randomly sampled, within which a randomly selected respondent was interviewed. Setting: The country of Georgia, population 4.7 million, located in the Caucasus region of Eurasia. Participants: One household member aged between 13 and 70 was selected as interviewee. In households with more than one age-eligible person, selection was carried out at random. Of 1588 persons selected, 14 refused to participate and interviews were conducted with 915 women and 659 men.

Outcome measures: Respondents were interviewed about their level of agreement with four possible smoking restrictions/bans, used to calculate a single dichotomous (agree/do not agree) opinion indicator. The level of agreement with restrictions was analysed in bivariate and multivariate analyses by age, gender, education, income and tobacco use status.

Results: Overall, 84.9% of respondents indicated support for smoking restrictions. In all demographic segments, including tobacco users, the majority of respondents indicated agreement with restrictions, ranging from a low of 51% in the 13–25 age group to a high of 98% in the 56–70 age group. Logistic regression with all demographic variables entered showed that agreement with restrictions was higher with age, and was significantly higher among never smokers as compared to daily smokers.

Conclusion: Georgian public opinion is normatively supportive of more stringent tobacco-control measures in the form of smoking restrictions. There is a need to implement article 8 of the FCTC and its guideline including effective measures for enforcement.

PD-1292-21 Creation of favourable environments and building capacity among Government officials for tobacco control efforts in Kerala, India

P Kumar¹

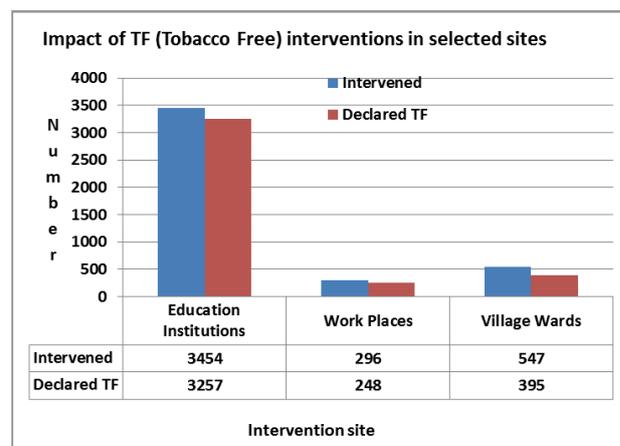
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Background and challenges to implementation: Awareness of tobacco hazards was high among the government officials but knowledge on tobacco control laws was poor

in the state of Kerala in early 2011. No smoking signages were absent and smoking was rampant in public places. Advertisement boards were common at point of sale. Level of confidence and motivation for implementing tobacco control laws was discouraging.

Intervention or response: Trainings, seminars and workshops were conducted for government officials with experts between 2011 and 2013. Simultaneously awareness programs, advocacy meetings, media sensitization and community campaigns were organized through different agencies with the participation of community leaders to create favourable environment. Institutional mechanisms were established by forming state and district level high power committees with representatives of line departments and civil society. High court order was secured to protect students from use and exposure to tobacco. Civil society groups were mobilized to facilitate the ground level activities. Health department took lead in coordinating academia, government departments and civil society coalition. Instructions were issued for enforcement to give authority to the officers working in the field. Situation analysed serially from quarterly reports from field, biannual meetings of stake holders and field observations.

Results and lessons learnt: About 80% (2750) of male health workers in health department could be trained. In addition 5638 teachers, 906 police persons, 776 panchayath secretaries and 312 local leaders were also trained. About 94 % (3257) educational institutions, 83.8 % (248) work places and 72.2 % (395) wards selected for intervention were declared tobacco free with specific interventions. In 2012 about 3000 illegal advertisement boards erected at point of sale were removed. In January 2014 about 95 % (8022) of advertisement boards detected at point of sale could be removed during one day campaign. Tobacco industry approached educational institutions and departments in disguise offering help and support. Institutions and departments failed to recognize their crookedness early.



Conclusions and key recommendations: Synergistic activities of multiple government departments with civil society are needed for wider coverage and effective accomplishment. Constant vigil and monitoring are needed to prevent the opportunistic intrusion of tobacco industry.

PD-1293-21 Estimation of salivary biomarkers in children exposed to second hand smoke: a comparative study

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Background: To evaluate the relationship between passive smoking and salivary biomarkers like pH, buffering capacity and flow rate, sialic acid and amylase levels in children and compare with the control group.

Design/Methods: Fifty children with history of passive smoking and 50 healthy age matched controls were included in the study. Smoking habits of household members, child's dental and dietary habits were recorded using a questionnaire. Saliva samples were collected from both the groups and salivary analysis was done for pH, buffering capacity, flow rate, sialic acid levels and amylase levels.

Results: The results of the study showed a lower salivary pH and lower flow rate and higher amylase activity and higher buffering capacity in passive smoking children when compared to healthy controls. However, sialic acid levels did not show significant differences between passive smoking children and control group.

Conclusion: Passive smoking may reduce the protective properties of saliva which can further affect the oral health status of young children and any factor that influences the secretion rate or composition of saliva will ultimately influence caries susceptibility.

PD-1294-21 Assessing compliance to the smoke-free provision of Indian tobacco control legislation in SIRSA, a religious destination of Northern India

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Background: Indian tobacco control legislation (Cigarette and Other Tobacco Product Act-2003) prohibits smoking in public places. The law mandates that a specific signage informs people about the smoke free status of a public place must be displayed at prominent places. Under the law, violators of the smoke free provisions will be fined up to INR 200/- . Sirsa (population= 1, 29 million), a district in north Indian state of Haryana implemented various steps for enforcing smoke free legislation through massive IEC activities, series of capacity building programmes and effective law enforcement . This study was conducted with an objective to assess the current level of compliance to the smoke free provisions of the law.

Design/Methods: An unobtrusive cross sectional survey of randomly selected 1534 public places in eight administra-

tive blocks of Sirsa district was done in the month of Feb-Mar, 2014 by the trained investigators using the pretested checklist. The five core parameters of evaluation were: Presence of signage, absence of active smoking, absence of smoking aids, absence of tobacco litter and absence of tobacco smell.

Results: The "No smoking signage" informing general public and tourists about smoke free provisions were observed at 88.20% of public places; While 94.06% of public places were found without active smoking. 88.39% public places were observed free from Smoking aids like ashtrays, match boxes and lighters. More than 91% of sampled public places didn't have any tobacco litter (cigarette butts and bidi ends). Over 83% of public places dint have evidence of recent smoking as evident of absence of tobacco smell.

Conclusion: Sirsa district has achieved high level of compliance to smoke free provisions of the legislation as a result of increased awareness among general public and custodians of public places a robust enforcement mechanism established. A pro-active district administration involving all important stakeholders led to this historic achievement. The administration is planning to declare it as first smoke free district in the state which we hope will scale-up tobacco control in this high prevalence state. Smokefree compliance surveys are important tools to validate levels of enforcement and compliance in a jurisdiction.

PD-1295-21 Beyond no smoking signages, additional measures are needed to create smoke free environment effectively: the Kerala experience

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Background: Kerala has been taking several steps for the implementation of Cigarette and Other Tobacco Products Act (COTPA) during last 3 years by promoting no smoking signages and creating smoke free environments which are legally mandatory in all public places like educational institutions, hospitals, offices, restaurants, bus stations, police stations, cinema halls etc. This study assessed the level of compliance in establishing smoke free environments and agencies involved in Kerala state in June 2014.

Design/Methods: This was a cross sectional study by trained independent observers who filled up the pretested questionnaire after observing the sites. Both urban and rural locations in all 14 districts were included in the study. Total of 112 locations (25% urban) were selected by stratified random sampling. In these locations 1455 educational institutions (18.6% urban), 277 hospitals (15.2% urban), 1642 offices (27.5% urban), 552 restaurants (37.7% urban), 161 bus stations (67.1% urban), 59 police stations (20.3% urban) and 39 cinema halls (30.8% urban) were randomly selected for study. A few interviews were made in each site with local people to know whether smoking is present in the study site. Statistical analysis was done with excel and SPSS.

Results: All selected sites were studied. No smoking signages were present in 76.9% educational institutions, 87.4% hospitals, 73.6% offices, 70.3% hotels, 64% bus stations, 89.8% police stations and all cinema halls. Proportion of signages in educational institutions, hospitals, offices, bus stations and police stations were significantly higher ($p < 0.05$) in urban areas than rural areas. No tobacco sale board and tobacco selling shops were detected in 66.9% and 4.6% educational institutions respectively. Both were significantly higher ($p < 0.05$) in urban areas. Smoking aids could not be seen in 59.8% sites and rare in other sites. But smoking was present in 79.5% sites. Government departments like health, police and education were actively involved in more than 80% sites while local panchayaths and NGO were less active. Government departments were more active in rural areas than urban areas. No significant association could be identified between these and smoke free compliance.

Conclusion: Though no smoking signages could be established in many areas smoke free public places could not be created effectively. Other measures like fining, social isolation of smokers may be explored as additional measures.

PD-1296-21 Campaign development in Latin America: Progress, challenges, opportunities

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Background: In Latin America there are 145 million smokers, this number represents 12% of the world's population. Tobacco prevalence in adults is 22% and these smokers are harming not only themselves but the people around them as well. Tobacco use is the only risk factor shared by each of the four main non-communicable diseases and the cost associated with these diseases substantially affect countries' wellbeing, public health and their economy. Latin America has had important progress in tobacco control, MPOWER^[1] measures has been implemented in several countries, Monitor tobacco use and prevention policies; Protect people from tobacco smoke; Offer help to quit tobacco use; Warn about the dangers of tobacco; Enforce bans on tobacco advertising, promotion and sponsorship and Raise taxes on tobacco. Countries that have implemented two or more MPOWER measures are the ones where prevalence has shown a bigger decline, although there is still much more work to be done.

Interventions: Latin America progress in tobacco control has been supported with successful and effective mass media campaigns and advocacy campaigns, trainings and capacities building for policy development, tax initiatives. Some achievements in the Region:

- Five countries in Latin America protect their population with 4 or more of the MPOWER measures at its higher level of achievement;
- Honduras and Bolivia include the WHO Framework Convention on Tobacco Control (FCTC) into their national development agendas.
- More than 40 technical and management regional trainings for capacity building and policy implementation implemented in the Region.
- Mass media campaigns implemented in Mexico, Brazil, Colombia, Bolivia, Uruguay among others.

Results and lessons: In most of the countries, 90% of the population is protected by 100% smoke free environments. This policy has a huge impact in public health and lives saved. Many countries have implemented health warnings, a very important component in national health education programs. Bans on advertising, promotion and sponsorship is an ongoing effort currently and advancing at good steps.

Conclusions: Continue with tobacco control efforts strengthening the implementation process of MPOWER. Include FCTC in the national development Plan and in the international cooperation at the UN.

[1] MPOWER_ Technical package developed by WHO to support countries to begin the implementation of the WHO Framework Convention on Tobacco Control.

PD-1297-21 Assessing Nigerian university students attitudes toward environmental tobacco smoke: opportunities for health education

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Background: Non-smokers have the primary responsibility to protect themselves from Environmental Tobacco Smoke (ETS) also called Second Hand Smoke. Their attitude to ETS determines to a large extent how aware they are of the need to protect themselves from ETS. This study was conducted to determine university students' attitude to ETS. The following research questions guided the study: What are students' attitudes to smoking in public places? What are students' attitudes to the effect of ETS on personal health? What are the students' attitudes to preventing ETS? In addition to providing answers to these questions, this study also explored the influences of gender, smoking status, institutional type, and course of study on the students' attitude to ETS.

Design/Methods: The study was conducted on undergraduate students in two government owned universities in Enugu State of Nigeria. Descriptive survey research design was used for the study. A four-point Likert-type questionnaire consisting of positive and negative items was used to collect data on students' attitude to ETS. The stu-

dents' responses were weighted and the data were analyzed using mean, t-test for independent groups and Analysis of Variance.

Results: The students did not support smoking in public places, they agreed that second hand smoke negatively affects health and supported prevention of second hand smoke. Non smokers favoured smoke free environment more than smokers. Students from the federal university had higher positive mean attitude scores than those from the state university. There were no significant differences at $p < .05$ in the students' attitude to ETS when classified according to course of study.

Conclusion: The majority of students were not in favour of smoking in public places and many see it as a threat to health. Most students supported preventing second hand smoke. The findings of this study have added weight to the argument for signing the National tobacco control bill into law in Nigeria. The institutions of higher learning are fertile grounds for preventive health education on the control of not just smoking but also second hand smoke.

PD-1298-21 A holistic approach towards a smokefree region: a success story from Krasnoyarsk, Russia

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Background and challenges to implementation: Krasnoyarsk region became the first territory in Russia where International Union Against Tuberculosis and Lung Disease started its technical assistance. Since 2009 the Union was implementing a Smoke-Free Implementation in co-operation with the Krasnoyarsk Regional Medical Prevention Center.

Since the adoption of the Russian national law in 2013 the project has focused on providing technical support to regional officials in compliance monitoring, civil surveillance research, and capacity development.

Intervention or response: The five-year project consisted of an advocacy component, research, development of interagency coordination mechanisms to ensure implementation and compliance with Smoke Free regulations.

Results and lessons learnt: Before the National SF legislation was adopted, in 2009 Krasnoyarsk regional MoH issued a complete smoking ban in hospitals. A regional SF law was adopted in 2013 that assigned a regional coordination council, a regional compliance hotline and a smoking ban in park areas, a stronger norm that extend beyond the framework of the national SF law.

A MoU was signed between executive regional ministries to ensure full enforcement of SF measure and transparency and accountability of all interaction with the tobacco industry in accordance with art. 5.3 of FCTC. A prevalence study was conducted in 2013 and in 2014 witnessed

a slight decline in smoking prevalence from 32,3% in 2013 to 28,4% in 2014. Yet, still half of the smoking respondents acknowledge they sometimes smoke in places where they believe smoking is forbidden. Over the last year SF law gained a substantial support especially positive attitudes increased towards such measures as fines (from 32% to 84%) and sale restrictions (from 7% to 15%).

Conclusions and key recommendations: Krasnoyarsk turned out to be one of the benchmark regions in Russia in terms of interagency coordination, commitment and good will among decision makers. Yet, there is a long way to go to ensure better compliance and state monitoring.

PD-1299-21 Assessment of indoor and outdoor smoke-free regulations in the WHO European Region

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Background: As posed by the Framework Convention of Tobacco Control (FCTC), comprehensive smoke-free laws are the most effective tool to protect the population from second hand smoke (SHS) and assure healthy environments. Studies evaluating how laws prescribe SHS protection are scarce. This study aimed to assess the level of protection of SHS of laws in indoor and outdoor locations among countries belonging to WHO European Region.

Design/Methods: Cross-sectional study, measuring the level of protection provided by laws in indoor and outdoor locations. A protocol to evaluate exposure to smoke-free legislation was developed according to the recommendations provided by the WHO Guidelines for implementing smoke-free indoor and outdoor places. For each law 6 main sectors and 28 locations were evaluated.

Results: Overall 68 laws from 48 countries from the WHO European Region were reviewed. "Education" was the most protected sector against SHS both indoors and outdoors, - mostly in primary and secondary schools. Many WHO European laws do not provide total protection to SHS in all the public sectors such as 48.5% of "General health facilities" and 71.2% of "Restaurants". Several WHO European laws still allow smoking indoors under certain conditions with designated and/or ventilation areas prescribed. In addition, only 3.1% of the locations specified 100% smoke-free outdoor regulation without exceptions, 2.5% permitted smoking in designated outdoor areas, 37.5 % allowed smoking everywhere, and 56.9% did not provide information about how to deal with smoking in outdoor places. Few pioneering laws (3) from recreational locations and two from general health facilities specified 100% outdoor smoke-free regulation.

Conclusions: Ten years after the approval of the WHO FCTC there are still legal formulas in which smoking is allowed indoors in certain sectors (ie: "Hospitality") and through the inclusion of separated areas, ventilated and other circumstances conditions in indoor locations. Outdoor smoke-free policies are limited and mainly have been passed in primary and secondary schools. We face some challenges such as eradicating the legal clauses that hinder indoor 100% smoke-free environments and we should advance in ruling smoke-free outdoors laws in areas frequently crowded, specially by minors.

PD-1300-21 Progression toward a smoke-free home: The role of partial bans

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Background: There is no safe level of secondhand smoke. Households with partial smoking bans may have a higher level of readiness to go smokefree than households with no restrictions. Understanding who establishes partial bans, what these bans cover, and whether they are an intermediate step in going smoke-free would help to inform smoke-free home interventions.

Design/Methods: Participants were recruited from United Way of Greater Atlanta's 2-1-1 contact center to participate in an intervention trial focused on creating smokefree homes. Eligible participants reported smoking was allowed in the home at baseline. Data were collected at baseline, three and six months via telephone interview. Those with complete data at all three time points were included in analyses (n=375).

Results: Participants were largely African American (84.2%) and female (84.3). The majority (58.5%) had annual household incomes less than \$10,000. At baseline, 61.3% reported a partial smoking ban and 38.7% reported no ban. Relative to no ban, partial bans were associated with gender, education level, marital status, and age. Partial bans most often meant smoking was allowed only in designated rooms (52.6%). Other common rules included: no smoking in the presence of children (18.4%) and smoking allowed in combination with perceived harm reduction behaviors such as an open window or running fan (9.8%). A higher percentage of households with partial bans at baseline were smokefree at six months (36.5%) than were those with no bans at baseline (22.1%).

Conclusion: Households with partial smoking bans may be especially receptive to smokefree home interventions.

PD-1301-21 Avoidance practices in smoking households and children's salivary cotinine level

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Background: Implementation of comprehensive smoke-free legislation in Hong Kong banning smoking in most public places may not protect children from secondhand smoke (SHS) exposure at home. This study compared the cotinine levels of children in smoking households with and without SHS avoidance practices.

Design/Methods: The data was collected from mothers and children recruited from 4 Maternal and Child Health Centres with 773 mothers (response rate:66%) who reported children's SHS exposure outside and at home, SHS avoidance practices taken (e.g., take children away from smoke; and open windows) and rules made (e.g., smokers should extinguish cigarettes before entering the home) at home, and socio-demographic information. The salivary sample was collected from 445 children (57.6%) and its cotinine level was analysed by the National University of Singapore. Households (N=146) with smoking family members or visitors who smoked at home were included in the analyses. Geometric means of children's cotinine level by SHS avoidance practices taken and rules made in smoking households were compared by using t-tests and generalized linear model (-coefficient) with the adjustment of SHS exposure outside home.

Results: In general, salivary cotinine level between household taking or not taking SHS avoidance practices was similar (p-values>0.05). The children whose household made the rules of "smokers should extinguish cigarettes before entering home," and "smoking in the bathroom and kitchen is not allowed" had lower cotinine levels (1.15 ng/ml vs. 1.32 ng/ml p=0.013; 1.09 ng/ml vs. 1.30 ng/ml p=0.002; 1.19 ng/ml vs. 1.38 ng/ml p=0.034, correspondingly) compared those without such rules. Other avoidance rules were not associated with children cotinine level. Children in the smoking household with more rules above were more likely to have lower cotinine level (-coef=-0.33 95% CI=-0.57 to-0.08, p=0.008).

Conclusion: Taking children away from smoke and opening windows were not sufficient to reduce SHS exposure in children. In contrast, smoking household with stringent smoking ban can reduce children's cotinine level.

61. ASSESSING THE FACTORS THAT INFLUENCE TOBACCO USE

PD-1302-21 Modeling the health impact of cigarette smoking by pregnant women in Brazil

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Background: Research on the association between adverse maternal and child health outcomes (MCH) and maternal smoking in low and middle income countries (LMICs) remains much more limited despite an increasing prevalence of smoking among women, limited access to maternity care, and poor MCH outcomes in many places. The United Nation's Millennium Development Goals included a goal of improving MCH outcomes as an important step for economic development and reducing poverty in LMICs. Brazil has reduced its smoking rate by about 50% between 1989 and 2010. During that time period, strong tobacco control policies were implemented. Thus, the objective of this study was to evaluate the effect of strong tobacco control policies on preterm births, low-birth weight babies, spontaneous abortions, sudden infant death syndrome, placenta abrupta, and placenta previa in Brazil.

Design/Methods: We used a previously developed Brazil SimSmoke policy simulation model. Using policy, population, relative risks, and smoking data for Brazil, the model assessed the effect on adverse MCH outcomes of cigarette taxes, smoke-free air laws, mass media campaigns, marketing restrictions, packaging requirements, cessation treatment programs, and youth access restrictions. Standard attribution measures are used to estimate the effect of past policies relative to a counterfactual of policies kept to 1989 levels, and the effect of stricter future policies.

Results: Current policies are estimated to reduce a cumulative total of 296,330 adverse MCH outcomes by 2010 and 1,147,313 by 2050, as compared to policies kept to 1989 levels. With more comprehensive tobacco control policies, the number of smoking-attributable adverse MCH outcomes may fall to 580,683 by 2050, far less than predicted 855,645 with current policies in place from 2011 forward.

Conclusions: Brazil is an example of a low- and middle-income country where tobacco control has reduced pregnant women's smoking prevalence, and as a result, adverse MCH outcomes. Our analysis can better inform policy makers in LMICs about allocating resources to this potentially important area with a range of tobacco control policies. The benefits for maternal and child health outcomes are often overlooked in discussions of tobacco control. The case for tobacco control becomes even more compelling by extending the analysis to consider the high costs and toll in human suffering associated with birth-related defects.

PD-1303-21 Prevalence and correlates of menthol cigarettes in Zambia: findings from the ITC Zambia Survey

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Background: Menthol is added to tobacco products to mask the harshness of tobacco smoke - an effective strategy to maintain current and recruit new smokers. Most studies on menthol have been conducted in high-income countries (HICs). There are very few studies on consumer perceptions of menthol cigarettes in low- and middle-income countries (LMICs). This study is, to our knowledge, the first study of menthol cigarettes in Sub-Saharan Africa.

Design/Methods: We analyzed data from Wave 1 of the ITC Zambia Survey, a nationally representative survey of 1483 tobacco users aged 15+ years. Face-to-face interviews were conducted Sept-Dec 2012 by trained staff from the Zambian Central Statistics Office and the University of Zambia. We computed the prevalence of menthol cigarettes and examined correlates of menthol smokers. We also examined whether menthol smokers differed from non-menthol smokers on demographic variables, key beliefs, knowledge about health harms, perceived addiction, quit intentions, and other quit-relevant measures.

Results: The prevalence of menthol smoking in Zambia was very high (27%) compared with other ITC LMICs (e.g., Brazil, China, India, Bangladesh, all $\leq 5\%$) and compared with ITC HICs (e.g., Canada, UK, Australia, all under 10%). Menthol prevalence was similar to the US. Menthol smoking was more prevalent among younger smokers (34.8% among 15-24 yrs; 29.6% among 25-39 yrs) than among older smokers (22.7% among 40-54 yrs; 7.9% among 55+ yrs). Menthol smokers were more likely to choose their brand because of taste and quality and less likely to cite price, popularity, and friends; and were equally likely to cite less health harm. There was no overall difference between menthol and non-menthol smokers in health knowledge, quit intentions, or quit attempts in the last 12 months.

Conclusion: The high rates of menthol cigarette use in Zambia, especially among young people, illustrate the need for public education to highlight the deceptive nature of menthol: that the lower harshness and cooler sensation of menthol (that menthol smokers reported to influence their brand choice) make cigarettes easier to smoke, especially for youth, despite being no less harmful. Brazil is in the process of banning menthol and other additives, and several other countries are considering such action. There is a strong need for research in Africa on menthol and other additives for possible evidence-based regulation of additives under Articles 9 and 10 of the FCTC.

PD-1304-21 5-year trends in daily and heavy smoking consumption amidst the economic crisis and after recently implemented antismoking legislation in Greece

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Background: Economic crisis and antismoking legislative measures have been shown to have a significant impact on public health. Taking under consideration the ongoing financial crisis in Greece and the recently implemented tobacco control measures, we assessed trends in daily cigarette consumption and heavy smoking consumption in Greece, before and during the current financial crisis, and after the enforcement of antismoking legislation in Greece.

Design/Methods: Data from two waves of the "Hellas Health" surveys were analyzed. Hellas Health I was conducted in 2006 (n=1,005) and Hellas Health IV in 2011 (n=1,008). Respondents were selected by means of a three stage, proportional to size sampling design. Samples were representative of the Greek adult population in terms of age and residency.

Results: In comparison with 2006, daily cigarette consumption is different (p<0.001). A decrease in the percentage of everyday smokers that smoke more than a pack a day (>20 cigarettes) was noted (p<0.001), which resulted in the increase of the percentage of smokers that smoke <20 cigarettes a day. More specifically, a decrease in the percentage of everyday smokers that smoke more than a pack a day (>20 cigarettes) was noted for men (p<0.001) and women (p=0.010), for the age group 18-34 years (p=0.049) and 35-54 years (p<0.001), for those being single (p=0.008) and married (p=0.001) and for divorced or widowed participants (p=0.044), for smokers of high (p=0.012), middle (p=0.002) and low (p=0.039) socioeconomic level, for those of middle educational level (p=0.001) and for those who live in urban (p<0.001) and rural areas (p=0.016). Socioeconomic and demographic variables do not temporally affect heavy smoking consumption with the exception of variables for sex and age which affect heavy smoking consumption only for 2006.

Conclusion: Trends in smoking consumption seem favorable during the past 5 years. This allows us to believe that tobacco control policies implemented in Greece, along with the current financial crisis and the fiscal changes and austerity measures that have taken place seem to have an impact on smoking consumption.

PD-1305-21 Developing a model: MPOWER in a non National Tobacco Control Program (NTCP) State

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Aim: Effective MPOWER policies implementation with existing resources- a low cost strategy

Background/challenges: Himachal Pradesh (68 lack population) was not included among the 21 NTCP (National Tobacco Control Program) States out of 28 in spite of the fact that as per survey- NFHS-iii 2005-06, the smoking prevalence in the State was higher (33.2%) than the Country (32.7%). In 2008 WHO, IUTLD and GOI conducted a zonal workshop which opened the doors.

Interventions/response: Identification of few but committed volunteers. Simple implementing guidelines (to discuss tobacco control with the existing programs, routine / periodic inspections in teams/squads to fine violators of the tobacco control law and to use funds collected as fine for anti tobacco activities) and strong monitoring. Targeted approach and evidence based compliance. Huge NGO and media support. Incentive to the performers in the form of recognition, rewards and motivation.

Results/lessons learnt: M-More than 10 studies /surveys conducted in the State in last 5 years. The MPOWER progress is monitored in routine on monthly basis in the state /Distt./Sub Distt.level P-Huge enforcement of law >82000 violators fined in last 5 years and >98 Lacs INR collected as fine and being utilized for anti tobacco activities. The state was declared smoke free on 2.7.14 with >80% compliance of smoke free rules O-One Dedicated Tobacco Cessation centre-TCC with trained doctor, clinical psychologist and social worker established in all 12 Distt.hospitals. There are 5 dedicated beds in each centre and >10 pt. are attending the TCC on each day. 50 doctors has been trained to set up Sub divisional level TCC W-Due to the first conviction under section 7 of Indian tobacco control laws in the country and its media advocacy the compliance has gone >95% E-The TAPS ban especially point of sale advertisements of tobacco has reduced to <1% in the state with the enforcement and awareness notices. However the media violations are there which are beyond control of State. R-The tax on tobacco products has been increased by 50% in last 3 years **Conclusion:** Effective MPOWER policies implementation is a low cost strategy if we make it a part of the existing or ongoing routine activities under health or other department. Tobacco control is a state priority and pride to the Govt. and people of state. The state has emerged as a MPOWER model in the country with two SEARO WHO awards for tobacco control in 2011 and 2012.

PD-1306-21 Implementing the National Tobacco Control Programme in India: An evaluation

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Background: India was among the first countries to pilot a National Tobacco Control Programme (NTCP) in 2007 with the main objectives of bringing greater awareness about the harmful effects of tobacco use and tobacco control laws. In 2007, NTCP was launched in nine Indian states, with two districts in each state and later expanded to 24 more districts in 12 new states in 2008-09. This paper presents an independent evaluation of the level and extent of implementation of activities under NTCP and identifies the successes, challenges and gaps.

Methods: 'Mixed methods approach' — consisting of both quantitative and qualitative methods — was used for the evaluation. In order to represent four geographic regions in India, ten states from across the country were selected. Existing NTCP activity reports were analysed, while primary data was collected through key stakeholder interviews; focus group discussions, survey with programme implementers and observational survey.

Results: Majority of the respondents suggested that implementation of the programme was satisfactory and in future should be expanded nationally. Strong political will and support from the Central Government was perceived as a significant enabler. Mass media campaigns were considered the most important component of the programme. Campaigns like 'Sponge' and 'Mukesh' were considered successful. Civil society plays a significant role in implementation of the programme. School health programme running successfully in several districts. Gutkha ban considered useful in restricting initiation and uptake of tobacco use. High compliance with COTPA provisions along with challaning mechanisms and enforcement squads. Operational guidelines are in place. Most of the programme implementers satisfied with the clarity on their roles and responsibilities. However, Inter-Ministerial Task Force and Steering Committees are unable to function actively and not meeting as per the mandate. Limited and inadequate funds besides the nodal officers often handling number of other departmental tasks considered as barriers. Being a pilot programme NTCP gets lower priority in comparison to other national health programmes.

Conclusions: This evaluation helped in identifying gaps, challenges, and opportunities in implementing NTCP in states and districts, which aided in nationally expanding and revising the programme components under the 12th Five Year Plan of the Government of India.

PD-1307-21 Preliminary evidence of waterpipe effects on respiratory symptoms in young long-term users

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Background: Evidence has shown that waterpipe (WP) smoke contains toxic constituents similar to those in cigarettes; and that it is associated with reduced lung function and cardiac measures as well as respiratory disease. However, less is known about WP-induced pulmonary effects, particularly in young age groups, where this form of tobacco is growing in popularity. We report preliminary data from a study that seeks to assess the effects of WP smoking on self-reported respiratory symptoms among young men.

Design/Methods: Waterpipe smokers, WPS, (≥ 3 times/week WPS for the past 4 years, no use of other forms of tobacco) and non-smokers, NS, (no tobacco use ever) are being recruited for the study. All participants were healthy (by a medical history and physical examination). The American Thoracic Society and the Division of Lung Diseases (ATS-DLD-78) adult questionnaire were administered to subjects and the effects of WP smoke on ATS-DLD-78 measures compared between WPS and NS. The ATS-DLD-78 was selected due to its being one of the important and validated tools to gauge respiratory health.

Table. Reported respiratory symptoms among waterpipe smokers and non-smokers.

	Non-smokers n=47 (%)	Waterpipe smokers n=47 (%)
Any respiratory symptom*	13 (27.7%)	36 (76.6%)
Usually cough**	1 (2.1%)	13 (27.7%)
Usually bring up phlegm**	1 (2.1%)	17 (36.2%)
Had an episode of coughing with phlegm that lasted atleast 3 weeks**	0 (0%)	8 (17%)
Does chest sound wheezy chest when you have a cold	2 (4.3%)	6 (12.8%)
Does chest sound wheezy chest occasionally apart from cold	1 (2.1%)	4 (8.5%)
Does chest sound wheezy chest on most days or nights	2 (4.3%)	5 (10.6%)
Ever had attack of wheezing that left you short of breath	1 (2.1%)	1 (2.1%)
SOB when hurrying or walking uphill**	1 (2.1%)	15 (31.9%)
Does cold usually go to chest	3 (6.4%)	5 (10.6%)
Chest illness in past 3 years that kept you off work	7 (14.9%)	12 (25.5%)

** Significant Chi-square statistic ($p < 0.05$)

Results: 47 WPS (mean age 22.3) and 47 NS (mean age 21.5) have been recruited thus far. WPS were significantly heavier (79.3 vs 73.1 Kg; BMI 25.6 vs 23.3). Baseline carbon monoxide levels were 4.2 and 2.2 PPM in WPS and non-smokers respectively. WPS smoked an average of 5.7 days per week; with an average of 5.2 years of WP smoking. The majority (77%) of WPS reported at least one respiratory symptom from ten symptoms covered in the ATS-DLD-78 (substantially less nonsmokers, 28%, reported at

least one respiratory symptom). Specifically, the following respiratory symptoms were significantly more frequent with WPS: Usually having a cough; usually bringing up phlegm; having episodes of coughing with phlegm that lasted at least 3 weeks per year; and suffering from shortness of breath when hurrying or walking uphill (see table).

Conclusion: Preliminary data indicate that regular WPS, even at a young age, exhibit respiratory health deterioration in comparison to non-smokers. Significantly more frequent respiratory symptoms were reported among young WPS, a possible sign of early pulmonary dysfunction. Further work is needed to characterize the significance of these differences.

PD-1308-21 Prevalence of smoking and smoking related knowledge and attitudes among pharmacy students in Qassim University

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Background: A lot of researches have been done on knowledge and attitude toward smoking among medical students. However, limited studies were done on pharmacy students. The study objectives was to estimate the prevalence of smoking and to determine the attitude and smoking related knowledge among pharmacy students in Qassim University.

Design/Methods: A cross sectional survey was conducted among pharmacy students in Qassim University. The sample size of this study was 300 male students. The questionnaire asked about demographic information, social history, smoking-related knowledge and attitude. Knowledge items include nicotine addiction and the following diseases: Lung cancer, Asthma, peripheral vascular disease, Malaria, Impotence and Stroke. Attitudes items include attitude and beliefs towards smoking cessation, difficulty of quitting, responsibility toward the patients, smoking benefits and reflection of smoking on personality. In addition, there were some questions assessing intention to quit and quitting attempt among smokers and reasons for smoking. Statistical analysis was done using SPSS Software.

Results: A total of 229 Students answered the questionnaire with a response rate of 76.3%. The prevalence of ever-smokers among pharmacy students was 24.01 % with an average number of smoked cigarettes of 10.04 cigarettes per day. Mean age of ever-smoking was 22.53 (SD 2.124). About 42% of students are having a smoker in the family and 80.4 % of them are having friends who smoke. There is no significant difference between never-smokers and ever-smokers in the knowledge of smoking related health hazards with student showing varied levels of knowledge about various diseases. The vast majority of smokers (94.3%) reported an intention to quit smoking and 67.9% of them had tried quitting smoking. The majority of pharmacy students both never-smokers and ever-smokers appreciated their future role to help patients in smoking cessation.

Conclusion: This study reported prevalence of smoking and assessed smoking related knowledge and attitude among pharmacy students. Prevalence of smoking among pharmacy students was within rates reported from other universities in Saudi Arabia.

PD-1309-21 Changes from 2007 to 2011 in tobacco use and factors that may affect use among Ugandan youths: findings from the Global Youth Tobacco Survey

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Background: To assess changes from 2007 to 2011 in the prevalence of tobacco use and factors that may influence the use of tobacco by examining results from the Global Youth Tobacco Survey (GYTS).

Design/Methods: Both the 2007 and 2011 GYTS were conducted among students aged 13–15 years. The surveys employed the standardized GYTS methodology for constructing sampling frames, selecting schools and classes, preparing questionnaires and carrying out fieldwork. A two-stage cluster sample design was used to generate a representative sample of students for the surveys. Stata 12 software was employed to conduct a weighted analysis of the data that yielded proportions with 95% confidence intervals (CIs).

Results: The estimated percentage of male students who had ever smoked a cigarette, even just one or two puffs, declined from 19.2% in 2007 to 11.5% in 2011. For males and females combined, the prevalence of current tobacco use of any sort rose from 16.6% to 17.3%, but this increase was not statistically significant. The proportion of students who currently smoked cigarettes declined from 5.5% in 2007 to 4.8% in 2011 ($P=0.016$), while the proportion of students who had ever been offered a free cigarette by a representative of the tobacco industry rose from 10.3% to 10.7% ($P=0.04$).

Conclusion: The overall rates of current cigarette smoking and a history of ever smoking even a single cigarette declined significantly in the study population from 2007 to 2011. However, even though overall tobacco use among Uganda adults is known to be decreasing, the present study found a non significant increased prevalence of tobacco use (all types) among the youth of interest, with similar findings for boys and girls. Although there is some small cause for optimism about the issue of cigarettes among Uganda youth, it is clear that this nation and other countries around the world need to formulate effective public health interventions to curb the use of tobacco of any type in the decades ahead.

PD-1310-21 Is the younger generation picking up smoking earlier in emerging market countries?

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Background: The age of smoking initiation is an important health indicator. Early smoking initiation was reported to be associated with higher risk of lung cancer and lung damage. We investigated the age of daily smoking initiation in 20 countries using data from Global Adult Tobacco Survey (GATS), including Argentina, Bangladesh, Brazil, China, Egypt, India, Indonesia, Malaysia, Mexico, Nigeria, Panama, Philippines, Poland, Romania, Russia, Thailand, Turkey, Ukraine, Uruguay and Vietnam.

Design/Methods: GATS applies standardized sample design, core questionnaire and data collection procedures, enabling comparison across countries. Nationally representative samples were obtained with 298,896 completed cases, covering nearly 3 billion people. Age of daily smoking initiation was measured for smokers aged 15 to 35. Its association with GDP per capita was also examined using linear regression analysis.

Results: Age of initiation was less than 18 years in 16 countries, ranging from 16.3 (95% CI: 15.8-16.9) in Argentina to 19.5 (CI: 19.1 – 20.1) in China. A gender comparison indicated that males started smoking daily earlier than females in Philippines, Romania, Russia, Turkey and Ukraine (all $p < 0.05$). Smokers aged 15 to 25 started smoking daily earlier than those aged 25 to 35 in all countries (all $p < 0.05$) except in Malaysia, with largest difference (2.3 years) found in Bangladesh, India and Nigeria. Linear regression indicated higher GDPs per capita were associated with lower initiation ages ($p < 0.05$).

Conclusion: Our results indicated a drop in age of daily smoking initiation among smokers aged 15 to 25 compared to smokers 10 years senior to them in emerging market countries, despite worldwide tobacco control efforts. Economic advancement may contribute to a decrease in initiation age, as suggested by our data. It is important to fully implement WHO MPOWER, a tobacco control strategy package, to reduce smoking among youth in emerging market countries and save lives.

PD-1311-21 An analysis of cigarette prices and tobacco use in Thailand: evidence from the repeat Global Adult Tobacco Surveys (GATS) of 2009 and 2011

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Background: Despite comprehensive tobacco control policies, the repeat GATS in Thailand reveals that overall tobacco use remained unchanged and quit attempts in the past 12 months declined among current smokers. Even

when the prevalence of tobacco use remains unchanged, it is critical to understand both inter- and intra-region variations in tobacco use, and variations between population sub-groups as a function of gender, area of residence, education level, and other factors. Also, among current smokers of manufactured cigarettes, a significant fraction purchased the new inexpensive brands that were introduced in the market by the Thailand Tobacco Monopoly (TTM) following the 2009 tobacco tax increase.

Methods: The paper presents detailed descriptive economic statistics on tobacco consumption and transaction in Thailand and analyses the temporal pattern using the GATS of 2009 and 2011. The analysis highlights how the answers differ for various regions, age cohorts, gender, education, wealth, and employment status. Subsequently a demand analysis highlighting the price and income elasticities and correlates of tobacco use will be presented, in which smoking propensity (using logit specification) and intensity (using OLS) are modelled separately.

Results (Preliminary): Preliminary results suggest that prevalence of smoking has remained mainly unchanged with very moderate and insignificant increases in both manufactured and hand-rolled cigarettes. The increase in the prevalence is mainly due to increase of smokers in the younger age cohort (age 15-24). Quit attempts during the last 12 months declined significantly between the two rounds of surveys. Regional heterogeneities are observed for several indicators, such as prevalence, quit attempts, price, affordability, and brand choices. The consumption of premium brands decreased significantly, and evidence of switching to the discount and deep discount brands has been observed. Also, we observe heterogeneous regional price elasticities.

Conclusion: In this paper, key questions related to prevalence and intensity of smoking, price, expenditure, affordability, types and pattern of cigarettes and tobacco use, which are all important for policy purposes, and in particular the design of tobacco control policies, are reported.

PD-1312-21 Association between daily smoking and unhealthy weight control behaviours among adolescents in the United States

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Background: Smoking is perceived among some adolescents as a strategy to reduce their weight. The aim of this study was to assess the association between cigarette smoking and unhealthy weight control behaviours among US adolescents.

Design/Methods: We analysed data for 13,583 US students in grades 9-12 using the 2013 National Youth Risk Behavior Survey. Daily cigarette smoking was defined as having smoked at least one cigarette every day for the past

30 days. Any unhealthy weight control behaviour was defined as any of: self-reported fasting for 24 hours or more; taking diet pills, powders, or liquids without a doctor's advice; or inducing vomiting or taking laxatives during the past 30 days. Data were also collected on perceived overweight and having ever used drugs. Multiple logistic regression models were fitted to assess the association between daily smoking and several behaviours commonly used among adolescents to lose weight, controlling for age, gender, race/ethnicity, drug use and perceived overweight.

Results: Adolescents who smoked daily had higher odds of engaging in any unhealthy behaviours to lose weight (OR=1.92, 95% CI: 1.47-2.50). The association was especially significant for fasting, as adolescents who smoked daily had 2.22-fold increased odds (95% CI: 1.71-2.88) of going without eating for 24 hours or more in order to lose weight or to keep from gaining weight. For vomiting or taking laxatives, smokers had an OR of 1.76 (95% CI: 1.25-2.46). However, the association between tobacco smoking and taking diet pills was not statistically significant (OR=1.32, 95% CI: 0.92-1.89).

Conclusion: Students who smoked daily were more likely to engage in unhealthy behaviours to lose weight. This might indicate a complex relationship between tobacco use and weight control in adolescence, which further complicates efforts to prevent smoking and obesity among adolescents.

PD-1313-21 Parental pro-smoking practices and smoking susceptibility among children in Hong Kong

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Background: Parental influence on children smoking is well known, but most studies focused on general parenting and less on smoking-specific parental practices. We investigated the association between some parental pro-smoking practices (PPP) and children smoking susceptibility.

Design/Methods: Among 100 primary schools with students viewing an anti-smoking drama performance commissioned by the Hong Kong Council on Smoking and Health in 2012/13, 7 were randomly selected and 1255 primary 2-4 students (mean age 8.5±0.02, 42.8% boys) completed an anonymous self-administered questionnaire. Fifteen specific items of PPP in the past 30 days were grouped into 4 types: (1) hearing parents saying students could smoke, certain cigarettes tasted good, something against tobacco control, harms of smoking cessation or benefits of smoking; (2) seeing parents' cigarette packs at home, or seeing parents buying cigarettes or smoking; (3) helping parents buy/get cigarettes, get lighters/light cigarettes, or get/clean ashtrays; (4) having cigarettes from parents. Students unable to assert that they would not smoke in the next 12 months, when grown up or when cigarettes were offered by good friends were defined as susceptible to smoking. Logistic regression yielded adjusted odds ratios (AORs) of smoking susceptibility for the 4 types of PPP, adjusting for socio-demographic characteristics (sex, age and number of bedrooms), parental smoking and school clustering effect.

Results: Prevalence of smoking susceptibility and any PPP exposure was 17.9% and 50.2%, respectively. Having cigarettes from parents was reported by 1.2% of students and was associated with an AOR (95% CI) of 6.62 (3.02-14.48) for smoking susceptibility, compared to no cigarette from parents. The corresponding figures were 12.5% and 2.86 (2.08-3.93) for assistance to parental smoking, 21.4% and 1.64 (1.11-2.41) for hearing pro-smoking messages, and 34.6% and 1.02 (0.67-1.57) for seeing cigarette packs or smoking-related behaviours, compared to no exposure to the respective PPP. The AOR (95% CI) of any PPP exposure for smoking susceptibility was 1.82 (1.38-2.41), and increasing PPP exposure was associated with smoking susceptibility with a dose-response relationship (P for trend<0.001).

Conclusion: Smoking susceptibility in children was associated with the number of PPP with a dose-response relationship, and particularly for PPP of having cigarettes from parents, assistance to parents' smoking and hearing pro-smoking messages from parents. Parents should quit smoking and avoid exposing children to a pro-smoking environment.

62. EFFECTIVENESS OF MEDIA CAMPAIGNS

PD-1314-21 Evaluation of a tobacco control media campaign in Bangladesh

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Background: Recently tobacco control act of Bangladesh has been amended. Three television spots (TVCs) were aired to inform public about newer aspects of amended law. Three TVCs were aired for consecutive 30 days in January 2014. TVCs were focused on three newer aspects of the amended act such as TVC-1 on ban on sale to and by minors, TVC-2 on ban on point-of-sale (POS) adver-

tisement and TVC-3 on inclusion of smokeless tobacco as tobacco products. The present study was conducted to evaluate outcome of the campaign.

Design/Methods: A cross sectional survey was conducted in February 2014 in the selected areas of four divisional cities of Bangladesh. One urban area from each of the cities was selected as study sites. The target population was people aged 15 years or more, and tobacco product sellers in the area. Four survey teams each consisting of a male and a female interviewer collected data by face to face interview using a semi structured questionnaire.

Results: Among the 565 respondents who had watched any of the selected TV channels during the campaign period, 34.3% could recall watching of TVC1 i.e. banning of sale to and from minor, 17.5% could recall watching TVC2 i.e. banning of advertisement at POS and 22.6% could recall watching TVC3 i.e. types of tobacco products covered by the amended law. For TVC1 and TVC3 proportion of respondents with recall was almost similar between household respondents and tobacco seller; however for TVC2, tobacco seller (21.7%) had higher recall than household respondents (15.4%). The proportion of respondents who could understand the messages of TVC1, TVC2 and TVC3 were 68.1%, 85.1%, 58.3% respectively.

Conclusion: Media campaign using television spots is a cost effective approach for raising awareness about new provisions of law. However by increasing the air time and duration of campaign a larger number can be targeted for future campaign.

PD-1315-21 Campaign: narghile smoking and smoking initiation

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Background and challenges to implementation: Created in 1986 by Federal Law. 7488, the National Day Against Tobacco, celebrated on August 29, aims to strengthen national awareness raising and mobilization of the population for the social harm, political, economic and environmental damage caused by tobacco. This was the first federal legislation related to the regulation of smoking in Brazil. The National Programa of Tobacco Control / NTP in accordance with the guidelines of the Framework Convention on Tobacco Control - FCTC, develops strategies to reduce smoking initiation and experimentation through educational activities in schools; increasing cessation of tobacco use and its derivatives; extend public treatment to smokers in public health system (SUS) and reduce environmental exposure to tobacco smoke, supporting environments 100% smoke free.

Intervention or response: The National Campaign Against Tobacco Day 2013, we chose to work the subject: Narghile smoking and smoking initiation.

The decision was based on the increasing number of new users of tobacco products in Brazil, according to data from

PETab (2008), the pipe of Eastern origin had, at that time, nearly 300 THOUSAND CONSUMERS IN THE COUNTRY. Importantly, the hookah has a peculiar feature: a single pipe can be used by several people simultaneously. This reinforces the ASPECT SOCIALISATION the pipe, something very attractive especially for young people. Information Vigescola highlighted the high prevalence of use of hookah among school youth 13-15 years in 2009. In Sao Paulo (SP), 93.3% of respondents who consumed other smoked tobacco products, in addition to commercial cigarettes, reported using the hookah with greater frequency. In Campo Grande (MS), 87.3% of students surveyed said they preferred the oriental pipe. Already in Victoria, the corresponding figure was 66.6%. In the week of the National Day Against Tobacco, activities aiming to mobilize society were held.

- A. Parts publicity;
- B. Hotsite INCA Portal (www.inca.gov.br);
- C. Social Networks;
- D. Shares of mobilization;
- E. Disclosure of the INCA study and research data on the use of hookahs.

Conclusions and key recommendations: We conclude that it is necessary to ensure strategies on this product mainly use among young children in Brazil.

PD-1316-21The effect of exposure to pro-tobacco content in mass media on trying and actual tobacco use among adolescents in India

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Background: Tobacco use is the second most common cause of death and fourth most common risk factor for disease worldwide. Tobacco advertising targeting youth and specific demographic subgroups is particularly effective. Tobacco companies pay to the media for showing advertisements which offer accessories and clothing with tobacco brands pasted on them. The present study presents the relationship between mass media exposure to tobacco use behavior among school going adolescents.

Design/Methods: It was a cross-sectional school based survey conducted amongst students aged 13-15 years in government schools of U.T. Chandigarh between January till May 2012. Based on prevalence of tobacco use among adolescents due to media influence to be 15% and relative error 3%, the minimum sample size arrived was 544. Assuming 10% non-response rate, the final sample size was taken as 600 students. Population proportionate to size (PPS) sampling technique was used to draw proportionate sample of students from schools located in urban, rural and slum areas. The data was double entered in MS excel and analyzed using Statistical Package of Social Sciences version 18.

Results: Out of total participants, 32(5.3%) were current tobacco users while 51(8.5%) were past tobacco us-

ers. Around half of the students (57.3%) were exposed to tobacco related contents while watching television while 20% were exposed to tobacco related contents viewing internet. Exposure to cinema weekly [OR=4.46, 95% CI (2.16-9.20)] and surfing internet daily [OR=3.28, 95% CI (1.57-6.87)] significantly increased the likelihood of using tobacco products. Exposure to daily radio, newspaper/magazine occasionally and daily internet significantly increased the likelihood of using tobacco in girls [OR=4.2, 95% CI (1.13-15.62) for radio, OR=5.72, 95% CI (1.08-30.21) for newspaper/magazine and OR=11.52, 95% CI (3.08-43.02) for internet]. Exposure to parent tobacco use significantly increased the likelihood of using tobacco in adolescents [OR=2.71, 95% CI (1.30-5.65) P = .008].

Conclusion: The present study findings provide evidence that exposure to pro-tobacco content in mass media is pervasive and promote tobacco use. It also supports the hypotheses that media exposure to tobacco contents leads to trying and initiation of tobacco products. The Government of India should take serious steps in completely banning all tobacco depictions in mass media.

PD-1317-21 Effects of the World Lung Foundation's "Sponge" media campaign on smokers' behaviour in Mauritius

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Background: Only limited information is available on the impact of anti-tobacco mass media campaigns on smoking behaviour in low-and-middle-income countries. A local version of the Australian Cancer Institute NSW's original "Sponge" media campaign (SMC) adapted for Mauritius with technical assistance by the World Lung Foundation (WLF) was launched on World No Tobacco Day 2011 and aired for three weeks until 19 June 2011 on television, radio, and billboards This study assessed the effectiveness of the World Lung Foundation's adapted Sponge media campaign (SMC) on Mauritian smokers' behaviour change towards quitting.

Design/Methods: Secondary data from three surveys of the Mauritius International Tobacco Control Policy Evaluation Project was analysed. Data collected included socio-demographic characteristics, smoking behaviour and quitting intentions using a stage of change model. Also measured were smokers' reactions to both the pictorial health warning labels (PHWLs) and the SMC introduced a year before Wave 2, and three weeks before Wave 3, respectively. Principal component analysis allowed construction of an index of reaction and generalised estimating equations modelling determined the association between reaction to the SMC and quitting intentions over time.

Results: 534 smokers were followed-up from Wave 1 to Wave 3. Findings indicated that progression over time from pre-contemplation to quitting was significantly associated with reporting greater positive reaction to the PHWLs (OR=1.01; 95%CI=1.00-1.01; p=0.01) but not to the SMC (OR=1.00; 0.99-1.01; p=0.52) at Wave 3. However, greater reaction to both interventions tend to have an additive effect (p=0.07). Other predictors of positive change towards quitting included greater self-efficacy (OR= 1.15; 1.11-1.19; p<0.001), better knowledge of health risks (OR=1.02; 1.00-1.03; p<0.01), and having friends who want to quit (OR=1.11; 1.04-1.19; p<0.01).

Conclusion: Despite its short duration in Mauritius, the Sponge Media Campaign was a positive moderator of the impact of PHWLs on enhancing progression towards quitting. In the upcoming Mauritius ITC Wave 4 survey, there is further need to investigate the number of quitters after data collection of Wave 3 survey, as a result of the SMC specifically.

PD-1318-21 Effect of tobacco control policies on information seeking for smoking cessation in the Netherlands: a Google Trends study

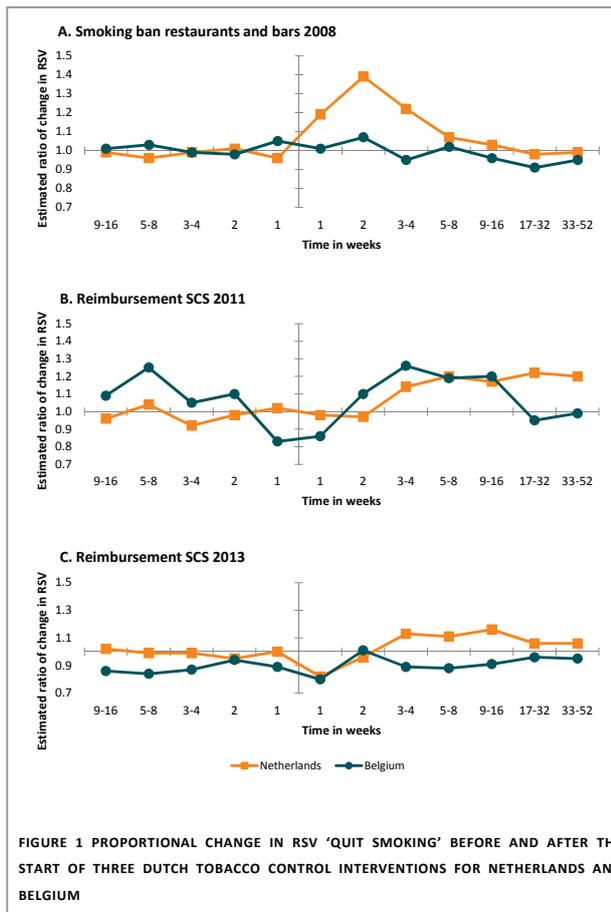
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Background: The effects of tobacco control policies have often been assessed by smoking cessation rates, with less attention to precursors of behavioural change such as contemplation. This study aims to measure the impact of Dutch tobacco control policies on the rate of searching for information on smoking cessation, using Google Trends search query data.

Design/Methods: An interrupted time series analysis was used to examine the effect of three Dutch tobacco control interventions on Google searches for 'quit smoking'. Search query data from Google Trends were seasonally adjusted and analysed using ARIMA modelling. Multiple variables were used to measure the duration of the effects of each intervention, ranging from 16 weeks before to one year after. The same analysis was repeated with Belgian search query data as a control.

Results: A significant increase in relative search volume (RSV) was found for one to four weeks (21-41%) after the introduction of the smoking ban in restaurants and bars. Effects were not found in the control group. The introduction of the reimbursement of smoking cessation support (SCS) was associated with a significant increase of RSV (16-22%) after 3 through 52 weeks. Significant increases in RSV were found in the control group before and after the start of the policy. The reintroduction of SCS in 2013 caused a significant increase of RSV (9-21%) for 3 to 32 weeks after the intervention. No effects in the control group were found for this policy.



Conclusion: The introduction of a smoking ban in restaurants and bars in 2008 caused a short term increase of RSV. The introductions of the reimbursement of SCS in 2011 and 2013 both caused a medium-term increase of RSV. This evidence suggests that tobacco control policies have short-term or medium-term effects on the rate of searching for information on smoking cessation.

PD-1319-21 Evaluation of a TV campaign showing testimonials of patients with smoking-related diseases

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Background: Smokers often underestimate the risks of smoking, or think they are not at risk personally. The objective of the evaluation study was to assess the impact of a TV campaign showing testimonies of sick smokers. Five films of 30 seconds each were broadcasted 409 times on the main TV channel in French-speaking Switzerland in 2013. The objective of this campaign was to increase the perception of risks among smokers.

Design/Methods: Before-after study with control group: 990 questionnaires were collected online in French-speaking Switzerland (exposed to the campaign) and 1315 in German-speaking Switzerland (control group, no campaign) in 2012 (before the campaign) and 1001 questionnaires in French-speaking Switzerland and 1002 in

German-speaking Switzerland 2013 (during and after the campaign.). All participants were current smokers. The sample was representative of all adults smokers in Switzerland.

Results: Fifty eight percent of the population in French speaking Switzerland recalled having seen the campaign. The message was very well remembered. The campaign increased the perception of smoking-related risks among smokers. An increase of 4 to 5% in the proportion of smokers saying they feared the health consequences of smoking was observed in French-speaking Switzerland between 2012 and 2013, whereas no change occurred in German-speaking Switzerland. The campaign had no detectable impact on smoking cessation, but this was not among its objectives.

Conclusion: The campaign was seen by a majority of the population and the message was well accepted and retained. The spots were deemed credible, they stimulated discussion among people who saw them and increased the fear of being affected by a smoking-related disease among smokers, which was the purpose of this campaign.

PD-1320-21 Development and expansion of the local media network to reduce smoking in Thai communities

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Background: According to the Global Adults Tobacco Survey 2011, (GATS), the current number of tobacco users in Thailand is 13 million, with 9 million users located in provincial areas. The GATS survey also shows a correlation between high smoking rate and low literacy of users. The majority of these users live outside of municipalities. Thus, it is crucial that local media outlets that serve tobacco users are given an opportunity to play an active role in anti-smoking campaigns. The objective of this project is to engage local media and provincial public relation departments in order to give them tools to become more involved in anti-smoking campaigns. Their main responsibility is to help create awareness among the local population with high smoking rates as well as to be involved with local youth anti-smoking campaigns.

Intervention: ASH Thailand organized 11 workshops with a total of 430 participants from local media outlets representing television, radio, newspaper, and provincial public relation offices. We encouraged existing media organizations to develop and expand a network to include new media outlets and provided funding to support 50 local media projects.

Results: From these efforts with local media since 2011, ASH Thailand has been able to help engage 3,713 media outlets nationwide. This number includes 51 newspapers, 403 magazines, 2,316 local radio stations, and 253 cable TV stations. ASH also developed a close working relationship with 430 local media organizations who involve themselves with our anti-tobacco campaigns. The media

also provided multiple news releases free of charge from January 2011 - June 2014, with an estimated value of 181,136,000 baht (6 million US\$).

Conclusion: Our continuous efforts to build strong relationships with local media have generated a wider distribution of information. It also resulted in increased public awareness about the harms of tobacco products, as well as knowledge of assistance for those who want to quit smoking. The local media has proved to be a crucial mechanism of support in moving Thai tobacco control policies forward.

PD-1321-21 Community-based interventions for tobacco control in developing countries could be effective: the case of Sousse, Tunisia

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Background: tobacco use is frequent among adults in developing countries where there are few interventions to reduce this unhealthy habit. Aim: evaluate feasibility and effectiveness of three years community based intervention for tobacco control in the region of Sousse Tunisia.

Methods: We conducted a quasi-experimental design with intervention and control groups from 2009 to 2014. The study concerned adults aged 18 to 65 years old living in delegation of Sousse Jawhara and Sousse Riadh for intervention area and delegation of Msaken for control area. Data collection concerned a randomized sample of districts in each area. The adults living in selected districts were invited to participate by responding to a questionnaire by interview at pre and post assessment. The intervention program from September 2010 to September 2013 included mass media programs on tobacco prevention and cessation, open sensitization days in neighborhoods, distribution of flyers and the association with workplace and school based interventions. We used chi square test to compare percentages of smokers at pre and post assessment with 0.05 level of significance.

Results: At pre assessment the sample was composed of 940 participants in each group with 34.3% and 28.8% of males respectively in intervention and control group. At post assessment the sample was composed of 1001 and 976 participants respectively in intervention and control groups. The proportion of males was 44.2% and 43.2% respectively in intervention and control group. The proportion of smokers decreased from 26.2% to 23.2% in intervention group ($p=0.13$) from pre to post assessment. In control group, this proportion increased significantly from 14.4% to 18.3%. Among men, tobacco users decreased from 52.9% to 45.6% ($p=0.035$) in intervention group and increased from 46.9% to 50.4% ($p=0.38$) in control group. Among women, tobacco users decreased from 5.6% to 5.5% ($p=0.99$) in intervention group and increased from 46.9% to 50.4% ($p=0.73$) in control group.

Conclusion: Integrated and sustainable interventions against tobacco use and other non-communicable disease

risk factors in this region could be effective and should be sustained and adopted by the government. Acknowledgment: this project was funded by United Health group initiative and NHLBI

PD-1322-21 Effect of the first National tobacco control campaign in Senegal, Africa: an evaluation

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Background: Tobacco use, the leading cause of preventable death worldwide, is on the uptake in Africa. Mass media campaigns are effective at preventing and reducing tobacco consumption, but the efficacy of their use has not been documented in Africa to date. With technical support from World Lung Foundation, the Ministry of Health, Senegal, ran the first national anti-smoking campaign between April and May 2013. The effectiveness of the campaign was assessed.

Methods: Nationally representative household surveys of 18 to 55 year old adults were conducted prior to the launch ($N = 1107$) and immediately following the conclusion of the campaign ($N = 1097$). Campaign awareness, reactions to the campaign, and changes in smoking-related knowledge, attitudes and behaviors were assessed using bivariate tests (chi-squares) and multivariate logistic regression analyses. Calls to a national quitline were also monitored.

Results: 63% of respondents recalled the campaign. Among non-smokers, there was a significant increase from the pre-campaign to the post-campaign period in knowledge of smoking harms (94% vs. 96%, $p < 0.05$) and increased support for government run campaigns on smoking and health (83% vs. 93%, $p < 0.05$). Among smokers, there was a significant increase in the percentage who reported being worried for their health because of their habit (93 vs. 99%, $p < 0.05$), who seriously considered quitting (79% vs. 93%, $p < 0.05$), and that intended to quit within the next six months (40% to 54%, $p < 0.05$). Application of change rates to Senegal census data suggested that an estimated 96200 (95% CI 16800-176000) additional Senegal smokers intended to quit within the next 6 months. Calls to the quitline increased six-fold during the period of the campaign compared to two months prior, and increases in calls to the quitline were closely related to the intensity of the campaign such that calls spiked on days when the campaign aired at greater intensity.

Conclusion: The campaign had good reach and impact, creating concern among smokers, motivating quit attempts, and creating better knowledge and more anti-tobacco attitudes among non-smokers. Mass media campaigns can be an effective intervention for tobacco control in Africa.

PD-1323-21 Cost-effectiveness of tobacco control mass media campaigns in low- and middle-income countries (LMICs): examples from Senegal, India, China, Vietnam

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Background: While tobacco control mass media campaigns have been found to be effective in preventing and reducing tobacco use, to date there have been limited studies of the cost-effectiveness of mass media campaigns in LMICs. Four recent mass media campaigns were studied for cost-effectiveness, including a campaign in China on the harms of second-hand smoke (SHS) exposure; in India, on smokeless tobacco harms; in Senegal, on the harms of smoking; in Vietnam, on the harms of SHS exposure.

Method: Campaign impact was assessed in nationally representative, post-campaign household surveys in each country and included 3001 adults in China; 3670 tobacco users in India; 1097 adults in Senegal; and 1965 adults in Vietnam. Survey data was combined with campaign expenditure to identify costs associated with campaign-attributable changes in knowledge, attitudes and behaviors. Sampling weights were applied to project to the population. Logistic regression models, controlling for confounders, calculated differences between campaign aware and unaware respondents, and through extrapolation, the numbers of individuals in the populations reflecting campaign-attributable. Sensitivity analyses with success rates ranging from 10 - 100% were performed for each outcome. Cost-effectiveness ratios were then calculated by combining the figures from the above analysis with campaign cost.

Results: Campaign awareness was associated with improved campaign-related knowledge in approximately 7 million Chinese, 16 million Indians, 247,000 Senegalese, and 1 million Vietnamese. The cost per person to improve knowledge (at 50% campaign attributable) was lowest in India at US\$ 0.12 and highest in Senegal at US\$ 1.7. Campaign awareness increased interpersonal communication about smoking among 23 million Indians and 5 million Chinese, with cost-per-person (50% campaign attributable) at US\$ 0.09 and US\$ 0.17 respectively. Finally, campaign awareness was associated with increased quit attempts among 29 million Indian SLT tobacco users, 4 million Chinese, and 680,000 Vietnamese smokers. Associated costs per person (50% attributable) were US\$ 0.07, US\$0.21, and US\$ 0.56 respectively.

Conclusion: The findings from this study highlight the large reach of the campaigns and the low costs associated with campaign-attributable improved knowledge, attitudes, and behaviors. This study suggests that tobacco control mass media campaigns are potentially cost-effective interventions in LMICs.

PD-1324-21 An exploratory study of generational differences in health information seeking and smoking behaviors in Bulgaria
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Background: Today, over 80% of the world's smokers live in low- and middle- income countries. Bulgaria is a middle-income country with a substantial smoking problem - half of the adult men and over a quarter of the adult women smoke cigarettes. Bulgarians also tend to be heavy smokers, ranking second in the world for cigarettes smoked per capita. Research suggests that one of the most important predictors of smoking behavior in Bulgaria is age. The primary purpose of this research project was to deepen the current understanding of generational differences in health information seeking behavior in Bulgaria, as well as the current attitudes, behaviors and cultural perceptions in regards to smoking.

Design/Methods: Triangulation in data collection and data analysis was performed to answer 11 research questions. Sub-scales of the Health Information National Trends Survey (HINTS) were translated and tailored for Bulgarian audiences. In addition, semi-structured informational interviews were conducted to contextualize the quantitative findings. MANOVA, Chi-square tests, and Contrapuntal Analysis were performed for the quantitative and the qualitative data respectively.

Results: A total of 165 participants from South-West Bulgaria completed the survey and 14 of them participated in the interview process. The results suggest that there are statistically significant differences between members of Generation X (born 1961-1981) and Generation Y (born 1981-2001) in the following variables: concern with quality of health and medical information, perception of quitting difficulty, perception of the health consequences of direct smoking, and number of attempts to quit smoking in the past year. Generational differences in conceptualizing the cultural and ideological meanings of smoking were also noted.

Conclusion: Bulgarians differ by generations in how informed they are about the negative aspects of smoking, as well as how they acquire and perceive health information. However, both generations accept smoking as a normative social behavior and a cultural trend that is inherent within the Bulgarian culture. These findings can inform health communication campaigns in Bulgaria about smoking.

**PD-1325-21 'Be There Tomorrow':
a campaign that changed the behaviour of
125,000 smokers in the South West of England**

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Be There Tomorrow, a campaign developed by Smokefree South West highlights the stark truth that 1 in 2 smokers will die early from their habit. The aim: To shock smokers and trigger them to stop, think and make a positive step towards quitting, for themselves and for their loved ones. The campaign was launched following the publication of shocking statistics which revealed that more than 9 in 10 people (90.7%) surveyed were not aware that half of all smokers will die early from the habit. Be There Tomorrow was launched to stamp out this ignorance around the dangers of smoking. Be There Tomorrow, which focuses on the emotional consequences of smoking, was tactically launched on 10 February 2014, directly after Public Health England's new health harms campaign which highlighted the physical harm of smoking. Evidence suggests that running these two types of campaigns closely together, stimulates mass population quit attempts. The campaign was rigorously tested with both smokers and non-smokers, and ran across the South West of England as a heart wrenching TV advert, radio advert and outdoor poster campaign. The launch of Be There Tomorrow also ran on the news across the region generating an impressive £700,000 worth of free PR. Evaluation showed that the campaign made a significant impact among both smokers and non-smokers in the South West of England. 215,000 more people in the South West are now aware that 1 in 2 people will die early as a result of smoking, which represents a 26% increase in awareness of the dangers of tobacco. 6 in every 10 smokers (around 480,000) recalled seeing, hearing or reading about the campaign. This is the highest awareness ever recorded in the South West for the first airing of a campaign. 64% of our target audience of smokers with young children recalled the campaign. Ultimately the key measure of success for this campaign has to be the numbers of smokers who changed their behaviour as a result of our messaging. Among our key target audience of young parents who smoke, 1 in 3 smokers (33%) claim to have changed their smoking behaviour as a result of the campaign. Overall 1 in 4 smokers (26%) changed their behaviour, that's a significant 125,000 smokers in the region who have made a positive step towards quitting directly as a result of the campaign.

**PD-1326-21 Eliciting negative emotions
from media campaigns: the positive experience
from England**

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Background: FRESH- Smoke Free North East launched in 2005 covers a population of 2.6 million in the North East (NE) of England. Effective media and communication strategies as part of an eight key strand approach to reduce prevalence has been central to the work over the last ten years. The regional programme is funded by all 12 local government councils.

Intervention: Using substantial international evidence that the most successful campaigns to motivate smokers to stop are those that elicit negative emotions/portray the hard hitting truth of reality of smoking, FRESH has successfully woven this into its award winning programme. In recent years, FRESH has developed two specific hard hitting integrated campaigns across mass media, digital, social and earned media channels. These have led to significant increases in smokers' awareness of key smoking related facts and importantly have prompted positive shifts in behaviour.

Results and key lessons: The "Every Breath" campaign in 2012 (backed by international singer Sting and British Lung Foundation) highlighted the long-term effects of smoking related chronic obstructive pulmonary disease (COPD) to encourage more people to quit. A pre-survey of smokers found that 67% weren't aware of COPD or its debilitating effect. It resulted in the largest rise in quitting the NE has seen through the NHS Stop Smoking Services. The "Don't be the 1" campaign in 2014 highlighted the fact that one in two longterm smokers will die early with research showing that 9 out of 10 smokers underestimate the risk.

Results showed a 125% increase in smokers correctly identifying the 1 in 2 risk and over 31% of those who saw it taking positive action. The TV advert won overall Grand Prix prize at the 2014 UK Roses Creative Awards and the campaign is running again in autumn 2014. Throughout both campaigns, the use of real local people, clinicians and their personal stories has been integral to making sure the messages resonate with key audiences. This has also been used in the year round public relations work achieving over USD 4.3M earned media each year. This is a cost effective way for localities to benefit from world class campaigns across a big footprint.

Conclusions: Hard hitting media campaigns work and have helped to reduce smoking rates in the NE from 29% in 2005 to 22% in 2012 and also helped to shift the norms around tobacco resulting in the NE having the highest public support for new measures to tackle smoking. www.freshne.com

63. TRADE VS PUBLIC HEALTH: LINKS, THREATS AND STRATEGIES

PD-1327-21 Prevalence of current tobacco consumption in a North Algerian population: results of a household survey

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Background: The monitoring of tobacco consumption is necessary to estimate population risk for chronic diseases and cancer. However, very limited number of studies addressed the smoking prevalence among adults in Algeria. The objective of the survey was to measure the prevalence of current tobacco consumption in a representative sample of north Algerian adults.

Design/Methods: A household survey was carried out in Algiers area. We applied a standard multi-stage, cross-sectional study design. Households were randomly selected using a cluster sampling method. An anonymous questionnaire was used by trained investigators to identify people using tobacco. Prevalence of tobacco consumption is defined as the percentage of individuals who are current smokers or tobacco chewers. The Centers for Disease Control (CDC) defines current smokers as persons who have smoked cigarettes on one or more days during the 30-day period before the survey was administered. Statistical analysis was performed with Epi-Info software. Differences in proportions and means were considered statistically significant at the $p < .05$ level.

Results: In total, 1511 residents aged ≥ 20 years were examined (508 males and 1003 females). The overall prevalence of current tobacco consumption was 20.4% (58.9% among males and 0.9% among females; $p < .01$). The prevalence of those smoked cigarettes was 16.7% and the prevalence of those chewing tobacco was 9.7%. The mean age (standard deviation) of tobacco users was 49.2 (17.3) years old among males and 36.3 (10.4) years old among females ($p < .01$). The prevalence of tobacco consumption among males by age (years) was: 20-29 16%; 30-39 18.9%; 40-49 16.4%; 50-59 22.2%; 60-69 26.4%; ≥ 70 31.3%. The difference between the prevalence by age was not statistically significant. Smoking prevalence of current smokers among males was 48% and the prevalence of current tobacco chewers was 28.9%. Current smoking prevalence among males by age (years) was: 18-29 56.5%; 30-39 46.5%; 40-49 47.4%; 50-59 55.3%; 60-69 53.9%; ≥ 70 52.6%. The difference between the prevalence of current smoking by age was also not statistically significant.

Conclusion: The prevalence of tobacco consumption was high in men and low in women. Cultural factors may be explained this difference. The high prevalence of consumption in this sample of north Algerian adult population suggested interventions that aim primarily at prevention components, smoke-free spaces and advertising control.

PD-1328-21 Exporting an inherently harmful product: the marketing of Virginia Slims cigarettes in the United States, Japan, and Korea

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Background: Ethical issues surrounding the marketing and trade of harmful products such as tobacco require a better understanding. Virginia Slims, an exclusively women's cigarette brand first launched by Philip Morris in 1968 in the United States, was introduced to major Asian markets during the mid 1980s with the assistance of the U.S. government. We provide a case study that demonstrates how Philip Morris, the world's largest private tobacco firm, has marketed its Virginia Slims cigarette brand to consumers both domestically and internationally. Central research questions guiding our case study are: (1) What marketing strategies were used by Philip Morris as they entered new markets such as Japan and Korea, and to what extent did the company try to appeal to women in markets where comparatively few women were smokers?; and (2) What is the morality of private profit prevailing over public health?

Design/Methods: Internal corporate documents, made public from litigation, were examined that had been searched online from the Legacy Tobacco Documents Library (<http://legacy.library.ucsf.edu>).

Results: Due to differences in regulatory environments and cultural values in Asian markets, Philip Morris, the producers of Virginia Slims, implemented adaptive marketing approaches and underwent a drastic strategic change in Korea, where the brand is targeted to men. The case study also reveals that the classification of "vulnerable" consumers is variable depending on culture, tobacco firms display responsive efforts and strategies when operating within a "mature" market, and cultural values played a role in informing Philip Morris' strategic decision to embrace an adaptive marketing approach when entering the Japanese and Korean markets. Finally, moral questions are raised with tobacco being identified as a priority product for export and international trade agreements being used by corporations, governments, or trade partners in efforts to undermine domestic public health policies.

Conclusion: Trade agreements serve important functions such as enhancing competition and economic prosperity, but should include a common exception for subject matter that is deemed necessary to protect public health. Although debate is to be expected about what does or does not constitute such subject matter, it is clear that a common exception should be applicable for inherently harmful products such as tobacco.

PD-1329-21 Survey and analysis of tobacco use prior to the implementation of the "Changchun Method on Prevention of Hazards from Tobacco" in China

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Background: Changchun Method on Prevention of Hazards from Tobacco (hereinafter referred to as Method) begun to be implemented on March 1, 2014, dictating no-tobacco inside all buildings and no-buffer period in hotels, restaurants. The Survey of China (Changchun) on Tobacco Use by Adults was launched in July 2013. The data will be used as the benchmark before the Method, and, in 2016, the survey will make a comparative assessment of the law enforcement in the following three years after its promulgation.

Method: The survey aims to collect information on the target tobacco users' backgrounds, tobacco use habits, smoking cessation, second-hand smoking, tobacco economy, the media, and relevant knowledge on, attitude to and awareness of tobacco use. The survey adopted the multi-stage cluster sampling method. The selected households totaled 2500. One of the eligible members from each of the households was randomly selected to answer an individual questionnaire. In total, 2213 completed questionnaires were received, and the overall response rate was 92.2%

Results: The findings of the survey in Changchun are as follows:

- 43.2% of the males and 3.8% of the females use tobacco; 23.5% of the adults (515000) smoke; on average, a smoking male consumes 15.3 cigarettes a day.
- Over the past 12 months, 20% of the smokers have attempted to quit smoking.
- Over the past 12 months, 60% of the smokers who saw the doctor have been advised by the doctor to quit smoking.
- 48.9% of the indoor working adults (569000) are exposed to second hand smoking; 45.8% of the adults (960000) are exposed to second hand smoking at home; 72.7% of the adults (1.053 million) are exposed to second hand smoking in restaurants.
- 10% of the adults have come across cigarette advertisements in stores where cigarettes are sold; 40% of the adults have access to tobacco control information in newspapers or magazines; 60% of the adult have watched tobacco control publicity on TV.
- 61.0% of the adults think that second hand smoking may lead to heart diseases in adults; 83.8% of the adults think that second hand smoking may lead to lung cancer.

□□□□□□□□□□□□

Tobacco Use

- 43.2% of the males, 3.8% of the females, overall 23.5% adults (515000 people) in all, smoke.
- 39.4% of the males, 3.1% of the females, overall 21.2% adults (465000 people) in all, smoke every day.
- On average, a males smoke 15.3 cigarettes every day.

Smoke Cessation

- 20% of the smokers have tried to quit smoking over the past 12 months.
- 10% of the smokers are thinking about quitting smoking in the following 12 months.
- 60% of the smokers who saw the doctor have been advised by the doctor to quit smoking over the past 12 months.

Second Hand Smoking

- 48.9% (569000 people) of the indoor adult workers are exposed to second hand smoking.
- 45.8% (960000 people) of the adults are exposed to second hand smoking at home.
- 72.7% (1.053 million people) of the adults are exposed to second hand smoking at restaurants.

The Media

- 10% of the adults have come across cigarette advertisement in stores where cigarettes are sold.
- 40% of the adults have accessed the information on tobacco control in newspapers or magazines.
- 60% of the adults have watched the information on tobacco control on TV.

Knowledge, Attitude and Awareness

- 62.9% of the adults think that smoking may lead to myocardial infarction; 48.8% of the adults think that smoking may lead to apoplexy, 22.6% of the adults think that smoking may lead to erectile dysfunction.
- 61.0% of the adults think that second hand smoking may lead to heart diseases in adults; 83.8% of the adults think that second hand smoking may lead to lung cancer in adults; 75.4% of the adults think that second hand smoking may lead to lung diseases in children.

PD-1330-21 Knowledge, attitudes, and practices regarding tobacco use among school personnel in Mangalore City, India

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Background: Schools are in a uniquely powerful position to play a major role in reducing tobacco use among children since children spend most of their waking time in school and school personnel are their role models. Schools have contact with the child and the family from an early age and have the potential to reach a large numbers of children at an age when they are tempted to experiment with tobacco. To plan effective interventions, it is essential to have information on the extent and the type of tobacco use among school personnel, their attitudes towards tobacco control, and the existence of school health policies about tobacco. Hence this study was conducted to obtain baseline information about knowledge, attitude and practice about tobacco use among school personnel in Mangalore city, India.

Design/Methods: A cross-sectional study was conducted among School Personnel of Mangalore city, India using anonymous self-administered Global School Personnel

Survey (GSPS) questionnaire. The schools were selected based on convenience sampling and all school personnel in sampled schools were eligible to participate. The study was conducted for duration of 6 months from July to December 2013. The data obtained was analyzed using SPSS (Statistical Package for Social Sciences) version 16.

Results: A total of 130 participants participated in the study out of which 39.5% belonged to the age group of 20-29 years and 94.6% were females. Among them 5.4% smoked, 4.8% smoked in school premises and 2.4% chewed tobacco. Among the participants 93.7% believed cigarette smoking must be banned in public places, 96% believed cigarettes are harmful to health and other people smoke are harmful and 88.4% believed teachers tobacco use influenced youth tobacco use. Only 15.5% had received training to prevent tobacco use among youth though 80.8% believed that teachers need specific training to teach children how to avoid or stop using tobacco. Only 73.5% knew tobacco use causes heart diseases. It was alarming to note that around 30.7% said that tobacco products could be bought within 100 meters of their school building.

Conclusion: It can be concluded that School personnel have a favorable attitude towards tobacco control and are ready to work for it with proper training. Awareness programme regarding tobacco should be conducted for both teachers and students who can aid in implementation of tobacco control policies in schools.

PD-1331-21 Advocacy for use of WHO-FCTC Article 5.3 in line with COTPA 2003 to prevent tobacco industry interference

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Background information: UP state government seems to be working under the influence of tobacco industry. For example government it has not only given less priority to tobacco control interventions, but also made policy decisions that are favourable to the tobacco industry, such as reducing taxes on cigarettes, cigars, and un-manufactured tobacco. The objective of this initiative was to expose tobacco industry interference in various government departments, other than health, by using WHO-FCTC Article 5.3 in line with Cigarette and Other Tobacco Product Act (COTPA) 2003.

Methods: CNS signed a Memorandum of Understanding (MOU) with the government of UP State Tobacco Control Cell for this initiative. CNS coordinated with many government departments, including those of health, education, food, excise, labour and police among others, along with civil society partners from across the state, to organise a day long advocacy and training workshop on WHO-FCTC Article 5.3. This training was technically supported from two international organizations (Network for Accountability of Tobacco Transnationals (NATT), USA and

Health Justice, Philippines), and shared some best practice examples on the use of WHO FCTC Article 5.3 from across the world, including India. Result: WHO FCTC Article 5.3 training workshop was a great success. More than 60 participants, including 20 government representative from different departments, participated in the programme. Identifying opportunities and challenges to use WHO FCTC Article 5.3 in their local context, the participants agreed upon the following: (i) Respond to the misleading advertisements of nicotine chewing gums issued by ITC; (ii) State Level Coordination Committee should also act as an Article 5.3 Committee and communication platform; (iii) constituting District Level Task Force Committee to conduct monitoring and vigilance; (iv) a toll free number to report violations to be announced by UPSTCC.

Conclusions/ lessons learnt: We got overwhelming support from government institutions and civil society partners for making this training a huge success. Orientation of government officials/ law enforcement officials on the use of WHO-FCTC Article 5.3 in line with COTPA 2003 is likely to thwart the vested interests of the tobacco industry to some extent in the state, but for prolonged benefit we need to incorporate WHO-FCTC Article 5.3 into the national tobacco programme agenda as well.

PD-1332-21 Association between cigarette smoking and suicide attempts among disadvantaged adolescents in 5 global cities

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Background: Adolescents from disadvantaged urban communities are at increased risk of health-compromising behaviours like smoking. In this paper, we examined the association between cigarette smoking and suicidal ideation and attempt among vulnerable adolescents in five global cities.

Design/Methods: The Well-being of Adolescents in Vulnerable Environments (WAVE) study was conducted among adolescents aged 15 – 19 years residing in disadvantaged neighbourhoods in Baltimore, USA; Delhi, India; Ibadan, Nigeria; Johannesburg, South Africa and Shanghai, China. Adolescents were recruited via Respon-

dent Driven Sampling and completed Audio-Computer Assisted Self-Interviews. Information on smoking status (never smoked, ever smoked and currently smoking) and suicidal ideation and attempt were obtained. We explored the associations using Chi square test and logistic regression (unadjusted).

Results: Nearly half, (49.9 %) of the 2307 respondents were males and 26.3% had ever smoked cigarettes ranging from 6.0% in Ibadan to 43.8% in Johannesburg. Current cigarette use was 17.9% (3.7% in Delhi to 32.4% in Johannesburg). Twenty-four percent had ever seriously contemplated suicide (11.1% in Delhi to 35.5% in Johannesburg). In the previous year, 12.3% made a suicide plan (3.4% in Delhi to 21.7% in Johannesburg) while 8.3% (3.1% in Delhi to 16.5% in Ibadan) attempted suicide. Across all sites, 41.4% of current cigarette smokers (OR = 2.37, 95% CI = 1.89 – 2.96) and 35.2% of ever smokers (OR = 3.09, 95% CI = 2.64 – 3.63) compared to 18.6% who never smoked had seriously contemplated suicide ($p < 0.05$). This pattern was similar in the majority of the cities. About 17.2% and 20.3% of adolescents who ever (OR = 1.89, 95% CI = 1.42 – 2.51) and currently smoked (OR = 2.36, 95% CI = 1.94 – 2.88) made a suicide plan compared to 9.8 % who never smoked ($p < 0.05$). Overall, 12.4% of ever (OR = 1.93, 95% CI = 1.39 – 2.68) and 12.3% of current (OR = 1.95, 95% CI = 1.53 – 2.48) smokers compared to 6.8% who never smoked had attempted suicide ($p < 0.05$).

Conclusions: Our findings revealed a significant association between smoking and suicidal ideation and attempts among adolescents residing in vulnerable neighbourhoods. Also, ever smokers had similar probability of attempting suicide as current smokers. Strategies aimed at preventing cigarette smoking initiation among vulnerable adolescents might be beneficial in reducing suicidal ideations and attempts among these adolescents.

PD-1333-21 A comprehensive analysis of existing studies on tobacco control and trade

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Background: Since the advent of trade liberalization and even before the WHO FCTC negotiations, various studies have been conducted exploring the nexus of trade and tobacco control (TC). A comprehensive analysis of the recent trends in the area was conducted to analyze the prevalence of arguments supporting tobacco industry (TI) position vis-à-vis that of the TC community.

Design/Methods: This research employed a qualitative analysis of studies on TC and trade, published from 2001 to 2014, and gathered mainly from EBSCO and Google Scholar. Snowballing technique was employed to examine key sources cited.

Results: This research revealed that a significant number of studies, prepared by academic/legal scholars, support the position of TC advocates. Generally, they espouse policy coherence between TC and trade, proffer policy frame-

works and domestic measures to avoid legal challenges by TI, and tackle flexibilities in the interpretation of global trade policies to accommodate implementation of stringent TC measures. A handful of materials refer to policy options for negotiating treaties. There are also very few studies supporting TI position; these tend to confine their scope on technical/legal arguments specifically relating to the protection of trademarks and intellectual property rights, and often provide reference to other industries and stability of the international trade system. None of these materials are written by authors from and in the context of developing countries. A sharp rise in the number of materials is noticeable from 2010 onwards after Philip Morris sued Uruguay.

Conclusion: Available studies on the junction between TC and trade support the positions of the TC advocacy; however, these do not diminish the frequency of TI’s use of these arguments. Neither are these determinants of the outcome of cases, e.g., WTO Clove Cigarettes case. As to the handful of new materials relating to policy options in negotiating treaties, it remains to be seen how they could shape the contending discourses in the area or support the development of policies. It is worth exploring to see if they should feed into TC policy decisions in both local and international levels.

PD-1334-21 An analysis of the Philippines position on intellectual property rights protection: implications on tobacco control

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Background: While the Philippines is a signatory of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC), it is also a party to numerous free trade agreements (FTAs). At present, it is one of the negotiating countries of the Regional Comprehensive Economic Partnership (RCEP), which seeks to advance a multilateral trading arrangement between the Association of Southeast Asian Nations (ASEAN) and six states with which ASEAN has existing FTAs. Consequently, this study seeks to: (1) investigate the country’s commitment in some of its FTAs in relation to its trademark rules; and (2) determine whether or not these commitments will protect the country’s tobacco control measures from trademark-related disputes from the tobacco industry.

Design/Methods: An analysis of the country’s commitments in some of its FTAs particularly with reference to the latter’s intellectual property rights (IPRs) provisions was conducted to determine whether or not they pose threats to the country’s adoption of more stringent tobacco control measures, such as graphic health warning and plain packaging.

Results: Because of its commitments to various FTAs that require strong obligations to protect IPRs, the Philippines is exposed to threats from the tobacco industry which can exploit IPR rules to challenge tobacco control policies af-

fecting trademarks, e.g., graphic health warning and plain packaging. The degree and level of these threats vary depending on how its FTAs' IPR provisions are formulated.

Conclusion: Despite the ostensible disjoint in the country's position on tobacco control and protection of IPRs under its FTAs, opportunities exist for policymakers to address possible threats from the tobacco industry. The benefits offered by FTAs, including IPR protection, must not come at the expense of curtailing the country's capacity to enact and enforce more effective tobacco control measures. Policymakers should therefore review and amend the country's commitments to its FTAs in light of their serious policy implications on tobacco control.

PD-1335-21 Cotinine levels in urine of pregnant women as a biomarker of fetal exposure to tobacco smoke

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Background: Tobacco smoking is well known for its ability to seriously alter the course of fetal development. It may cause many complications including stillbirth, premature delivery, and low birth weight. However, still many pregnant women continue to smoke. The aim of the study was to evaluate fetal exposure to tobacco smoke by measuring the concentration of cotinine in the urine of pregnant women and to compare the results of analyzes with the data declared in the survey.

Design/Methods: The study protocol was approved by the Bioethical Committee of the Poznan University of Medical Sciences (Resolution No. 593/13 of 13 June 2013). The 77 urine samples from pregnant women (at 5 ml) were used in this study. They were divided into 3 study groups: tobacco smokers, exposed to second-hand tobacco smoke and non-smokers. Cotinine levels in urine was determined by high performance liquid chromatography with diode array detection (HPLC-DAD). Chromatographic analysis was preceded by the extraction from the urine, using a liquid-liquid technique.

Results: Analysis of data from surveys of patients participating in this study showed that 31 of them declared that they did not smoke tobacco; 25 that are exposed to passive exposure to tobacco smoke, while 21 indicated as active smokers. Toxicological analysis showed that in the group of women qualified on the basis of questionnaires to non-smokers in four cases, the presence of cotinine in urine were detected: 118.89 - 338.24 ng cotinine/ml. In addition, the group of women exposed to second-hand smoke, in two patients the presence of cotinine were 347.69 ng/ml and 492.25 ng/ml, which also suggest that these women were not exposed to tobacco smoke only in a passive way.

In the group of women smokers cotinine concentration was 131.58 - 717.27 ng/ml. In summary – almost 8% of the women have hidden the fact that they are smokers in the survey.

Conclusion: As suggested the literature in the surveys to the active smoking during pregnancy admits 15-30% of women. In fact, the number of women smokers is higher, because some of them hides the fact of smoking for various reasons. In order to achieve more reliable results, it is important to verify survey data by measurement of tobacco smoke biomarkers, which usually identifies a further 5-10% of pregnant active smokers.

PD-1336-21 Epidemiology of tobacco use: the dilemma of underreporting and underestimation in GCC countries

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Background: Tobacco use, a global public health problem and associated with a variety of chronic medical diseases is reported to have variable epidemiological trends across the world. Objective: This review paper aims to identify factors underlying variable prevalence of tobacco use worldwide in general but special focus on Gulf Cooperation Council (GCC) countries.

Methods: Computer searches of the largest databases-PubMed, MEDLINE, Google Scholar, and Quertle[®] were made using keywords for identifying and retrieving relevant articles published in English, peer-reviewed journals over the last 40 years.

Results: At global level, the prevalence of tobacco use has been decreasing in the Western world compared to Eastern world. However, GCC nations are showing increased prevalence rate over the past half-decade yet the projected prevalence of tobacco use certainly reflects the underestimation of the problem in hand attributable to a variety of reasons in terms of biological, psychological, socio-cultural, and political factors, which will be discussed in detail. GCC nations are showing increased prevalence rate over the past half-decade yet the projected prevalence of tobacco use certainly reflects the underestimation of the problem in hand attributable to a variety of reasons in terms of biological, psychological, sociocultural, and political factors, which will be discussed in detail. **Conclusion:** The prevalence of tobacco use is temporally variable across the nations; however tobacco use is on the decrease in the industrialized nations compared to low- and middle-income countries of the world. GCC nations tend to underreport the prevalence of tobacco use that has long-term adverse effects on the health and economy of the people.

PD-1337-21 Countering the tobacco industry's challenges on tobacco tax policy in ASEAN**R Sophapan,¹ S Ratanachena,¹ JL Reyes,¹ B Ritthiphakdee,¹ U Dorotheo¹**¹Southeast Asia Initiative on Tobacco Tax, Southeast Asia Tobacco Control Alliance, Bangkok, Thailand. e-mail: sophapanr@hotmail.com

Background and challenges to implementation: The Southeast Tobacco Control Alliance (SEATCA) implemented its Southeast Asia Initiative on Tobacco Tax (SITT) in Cambodia, Indonesia, Lao PDR, Philippines and Vietnam with specific focus on FCTC Article 6. One of the project's key strategies is to utilize evidence-based researches to educate key stakeholders in advancing effective tobacco tax policies and practice that will reduce tobacco consumption and save lives. Over the course of the project implementation, the tobacco industry has made countless attempts to interfere at different stages and levels of the tobacco tax policymaking process. The different forms of interference include but are not limited to: requesting to participate in the law-drafting committees, lobbying to influence high-ranking policymakers, mobilizing front groups and propagating false information to promote the industry's interests.

Intervention or response: In order to stand against the industry's tactics in challenging effective tobacco tax policy formulation and implementation, the SITT project has utilized the following strategies to overcome these forms of interference: 1. utilize evidence-based research that are country specific to educate key stakeholders and the public; 2. use different media to communicate key messages with the right decision-makers; 3. conduct consultations and dissemination activities to educate and gather support from different advocates; and 4. document and expose industry activities to interfere with policy formulation and/or implementation.

Results and lessons learnt: Through these strategies, successes have been achieved in SITT countries, with improved policies increasing tobacco tax rates that would generate more government revenues that can be utilized for public health and tobacco control.

Conclusions and key recommendations: The tobacco industry has different means to undermine efforts of governments and advocates in institutionalizing effective policies. Generating evidence-based research to support policy and mobilize support from different stakeholders is one of the most effective strategies towards policy reform in tobacco control.

64. DE-NORMALISING TOBACCO FOR WOMEN AND CHILDREN**PD-1338-21 Predictors of intention to quit smoking among tertiary students in Dhaka, Bangladesh****KN Kabir,¹ MA Rahman^{2,3}**¹Public Health, American International University Bangladesh (AIUB), Dhaka, Bangladesh, ²St Vincent's Centre for Nursing Research (SVCNR), Australian Catholic University, Melbourne, Victoria, Australia, ³The Cardiovascular Research Centre (CvRC), Australian Catholic University, Melbourne, Victoria, Australia. e-mail: aziz.rahman@acu.edu.au

Background: In Bangladesh, 23% of adult aged ≥ 15 years currently smoke tobacco and 70% of the current smokers have intention to quit. Intention to quit smoking is the first step towards cessation. Identifying predictors of intention to quit is crucial among young people as the average age of smoking initiation is 19 years in Bangladesh. They do not have exposure to tobacco for long, so specific targeted interventions can assist them in quitting and prevent future loss of productivity. This study aimed to identify factors influencing intention to quit smoking among current smokers of tertiary students in Bangladesh.

Design/Methods: A cross sectional survey was conducted during Jan-Jun 2014 with students of 18-25 years who have been smoking for at least 12 months and studying at four private Universities in Dhaka, Bangladesh. Students

irrespective of discipline and gender were recruited using snowball sampling technique. A structured questionnaire was used for both face-to-face and telephone interviews. The questionnaire included information on socio-demographics, smoking behaviour, intention to quit and Fagerstorm nicotine dependence scale.

Results: Total participants were 471 current smoker students, mean age was 22.4 (± 1.8) years and 409 (87%) were male. More than half of the total participants (54%) intended to quit smoking during the study. About half of them (46%) had been smoking for more than three years and one third (31%) had moderate to severe nicotine dependence according to Fagerstorm scale. Only 32% was aware of smoking cessation medication or instruments, but 50% was aware of current anti-smoking laws of the country. The main reasons for intention to quit were health (42%), money (21%) and family (18%), and for relapse was addiction (25%). Strong predictors of intention to quit smoking include past quit attempts, restrictions of smoking at home, disbelief that smoking adds values to personality, concerns of cost, no or less motivation, awareness of smoking cessation support and anti-smoking laws. After adjustment of potential confounders, intention to quit was strongly associated with past quit attempts (adjusted ORs 3.7, 95% CIs 2.2-6.4), awareness of anti-smoking laws (adjusted ORs 1.9, 95% CIs 1.1-3.3), and no or less motivation (adjusted ORs 0.5, 95% CIs 0.2-0.9).

Conclusion: Predictors of intention to quit smoking identified through this study should be utilised in developing targeted tobacco control interventions for young people.

PD-1339-21 Smokeless tobacco cessation in pregnant women of a Bangladeshi villageT Zissan¹¹MCH, Ekhlaspur Center of Health (ECOH), Matlab, Chandpur, Bangladesh. e-mail: zamanm@who.int

Background and challenges to implementation: Use of smokeless tobacco in women is very common. It is well known that many women start consuming betel quid with tobacco leaf during pregnancies as a remedy of morning sickness. Therefore pregnancy should be an opportunity for tobacco cessation. This study was done to assess whether a brief counseling during ante-natal visits can reduce smokeless tobacco use in rural Bangladeshi women.

Intervention or response: This study was done in a public health clinic, Ekhlaspur Centre of Health (ECOH), in rural Bangladesh. Three hundred consecutive pregnant women visiting ECOH were recruited. As a routine practice this Centre executes three ante-natal visits for women of Ekhlaspur village. The pregnant women's follow-up record sheet of ECOH has information about socioeconomic variables and smokeless tobacco consumption. It also has information on exposure to second hand smoke (SHS) inside their home. Counseling was done by trained counsellors to quit tobacco use if already started or not to start at all. Women were sensitized about the harmful effects of exposure to SHS at their home. Thus data on tobacco use and SHS exposure were obtained from the first and last visits.

Results and lessons learnt: Mean age of the women was 24 years (standard deviation, 5 years). They had a mean education of 6 years and husbands' education was also similar. Half of them were in second gravida. The prevalence of tobacco use in first visit was 2.5% compared to a prevalence of 6.2% for women of Ekhlaspur of child bearing age (2012 data). Of them 2.3% used jarda and 0.4% used gul. The total does sum up to 2.7% because a few of them used both forms. Prevalence appears to be low because many women take up this bad habit during their pregnancy. We could intervene to prevent initiation of tobacco use. Final follow-up at the end of pregnancy showed a very low prevalence close to zero. Exposure to SHS was 54% at their home at first visit. It declined to 25% after intervention. Another school based intervention for smoke-free home might have contributed also to this decline.

Conclusions and key recommendations: Early intervention at the first trimester could avert up-taking of tobacco by most of the pregnant women. Our data suggest that tobacco cessation in early pregnancy is effective way of controlling smokeless tobacco and SHS exposure in the community.

PD-1340-21 Relapse in women smokers: Profile of a populationV Gomes Borges,^{1,2} CM Cantarino²¹Center for Tobacco Treatment / Care Coordination, National Cancer Institute, Rio de Janeiro, Rio de Janeiro, Brazil, ²Center for Tobacco Treatment / Care Coordination, National Cancer Institute, Rio de Janeiro, Rio de Janeiro, Brazil. e-mail: velgomesborges@yahoo.com.br

Background and challenges to implementation: Treatment of tobacco dependence as a control measure, necessarily requires a careful look at the issue of relapse. We understand relapse as a return to the patterns of use of cigarettes as used before the start of treatment, in terms of quantity and frequency of use. Smoking, an addictive disorder, is characterized by high rates of relapse after initial successful treatment. The epidemiological profile of smokers in the world shows that million women smoke. A Brazilian survey conducted in 2013 shows that 8.6% of Brazilian female population still smokes (Vigitel - 2013) despite the reduction of smoking prevalence. Objective: To describe the health profile, the smoking history and motivation to quit of a specific adult female population. They returned to smoking (relapse) after being treated at the INCA Center for Tobacco Treatment and achieved abstinence.

Intervention or response: 35 records of women smokers who returned to smoking after being treated (relapsed) were selected. Information on medical history, smoking profile, motivation to quit and level of nicotine dependence were recorded.

Results and lessons learnt: The average age of women treated was 53 years. The degree of nicotine dependence was high and very high. Alcohol consumption, use of psychotropic medications, early onset of smoking and tobacco use linked to situations of sadness, happiness and anxiety were found. Previous attempts to quit smoking were reported. The sensations of calm and pleasure afforded by tobacco use were attributed to the reason for smoking. The reason for quitting was mainly due to concern about health, family reasons and social pressure. The motivating factors for relapse were attributed to anxiety, loneliness, sadness and depression.

Conclusions and key recommendations: The knowledge of the detailed profile of this population is essential for the establishment of procedures for specific intervention for women in smoking cessation programs.

PD-1341-21 Tobacco cessation interventions for underserved, high-risk women

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Background: Smoking rates among specific subgroups of girls and women in high income countries such as Canada remain above average, including young pregnant women, Aboriginal, those who have experienced violence, trauma and mental health issues and those in treatment for substance use. Yet there is a lack of tailored interventions to address smoking cessation among women facing such health disparities.

Design/Methods: Research knowledge from three bodies of literature was gathered and analysed to form a narrative review: 1) sex, gender, and diversity related influences in tobacco use and addiction, 2) evidence-based clinical guidelines on treating tobacco dependence and relapse prevention, and 3) best practices in the delivery of women-centred care. To identify key components of a women-centred approach to tobacco cessation, the narrative review was discussed and refined in consultation meetings with 24 key informants from women's health and tobacco control in Canada, the USA and Australia. A cessation guide for women was developed to reflect and apply the synthesised knowledge.

Results: The synthesis identified that: programming should be: tailored (i.e. supporting women in having choice and tailoring to their diverse social and economic contexts); build confidence and increase motivation (i.e. allow for a range of goals and skills development); integrate social justice issues and address inequities (i.e. address stigma and acknowledge other priorities including housing, food security, and childcare and how these may be linked to smoking); and be holistic and comprehensive (i.e. integrated into treatment for trauma, mental health, substance use, or other women's health concerns).

Conclusions: Smoking among high risk groups requires a focused approach in tobacco dependence treatment programs and cessation initiatives, by both addressing the complexity of women's smoking and tailoring to the needs of women facing such health disparities. Specific approaches and guidelines for conversations were developed, to help practitioners address smoking and cessation among underserved and high risk sub-populations of women.

PD-1342-21 Strengthening implementation of tobacco-free policies to restrict youth access to tobacco products: health promotion in Bihar, India

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Background: The tobacco epidemic is a serious threat to global health. The risk of oral cancers is up to 50 times and

6 times greater for people chewing and smoking tobacco, respectively. 90% oral cancers in India are related to tobacco use. Easy accessibility of tobacco products is a cause of oral diseases among youth. To comply with the Indian tobacco control law and to promote oral health, this project aimed to prevent minors' access to tobacco products.

Design/Methods: Intervention included capacity building; multi-sectoral advocacy; rallies/exhibitions; institutionalizing enforcement mechanisms; violations reporting by NGOs/youth and media engagement to create an enabling environment for strengthening policies which prevent youth access to tobacco.

Results, Post-Intervention: Statewide schools declared tobacco-free by the Government. Sale of tobacco products to and by minors reduced from 54.6% to 3.6% and 59.3% to 4%, respectively; sale of tobacco products within 100 yards of educational institutions reduced from 42.9% to 3.4%; absence of warning boards at points of sale and outside educational institutions reduced from 51.7% to 24.9% and 77.4% to 7.8%, respectively.

Conclusion: Capacity building, Government-NGO partnership and engagement with youth/media are recommended for a sustainable model for preventing youth access to tobacco and thereby promoting health.

PD-1343-21 School personnel's support for tobacco-free policies and the level of enforcement in Ugandan schools

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Background: School Personnel's attitude towards tobacco control policy is critical in ensuring successful implementation of tobacco control in schools. It is therefore important to understand the factors that are associated with their support for tobacco-free policies in schools. This study was conducted with the objective of identifying the factors associated with school personnel's support for tobacco-free policies in Uganda in 2007 and 2011.

Methods: Analysis of the 2007 (n=515) and 2011 (n=682) Ugandan Global School Personnel Survey (GSPS), where data on tobacco use, existence and enforcement of school policies prohibiting tobacco use, capacity for teaching tobacco use prevention, attitude towards tobacco control policies and tobacco product availability within and around the school were obtained. Data analysis included chi-square statistics and logistic regression analysis.

Results: Of the participants, 92.96% (95% CI: 90.13%-95.02%) supported the tobacco-free policies and 61.9% (n=727) of the schools had a policy restricting tobacco use within the school premises by personnel and students, however only 52.8% (n=370) reported complete enforcement of the school policy. Greater proportion of non-

smokers than smokers were in support of a school policy (94.8% vs. 57.7%; $p < 0.05$). Other factors significantly associated with support for school policy included believing that teachers' own tobacco use influences students' tobacco use (OR=8.9; 95% CI= 2.41- 33.47), and supporting increase in price of tobacco products (OR=6.4; 95% CI=1.33- 30.58). Surprisingly, those who supported school tobacco-free policy were also more likely to be of the opinion that tobacco industry should be allowed to sponsor school events (OR=6.4; 95% CI= 1.26- 15.23).

Conclusion: The findings show that most of the schools already have some policies or rules prohibiting tobacco use, but enforcement is poor even though there is high support for school tobacco-free policies by the personnel.

Interventions should promote personnel's enforcement of the policies and awareness of Tobacco Industry Advertising Promotion and Sponsorship (TAPS) tactics and objectives.

PD-1344-21 Telephone counseling for smoking cessation in pregnancy

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Background: The association between smoking during pregnancy and adverse maternal/neonatal health outcomes is widely acknowledged however, many women continue to smoke during pregnancy. Previous studies have shown that in Sankt-Petersburg 61% of men and 31,4% of women are regular smokers. 57,1% women of reproductive age are smoker (39,4% of them smoke regularly / daily). The aim of this study was to identify factors related to quit smoking during pregnancy and effectiveness of telephone counseling for smoking pregnancy.

Design/Methods: The research included 190 pregnancy women in age 19-46 years who applied to Russian Quitline and received the behavior counseling during 1 month of quitting. Behavioral telephone support included initial consultation (preparing to quit smoking and information on the types of care), calls on 1, 3, 7, 14 (support, answers to questions), 30 days quit, in 3 and 6 months (assessment of the effectiveness, the prevention of relapse of smoking). Respondents were interviewed about smoking, Fagerstrom's nicotine dependence test (ND), motivation to quit smoking (QS) and diseases. The primary outcome variable was 30-day and 6-month point prevalence abstinence.

Results: Before pregnancy women smoked $17,3 \pm 1,9$ cigarette per day, ND=4,57 \pm 0,76 units. Most of respondents (82%) had high QS, low QS – in 3% of cases, middle – in 15% of cases. In 65% of cases smokers had experience in smoking cessation and in 50% of cases had high intensity of withdrawal symptoms. Pregnant women stopped smoking during 14 weeks of pregnancy (14,7 \pm 1,9; 2 - 5 weeks – 2%, 6-8 weeks - 3%). 6-months abstinent period was in 63,5% of cases, 17,3% reduced the number of ciga-

rettes smoked per day by more than 2 times. If husband was smoker women smoked in 61,4% (before pregnancy). During pregnancy continued to smoke 33,2% pregnant who had smoking husband and 11% who had non-smoking husband. The factors, promotional quit smoking during pregnancy were: low level of ND, non-smoking family (especially non-smoking husband), high education, support of husband in quit smoking, planned pregnancy, physician's advice. Unmarried pregnancy women smoked more often in comparison with married women.

Conclusion: Pregnancy is a main factor to smoking cessation for women. Several factors influencing for smoking cessation were: nonsmoking partners, marriage, high education, planned pregnancy, physician's advice.

PD-1345-21 Smoking cessation among adolescent school students in Bangkok

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Background: Smoking prevalence among adolescents in Thailand is 11.7 % (20.1 % in males and 3.8 % in females), exceeding levels in neighboring countries. Little has been done to implement adolescent cessation programs nationwide. This study aimed to examine the effects Project EX on students' smoking behaviors, quit rate, and reduction rate.

Intervention: A total of 98 youth smokers in two schools in Bangkok (52 program, 46 comparison), between 14 and 19 years old, were recruited. The 8-session program material was translated but only modified slightly to fit the Thai culture. Subjects were surveyed at pretest, immediate posttest (either after receiving programming or 4 weeks after pretest), and at 3-month follow-up.

Results: We found that 9.6% of the experimental and 2.2% the comparison subjects were not at all motivated to quit smoking at pretest. The average level of cigarettes smoked/day was 5.38 ± 4.77 , 5.44 ± 5.42 , and 4.31 ± 4.12 in the comparison condition; 7.37 ± 7.36 , 5.36 ± 3.78 , and 4.42 ± 3.94 in the experimental condition at pretest, immediate posttest, and 3-month follow-up, respectively. At follow-up, reduction in saliva concentration (using biomarker saliva cotinine concentration strips) was 44.2% in Project EX and 19.6% in comparison ($p = .005$) conditions, and quit rates (confirmed both self-reported smoking behaviors and saliva test) were 7.7% in Project EX and 2.2% in the comparison group ($p = .10$). **Conclusions:** Project EX shows promise as an effective intervention for tobacco use cessation among adolescents in Bangkok. Larger-scale trials are needed.

PD-1346-21 Predicting factors for quit attempts in Thai Adolescents**S Rojnawee,¹ W Chaiyawat,¹ J Yunibhand¹**¹Faculty of Nursing, Chulalongkorn University, Bangkok, Thailand. e-mail: sunmar-jung@hotmail.com

Background: Most of Thai adolescent smokers have tried to stop smoking but most of them have failed. The most important precursor to the performance and success of quitting smoking is the quit attempt.

Design/Methods: This study was a correlational study aiming to examine the direct and indirect relationships of the predicting factors of quit attempt in Thai adolescent smokers. Multi-stage random sampling was used to recruit the sample. They were 463 adolescent smokers in grades 7-12 from 12 schools that belonged to the Teacher's Network against Tobacco (TNT) in all regions of Thailand and had attempted to quit smoking within the past three months. Subjects completed seven self-administered questionnaires. All questionnaires demonstrated acceptable content and construct validities, and reliability. Data were gathered from October to December 2013. The majority of the subjects were Buddhist (95.5%) and males (94.2%) that studied in grade 9 (28.5%). The average age was 15.20 years (SD=1.38). Most of them started smoking before 14 years of age (80.13%). Path analysis was used to test the relationships among variables.

Results: All independent variables had significant relationships with quit attempt at the .05 level. Time spent with peer smokers had a negative direct effect (-.26) on quit attempt, and it had a negative indirect effect on quit attempt through self-efficacy to resist smoking (-.25), and motivation to quit (-.25). Self-efficacy to resist smoking had a positive direct effect (.26) on quit attempt. Nicotine dependence had a negative direct effect (-.30) on quit attempt, and it had a negative indirect effect (-.23) on quit attempt through self-efficacy to resist smoking. Motivation to quit had a positive direct effect (.24) on quit attempt. Surprisingly, intensity of smoking cessation intervention had negative direct effect on quit attempt (-.02), and it had a positive indirect effect on the quit attempt through self-efficacy to resist smoking (.04) and motivation to quit (.02).

Conclusion: The highest impact factors influencing quit attempt was nicotine dependence, followed by time spent with peer smokers and self-efficacy to resist smoking. Identifying these variables can help tailor cessation programs to more effectively help adolescents quit smoking.

PD-1347-21 Using periodic messaging via text messaging and e-mail for cessation among young U.S. smokers: a knowledge synthesis**E De Leon,¹ L Fuentes,² J Cohen¹**¹Institute for Global Tobacco Control, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States of America, ²Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States of America. e-mail: edeleon@jhsph.edu

Background: The periodic delivery of smoking cessation prompts via e-mail or text-message has increased quit attempts, reduced consumption, and increased abstinence in the short term. However, the unique characteristics of messages delivered via youth-directed messaging interventions have not yet been considered. We reviewed the periodic messaging literature related to youth/young adult smoking to (1) assess success, (2) identify typical strategies, and (3) identify common message types across these interventions.

Design/Methods: Electronic searches of PubMed, PsycINFO, CINAHL, and Web of Science were conducted in October 2012, May 2013 and July 2014. Database search terms included variant terms for periods, prompts, interventions, media, and smoking. Messages were considered periodic if administered more than twice. The subset of studies targeting smoking cessation for youth and young adults was selected for closer review.

Results: Nine trials of 8 interventions were identified that used e-mail (n=1), text messaging (n=7) or both (n=1) to target youth and young adult smokers. Eight of the nine trials found that periodic messages resulted in more quit attempts and/or longer abstinence, compared to a control group or baseline measures. Messages were delivered around specific quit dates for 7 trials. All trials included tailored messages, and 5 provided feedback. One study identified tailored, high frequency messages were more effective than untailored messages. Another found that text-messaging produced higher rates of abstinence compared to a mobile application. Messages tended to address a participant's reasons for smoking and offer specific strategies for cravings and smoking triggers. Other messages included interactive features such as trivia games, pledges, surveys, and keywords to elicit additional help from the intervention. For one intervention, cigarette tracking was the most popular feature.

Conclusion: Messaging interventions appear to yield positive results for short-term smoking behavior changes in young adults. Prompt interventions used quit dates, tailoring and feedback to provide applicable content to participants. Message content was geared towards engaging young adults in bi-directional communication with the intervention. Work remains to better understand these elements and whether and in what ways they impact the efficacy of these youth-centric interventions, however high frequency tailored messages show promise.

PD-1348-21 Implementing a regional approach to reducing the number of pregnant smokers across the North East of England

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Background: The North East (NE) of England consistently has the highest rates of maternal smoking in England, as measured by smoking status at time of delivery (SATOD). One-in-five women in the NE smoke throughout their pregnancy. FRESH, the NE tobacco control programme, supported by regional colleagues, set up a project team in 2011 to address the high rate of smoking in pregnancy.

Intervention: Working with Fuse (the NE centre for translational research in public health), we sought to understand why some midwives are reluctant to discuss smoking with pregnant women. This identified issues such as training and access to appropriate resources. We then commissioned the Tobacco Control Collaborating Centre to help implement an approach called "babyClear" across the NE. This enabled:

- Routine identification of pregnant smokers at their first booking appointment, through systematic carbon monoxide screening
- Delivery of a more intensive "risk perception" intervention at the dating scan
- Training to Stop Smoking Service (SSS) advisors and administrative staff, to help them support pregnant smokers to quit
- Provision of resources to facilitate the above

This approach was gradually implemented across all eight NE local acute health care providers during 2013/14.

Results: "babyClear" has delivered:

- Over 450 midwifery staff trained to carry out a routine intervention at booking appointments
- 44 midwives trained to deliver messages about the harm of continued smoking as part of the risk perception intervention
- Over 150 stop smoking advisors have received skills training

Initial results are positive. In the period from October-December 2013, NE SSS saw a 24% rise in pregnant quitters compared to 2012, whilst nationally, there was no change. There was also a marked difference in the performance of early babyClear adopters in 2013/14 (a 35% increase in numbers using SSS) compared to later adopters (a fall of 12%). The latest quarterly SATOD data in the NE (18.5%) shows early progress.

Conclusion: A regional approach to tackling smoking in pregnancy can generate behaviour change among both health professionals and the public. Yet whole system change to local processes also has to be championed by senior management within each locality. Change also

has to be facilitated by provision of resources and project management expertise. Any regional activity must be flexible enough to allow for local variation, whilst remaining faithful to the fundamental principles of the intervention.

PD-1349-21 Unique education programmes and tailor-made cessation services to curb the tobacco epidemic among women

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Background: Smoking prevalence of Hong Kong reached its record low, 10.7%, in 2012. It has decreased by half in three decades, in which male smoking prevalence (19.1%) is being reduced vigorously whereas the female smoking is being suppressed at low level (3.1%). Unlike the situation in most western and developed regions where the prevalence of female smoking increases with the level of economic development, women smoking in Hong Kong did not surge apparently. For this uniqueness of female smoking pattern, Hong Kong does not fall exactly into any stage of tobacco epidemic as described by Lopez. Male smokers are decreasing but female smokers do not hike at the same time as depicted in this classical model.

Interventions/achievement: The low female smoking prevalence was to some extent the result of traditional value. More importantly the comprehensive education and publicity measures conducted since the early years contributed to keep the figure low. For example: informed the public of smoking hazards through the mass media; offered innovative school-based education programmes; gradually banned tobacco advertising and promotion; restricted sale of tobacco products; and expanded smoke-free area to de-normalize smoking behaviours.

Lesson learnt: Similar to most youth smoke-free programmes, experience from the female smoking in Hong Kong showed that precautionary education should be carried out as early as possible and before tobacco use becomes an issue. Most education and publicity works had prevented girls from starting smoking before youth, but not at young adulthood or middle age and could not encourage those who smoked to quit. Smoking among women aged 30-59 increased drastically in recent two decades in Hong Kong. Although female smoking prevalence is curbed at low rate, the absolute figure had increased significantly. More specific intervention programmes are required to effectively deal with the problem of female smoking.

Conclusions/suggestions: Female smoking associated specifically to emotional factors and stress and started at early adulthood. Women concerned less on their personal health and had comparative low awareness of gender-specific harms of smoking. Despite most may have low dependency on smoking, they had low intention to quit or easily failed. To tackle with the distinctive features of female smoking and quitting, tailor-made education programmes and cessation services that addressed to the root cause/difficulties of smoking are in need.

PD-1350-21 The family approach to promote and support smoking cessation**A Kwong,¹ V Lai,¹ L Chu¹**¹Hong Kong Council on Smoking and Health, Hong Kong, Hong Kong. e-mail: lawrence_chu@cosh.org.hk

Background: In Hong Kong most of the smokers have never tried to quit nor wanted to use the smoking cessation services. These smokers are “hardcore” and judgmental to the smoking cessation advice. It is important to increase their cessation motives through soft and indirect promotion strategies. According to the Government statistics, nearly half of ex-smokers quitted for the considerations of family members’ goodness. Our survey showed that the top three sources of quitters’ support were spouses, children and parents. It showed that family members could play a critical role in driving and supporting smoking cessation. It is crucial to make use of their influence and empower them to mobilize smokers to quit.

Intervention: “Smoke-free family” and “smoke-free home” projects had been launched by the Council to motivate smokers to quit in past years, such as Education Theatre and Smoke-free Teens programmes. Through the activities organized in schools and community, smoke-free messages and information of smoking cessation were transmitted to the participants and their families.

Results: Over 13,000 students aged 3-15 participated in Smoke-free Teens programme in 2011 which involved 8,000 families. Together with the similar programme in previous years, nearly 30,000 families pledged to create a smoke-free home and 5,000 parents were encouraged to quit smoking by this children-to-parents approach. Over 20,000 primary 2 to 4 students joined the Education Theatre programme every year since 1995. Through the theatre performance, smoke-free worksheets were distributed to 745 students, which required to be read through and completed together with parents. Favourable effects on parents’ attitude on tobacco control, reduction of pro-smoking practices and slight reduction of SHS exposure at home were observed.

Conclusions: The success of the smoke-free family approach implied the effectiveness of soft promotion strategy to encourage smoking cessation. The family approach initiated from students is particularly effective to those families with children. The approach should be further extended to exert the influence of the other family members, especially wife and mother, to motivate more smokers to quit. In view of this, the Council introduced series of smoke-free publicity programmes in 2014-15 to establish a rigorous supportive force for smoking cessation.

PD-1351-21 Smoking cessation telephone counseling for youth: effective regardless of recruitment methods?**YW Wong,¹ HCW Li,¹ C Lam,¹ D Wong,¹ S Chan,¹ TH Lam²**¹School of Nursing, The University of Hong Kong, Hong Kong, Hong Kong, ²School of Public Health, The University of Hong Kong, Hong Kong, Hong Kong. e-mail: wongbonny@hotmail.com

Background: Proactive telephone counseling appears effective for smoking cessation in youth and passive recruitment rate has been decreasing. New recruitment methods should be adopted; however, whether effectiveness of counseling is differentiated by recruitment methods remains unclear. This study compared quitting, adherence to services, service satisfaction, and baseline characteristics among youth smokers recruited from different sources.

Design/Methods: 146 (32%) youth smokers who called the Youth Quitline of the Schools of Nursing and Public Health of The University of Hong Kong, 210 (45%) who were recruited proactively from outreach and 107 (23%) who were referred by school teachers/social workers were included. All smokers received five telephone counseling sessions at baseline and 3-day, 1- and 2-week and 1-month follow-ups. They were asked about their smoking and quitting history and related psychological and socio-demographic information at baseline. The quit rate and service satisfaction were assessed at 6-months. Logistic regression was used to examine whether recruitment methods predicted quitting adjusting for age, sex, stage of readiness at baseline, and adherence to services.

Results: At baseline, smokers recruited from school referral and outreach reported milder nicotine dependency than those who initiated the calls (referral=79% and outreach=71% vs. incoming=52%; p-values=0.001). Smokers in outreach group were also more likely to be at pre-contemplation stage than those in incoming call group (%out=26% vs. %in=12%; p=0.001). The rate of adherence to the programme was similar in the 3 groups (%ref=20% and %out=11% vs. %in=17%, p=0.55 and 0.21, respectively). The referral group were more likely to be satisfied with the service than the incoming call group (96% vs. 85%, p=0.06). The quit rate was similar in the 3 groups (%ref=32% and %out=28% vs. %in=26%, p=0.29 and 0.66, respectively). After adjustment, the school referral and outreach group were 61% (95% CI: 0.89-2.94) and 42% (95%CI: 0.71-2.86) more likely to quit than the incoming call group but the difference was not significant, probably due to small sample size.

Conclusion: Our results showed that youth smokers actively recruited had different baseline characteristics but slightly higher quit rates compared with those passively recruited. The results support active recruitment to recruit more youth smokers to increase utilisation of quitline services.

65. EVALUATING IMPACT OF HEALTH WARNINGS

PD-1352-21 The impact of new tobacco product health warnings on the number of quitline calls in Argentina

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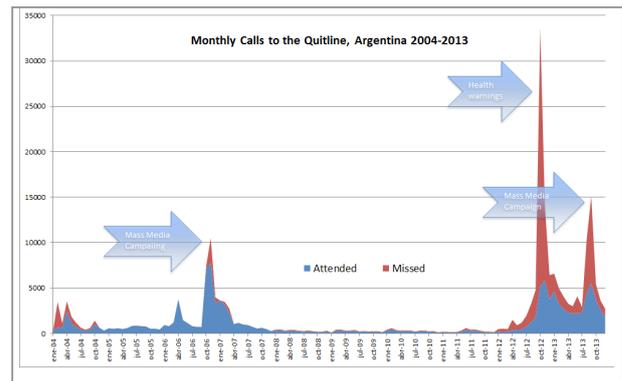
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Background: In Argentina the National Tobacco Control Law was passed in 2011, and in 2012 appeared the first picture warnings occupying 50% of the front of the packaging of tobacco products, a text on 50% of the back, and on the side, the phone number to quit smoking service of the Ministry of Health. The aim of the study was to evaluate the impact of new warnings on the calls to quit line, also considering the effect of communication campaigns.

Design/Methods: A historical series 2004-2013 of monthly attended and missed calls to the quitline was constructed. In addition, two types of interventions in this period were timed: 1) Communication campaigns, and 2) Printed warnings on packages. Call variations were measured before and after the appearance of health warnings on cigarette packs. Monthly volume of calls attributable to the warnings and campaigns were analyzed, considering seasonal variations. To do so, differences in calls from the appearance of the new warnings were calculated, and during campaigns, for the same months in previous years without warnings and without campaigning. Information from the surveys to the consultants about the sources for which they had taken note of the telephone line (pack warnings, television, radio, newspapers, promotions, physician recommendation, other) was processed.

Results: Health warnings increased 12 times the average of monthly calling from 300 to 3600, discounting the effect of communication campaigns. The highest amount was reached during the month of full appearance, and was 33,697 calls. The net effect of the warnings was 50,000 calls per year, greater than the sum of all campaigns in previous years. During the circulation time of health warnings, a campaign of small intensity increased 3 times the number of calls, reaching an increase similar to that obtained by a major investment campaign before the warnings, for an equivalent quarter.



Conclusion: The inclusion of pictorial warnings and telephone service information on cigarette packs had great impact on the increase in calls to the quitline in the short and medium term. The effect of the campaigns associated with warnings, was higher than without them.

PD-1353-21 Impact of plain packaging implementation, subsidisation of NRT, and media campaign intensity on Quitline calls and Quit website hits

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Background: Use of telephone helplines and quitting assistance accessed electronically (via websites, email and SMS) can significantly increase chances of successful quitting, and changes over time in use of these resources may reflect fluctuations in smokers' interest in quitting. This study tracked Quitline calls and Quit website traffic in the state of Victoria, Australia between January 2011 and October 2013 to examine the relative impact of implementation of plain tobacco packaging and subsidization of nicotine replacement therapy (NRT) that occurred at different times over this period, along with a variable intensity of anti-tobacco mass media campaign intensity.

Methods: Negative binomial regression models were used to examine the influence of each policy and anti-smoking advertising intensity on weekly Victorian Quitline call volume and traffic to Quit Victoria websites between 2011 and 2013, after adjusting for the effects of seasonal factors, cigarette costliness and time. Findings: Quitline call volumes increased by 74% in the two months following the subsidisation of nicotine replacement therapies (NRT) in February 2011 (Incident Rate Ratio [IRR]=1.74, $p<.001$) and by 15% in November and December 2012, during which plain packaging was introduced (IRR=1.16, $p=.003$). Traffic to Quit websites was unaffected by either policy. Call volume increased by 6% (IRR=1.06, $p<.001$) and website traffic by 10% (IRR=1.10, $p=.008$) with each additional potential ad exposure per person per week, where relevant phone numbers or website addresses were featured.

Conclusions: Recent tobacco control policies and activity in Australia, including the implementation of plain packaging, subsidisation of NRT, and adequate levels of anti-smoking advertising exposure, increased the propensity of smokers to call the Quitline in Victoria. The policies did not affect website traffic, perhaps because smokers desired tailored advice regarding NRT from Quitline advisors and because no website address is featured on plain packages (while the Quitline phone number is). Advertisements which featured a Quit website address were effective at generating website traffic. Smokers' interest in quitting was heightened by these important policy changes and levels of anti-smoking advertising.

PD-1354-21 Impact of the 2009 enhancement of cigarette health warning labels in Uruguay: longitudinal findings from the ITC Uruguay Survey

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Background: Health warning labels (HWLs) constitute an important policy for increasing awareness of the harms of tobacco products, motivating smokers to quit, and inhibiting non-users from initiating smoking. There are no longitudinal population-based studies that have examined the effects of implementing pictorial HWLs that are larger than 50%. The present study tested the hypothesis that the 2009 changes to HWLs in Uruguay (including a substantial increase in size from 50% to 80% of the pack) would significantly increase the effectiveness of the HWLs.

Methods: Data were drawn from a cohort of adult smokers (≥ 18 years) participating in the International Tobacco Control (ITC) Uruguay Survey. The probability sample cohort was representative of adult smokers in 5 cities: Montevideo, Salto, Maldonado, Durazno, and Rivera. The surveys included key indicators of health warning effectiveness, including warning salience, and cognitive, emotional, and behavioral responses to the warnings. Data were collected in 2008/09 (pre-policy: Wave 2) and 2010/11 (post-policy: Wave 3).

Results: Overall, 1746 smokers participated in the study at Wave 2 ($n=1,379$) and Wave 3 ($n=1,411$). Following the HWL changes in Uruguay, all indicators of warning effectiveness increased significantly (noticing: odds ratio (OR)=1.44, $p=0.015$; reading: OR=1.42, $p=0.002$; impact of HWLs on thinking about risks of smoking: OR=1.66, $p<0.001$; HWLs increasing thinking about quit-

ting: OR=1.76, $p<0.001$; avoiding looking at the warnings: OR=2.35, $p<.001$; and reports that health warnings stopped smokers from having a cigarette "many times": OR=3.42, $p<0.001$).

Conclusions: The 2009 changes to HWLs in Uruguay, including a substantial increment in size, led to increases in warning effectiveness. Increasing key specific aspects of health warnings (e.g., enlargement of the warning) can lead to even greater levels of effectiveness above and beyond the introduction of powerful images. These findings support the recommendation in the Article 11 Guidelines that the 50% warning size should be considered a minimum standard: increasing warning size above 50% to 80% is associated with significant benefits on all of the key indicators of warning effectiveness--indicators that have been shown to predict future quit attempts.

PD-1355-21 Evaluating compliance of cigarette packaging with FCTC and national legislation in 15 Countries

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Background: Cigarette packaging has emerged as a primary marketing tool for cigarette manufacturers, strained with increased restrictions on advertising. The Framework Convention on Tobacco Control (FCTC) contains guidelines on health warning and promotional labelling, which have been incorporated into national legislation in many countries. This study aims to assess compliance of package labelling and national legislation with FCTC guidelines from 15 countries across levels of economic development.

Design/Methods: Researchers from 15 countries involved in the Prospective Urban and Rural Epidemiological (PURE) study were asked to provide packs of at least 10 different types of the cheapest brands of cigarettes between June 2011 and June 2012. The countries included: Canada, Sweden, UAE (High Income Countries - HIC); Argentina, Brazil, Chile, Malaysia, Poland, South Africa, Turkey (Upper-Middle Income Countries - UMIC); China, Colombia (Lower-Middle Income Countries - LMIC); India, Pakistan, and Zimbabwe (Low Income Countries - LIC). A total of 275 packets were inspected using a structured data collection instrument.

Results: Health warnings were present on all packages; 91.6% of packs had warnings on the front or back panels (defined collectively as the principal display area [PDA]), the remainder 8.4% being on the side panels only. Only 6 of 15 countries met or exceeded the FCTC recommended size of 30% or more of the packets PDA. Promotional labels were present on all packages and more numerous than health warning labels in all countries except in Can-

ada, Chile, China, and Malaysia. Deceptive terms such as “light” and “mild” were observed on 25.8% of all packages examined and were present on packs from all countries.

Conclusion: Higher income countries were more compliant with FCTC recommendations and national legislation on health warnings; lower income countries had poor compliance. Deceptive terms were found in packs from all countries and there was poor compliance across all income groups. There is a need for stronger policies and implementation, especially in lower income countries. Ongoing surveillance and enforcement are essential and greatly needed.

PD-1356-21 Analysing compliance to national labeling legislation in 6 Middle-Eastern countries

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Background: Despite its positive impact, implementation of FCTC recommendations remains a challenge, especially in middle- to lower-income countries. Monitoring compliance allows objective evidence and specific feedback for the Ministries of Health to rectify their limitations. In this study, we assess compliance of labelling on tobacco packets from six Middle Eastern countries with national legislation and Article 11 of the FCTC.

Methods: Investigators from six Middle Eastern Countries – Bahrain, Jordan, Oman, Qatar, Saudi Arabia, and United Arab Emirates - collected at least 10 unique packets of the most commonly consumed and cheapest brands of cigarettes between June 2013 and June 2014. A total of 81 packets were inspected using a structured data collection tool; all labels were assessed for content, size, and location.

Results: Health Warnings were present on the principal display area of all packets (average two per pack). All countries met the minimum requirement of 30% of the principal display area covered by the health warning. Graphic pictorial warnings were present on 77% of all packs examined. All packets had general warning labels; there were no specific warning labels. At least two unique warnings were rotated on packs in each country. Promotional labels were also present on all packages. Deceptive terms such as ‘light’ and ‘blue’ were found on 26% of all packs and on at least one pack from all countries. Legislative and ingredient labels were also present on all packages.

Conclusion: All countries assessed in this study were compliant with FCTC recommendations on health warning labelling. However, there was poor compliance across all countries on promotional labelling as deceptive labels were found on packs from all countries. Greater emphasis must be placed on the removal of deceptive labels given their impact on perception of harm and smoking rates.

PD-1357-21 Estimated ten-year risk for cardiovascular diseases among asymptomatic adults in China

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Background and Objective: Cardiovascular diseases have become the leading cause of death in China during the last ten years. Cigarette smoking and other unhealthy lifestyle were related to the risk of CVD. However, the early assessment and intervention of cardiovascular diseases in community was not well known in China. Screening for the ten-year risk of CVD in asymptomatic individuals should be conducted in community settings.

Methods: Population-based cross sectional study including 10,465 adults aged 35-74 years randomly selected from Qingdao of China was collected. Individuals who had a prior history of coronary heart disease and stroke were excluded. The ten-year risk for CVD including current smoking, age, systolic blood pressure, body mass index, total cholesterol and a prior history of diabetes, validated by the Chinese Heart Association (CHA) was employed to identify the asymptomatic CVD individuals. The association between risk score and lipoprotein, circulating blood markers was also assessed. Logistic regressions and Spearman correlations were used to evaluate the interdependence of waist circumference, insulin resistance and CHA cardiovascular risk score.

Results: A total of 7,676 individuals (42.9% men, 51.8 years) was included in the data analysis. The average prevalence of current smoking was 25.4%, 55.0% in men and 3.2% in women; 16.8% in urban areas and 30.4% in rural areas. The proportion of intermediate or high level of ten-year risk for CVD was 15.7% in men and 9.8% in women. Similar trends were also observed both in urban and in rural areas, with corresponding figures of 11.5% and 12.7%, respectively. The mean values of waist circumference, fasting capillary glucose, hemoglobin A1c and uric acid increased dramatically with the level of CHA risk assessment through gender and residential areas ($P < 0.001$ for all comparisons).

Conclusions: The ten-year initial risk assessment for CVD will quantitatively apply to assess the asymptomatic high risk adults. It also provides evidence on early detection of CVD and tobacco control on risk factors in the community. Funded by the World Diabetes Foundation (WDF05-108and07-308)

PD-1358-21 Design and evaluation of pictorial health warning labels for Chinese cigarette packs

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Background: To advocate for pictorial health warning labels (HWLs), the former Ministry of Health (MOH) of China designed a set of ten pictorial HWLs in 2012 with their effectiveness yet to be assessed. This study aims to evaluate the perceived effectiveness of the picture HWLs designed by the former MOH in 2012, which are displayed on the mock-up cigarette packs, in comparison to the current text-only health warning label used in China and current plain packaging used in Australia.

Design/Methods: This study was conducted in two cities (Beijing and Shaoxing) in China in 2013, involving 600 participants in total. Participants first completed a pre-intervention survey, after which they viewed a set of mock-up cigarette packs with 12 different health warning labels. The warning labels fall into three categories a) ten picture warnings designed by the former MOH in 2012 covering 50% of the front/back of the pack; b) one current Chinese text-only warning covering 30% of the front/back of the pack; and c) one Australian picture warning using plain packaging. Participants rated and ranked the 12 warning labels on their effectiveness in terms of motivating smokers to quit and convincing young people not to start smoking etc. A brief post-intervention survey was also completed afterwards.

Results: The Australian picture warning using plain packaging was rated and ranked as most effective, whereas the current Chinese text warning least effective. Ten picture warnings designed by former MOH were perceived much more effective than the current text-only warning, but slightly ineffective compared to the Australian picture warning adopting plain packaging.

Conclusion: Picture based health warnings are demonstrated to be much more effective than text-only health warnings. The picture health warnings designed by former MOH could possibly insert greater impact on communicating the adverse effect of smoking/second hand smoke to the public.

PD-1359-21 The impact of health warnings on tobacco products on tobacco users in India

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Background: Pictorial Health Warnings (PHW) on the tobacco products is recommended as one of the demand reduction strategy by FCTC. In India, the current PHWs are picture of a cheek cancer on smokeless forms and text

warning is tobacco kills; and images of diseased lungs on smoking forms and text warning is smoking kills; which should occupy at least 40% of the principal display area of the front panel of the pack. The current study attempts to understand the comprehensiveness of the health warnings and its efficacy in motivating users to quit tobacco in India.

Design/Methods: Tobacco users (n=180, Smoking-68.3%, Chewing-22.2%, Both-7.2%, Chewing and Snuff-.6%, snuff-1.7%) from three Indian states (Tamil Nadu (n=94), Gujarat (n= 65), Andhra =31) were interviewed using a set of questions which include whether they have noticed any warning, their understanding about the warning, motivation and attempts made to quit, the impact of PHW, etc.

Results: Majority of the tobacco users (78.3%) noticed the warnings (PHW-20%, text warnings-18.9%, both-40.6%) in the tobacco products they use. A few (14.1%) reported that they never noticed any message and 10.7% of them were unsure about the presence of any warning. When probed about the message displayed on the tobacco products, 21.7% (text) and 39.4% (picture) mentioned it correctly. Remaining users perceived the picture as chest, heart, skull and liver though 48.3% of them using tobacco for many years (6-20years) and 51.7% of them using 10-20 times per day. About half of them thought of quitting tobacco and the reasons listed were family pressure, awareness about the harmful effects, health problem, cost and personal reason. Only one user attributed to PHW. When they were asked specifically about the impact of PHW on their motivation to quit, 36.9% of them reported that they thought of quitting. Tobacco users who have comprehended the PHW think of quitting and attempt to quit more often compared to those who did not comprehend the PHW. There is a significant association between education and comprehension of exact message (p=.000) and exact picture (p=.001).

Conclusion: Current PHW is not comprehensive to all sections of tobacco users as it is understood only by educated users. PHW do not seem to serve their intended purpose of demand reduction by motivating users to quit. It is important to undertake other evidence based tobacco control measures to reduce tobacco usage focusing on either demand, supply or both.

PD-1360-21 Assessing the impact of pictorial health warnings on tobacco use intentions among indigenous adolescents

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Background: Effects of specified health warnings on intention to use tobacco among indigenous adolescents belonging to lowest wealth quintile are being documented through this study. The tobacco use prevalence among tribal adolescent groups is expected to be high due to low literacy, notorious poverty and prevailing customs. The major objective of the study is to ascertain the effects of

pictorial health warnings on intention to tobacco-use among tribal adolescents of West Bengal, India and their perception regarding severity of the same.

Design/Methods: This cross-sectional study is being conducted among 406 tribal adolescents of 42 Tribal infested hamlets of West Bengal, India. The sampled group of participants (aged between 13 to 18 Years) was selected randomly from the list of adolescents prepared for the purpose. The sampled group of adolescents are either ill-informed or have no information regarding the harmfulness of tobacco. This background is particularly important for drawing inferences on the effects of the specified health warnings on tobacco packets better as they are encountering the anti-tobacco messages first time in their life. The respondents have been interviewed by trained Block Level Health Facilitators of MANT, Kolkata, by using pre-designed questionnaire. Descriptive statistics will be used to explain the demographic and socio-economic profile of the respondents and estimation of effects of pictorial health warnings on intension, fear-arousal and perceived severity of tobacco use. The relationships between variables will be analyzed by Chi-square and other non-parametric tests.

Results: The results will show the effects of present pictorial warnings on intension to tobacco use and on arousal of fear among the indigenous adolescents. The study will also focus on the relationship between the warnings and perceived severity.

Conclusion: The present study will be helpful to show whether the prevailing pictorial health warnings are effective in terms of intension, fear-arousal and perceived severity of tobacco use or not. The recommendations on the basis of the findings will be helpful for policy discussion at appropriate level.

PD-1361-21 Implementation of pictorial health warnings in Indonesia: a review of the policy change process

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Background and challenges to implementation: Indonesia stands as one of the most challenging countries in the world having a strong industry influence; resisting any push towards implementing tobacco control measures. Tobacco packaging is considered as an integral component of their marketing and commercial face. Changing the face of their brands is the last thing that industry would want especially in a country that industry feels is their stronghold. Despite a well-orchestrated resistance, the tobacco control advocates were able to convince the government move towards implementation of Pictorial Health Warnings that came into effect on 24th June 2014.

Intervention or response: Perspectives on national and international movement towards pictorial Health Warnings: We would like share our perspectives on the tough road towards this policy change. The national and in-

ternational political environment that challenged, at the same time influenced positively to reach this important policy change. We would also like to share this experience in terms of cohesive effect of international move towards pictorial health warnings, influence of multilateral and regional forums; and at the same time a generation of strong grass national grass root movement, that cumulatively led to overcome the industry influence for this particular policy change.

Results and lessons learnt: Tobacco control has become a reality even for the countries that as yet are considered as strongholds of tobacco industry. A coordinated effort from within the country, supported by strong international milieu favoring tobacco control is able to resist even strongest of the political influence of the industry.

Conclusions and key recommendations: Tobacco control is a scientific and political reality of the new world; even in the countries of strong industry influence, the industry cannot withstand the voice of people that is based on scientific evidence and human rights. Pictorial health warnings on packs in Indonesia has brought a long-lasting blow to tobacco industry image in Indonesia; once considered as their stronghold.

PD-1362-21 Impact of pictorial cigarette pack warnings on smokers in Malaysia

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Background: Cigarette pack warning labels, especially the larger and graphic ones, have been shown to increase smoking-related health awareness, stimulate motivational/cognitive responses and micro-behaviour responses such as forgoing cigarettes). Increasing international evidence also shows that these reactions predict subsequent quitting activities. We published evidence that the then weak Malaysian side of pack warnings were not strong enough to consistently stimulate quitting activity. Malaysia introduced six rotating pictorial warning labels on all cigarette packs in January 2009. This study examines the impact of the new Malaysian pictorial pack warnings across two waves after the implementation.

Design/Methods: The data came from the first five Waves of the International Tobacco Control (ITC) Southeast Asia Survey, a prospective cohort survey conducted among smokers in Malaysia and Thailand between 2005 and 2011. Between 3431 and 4373 smokers were interviewed in each wave. Key measures included salience of cigarette pack warnings (a combination of noticing and reading/

looking closely at them), cognitive responses (thoughts about harms and quitting), forgoing cigarettes and avoiding warnings.

Results: From 2005 to 2008 (prior to implementation), response levels of these four measures remained low among Malaysian smokers. After the pictorial pack warnings were introduced (2009), a marked increase was found in all measures at the subsequent survey waves. From 2008 survey to 2009 survey, the proportions of Malaysian smokers reporting forgoing cigarettes increased from 21% to 52%; for avoidance, more than a 10% increase was observed; the mean score of warning labels salience increased from 2.5 to 3.3; and the mean score of cognitive responses towards warning labels increased from 2.0 to 3.1 (All increases were statistically significant). In 2011, the reported levels of these four reactions remained higher than the levels prior to implementation. We will also report data on the relationship between their responses and attempts to quit smoking.

Conclusion: Consistent with previous research, the introduction of stronger health warnings increases concerns about smoking, and these can contribute to a reduction in smoking. This is found wherever strong warnings are introduced.

PD-1363-21 Enabling FCTC implementation in Africa: graphic pack warnings resource for the Sub-Saharan (AFRO) Region

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Background: Graphic warnings on tobacco packs (GPW) are an essential component of any comprehensive strategy to reduce tobacco. It is among the most affordable and powerful tools for educating smokers and non-smokers about the health risks of tobacco use. It is especially crucial for Africa where budgets for mass media may not be possible and literacy rates can be low. Here, a picture is worth two thousand words. Yet despite, FCTC requirements, currently only three AFRO region countries have embraced GPWs. The project aimed to expand the existing database of pictorial health warnings for tobacco products with evidence-based, easily licensable warnings, that can be used to empower African governments to fulfil their FCTC country obligations and implement Article 11.

Design/Methods: As part of the South-South and Triangular cooperation, WHO FCTC commissioned, and WLF executed, a GPW resource of ready-to-use, effective, appropriate warnings for the AFRO region. 72 Images were commissioned from Kenya, Senegal, Uganda, Togo, Malawi and Tanzania or sourced from medical archives. Diverse smoking and SHS health messages as well as socio-economic consequences were depicted. An evidence-based approach was used to evaluate how well warnings were performed in four general areas – effectiveness, grabs attention, communicates clearly, and is culturally appropriate.

Results: The AFRO region now has a powerful tool at the ready to hasten governments to effectively implement Art 11 of WHO FCTC. This resource is available at no cost and takes the guess work and the time needed to find effective images, out of the selection process.

PD-1364-21 Compliance of tobacco packs with health warning requirements: a four-country study

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Background: The World Health Organization's (WHO) Framework Convention on Tobacco Control (FCTC) sets minimal requirements for tobacco labeling and packaging. The present study assessed whether required health warning labels (HWL) on tobacco packages are being implemented as required by law in four low- and middle-income countries.

Design/Methods: Cigarette packs, and when sold, bidi packs, were systematically purchased in four countries in 2013: India, Mexico, the Philippines and Viet Nam, chosen based on their representation of three of the six WHO regions. Packs were assessed for compliance with tobacco HWL requirements in force within the country at the time the packs were purchased. All packs were coded by two independent coders and discrepancies were resolved.

Results: Data collection resulted in 600 unique packs. Findings from India, Mexico, the Philippines and Viet Nam reveal that just over half of the packs collected display the country's HWL in rotation at the time of collection (54.4%, 56.7%, 69.2%, 55.1% and respectively). Across packs with pictorial warnings, manipulation of color and images was observed. In the case of Mexico, labeling regulations are very specific regarding size of pictorial warnings and corresponding text; findings reveal that 66.7% and 98.7% of the packs complied with the respective rules. Of the Mexican packs whose warnings did not meet the minimum size requirement of 30% of the front panel, all were close, covering at least 28.7%. Indian labeling regulations, although applicable to all smoked tobacco products, do not specify how to apply all rules to bidi packs; we found that pictorial warnings on bidis were not printed as issued by the government and none met the size requirement. Analysis of packs collected in the Philippines, which mandates a text warning that covers 30% of the front panel, reveals that only 47.5% of the packs complied. Non-compliant packs displayed warnings that covered as little as 23.3% of the front. In the case of Viet Nam, one of the approved text warnings was often displayed on packs with altered text.

Conclusion: Findings revealed many packs with no HWL or warnings that were not consistent with current country law. In cases where packs had the required health warn-

ings, compliance was often found to be high when HWL regulations are specific. Findings can inform advocacy efforts for labeling requirements that are compliant with the FCTC and improved implementation of current laws.

PD-1365-21 Impact of graphic health warning labels on cigarette packaging in Turkey

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Background: Tobacco use is one of the leading causes of death and disease in Turkey with almost one third (31.0%) of the population smoking. Over the past 20 years the Ministry of Health has implemented a series of policy measures to protect the Turkish community from the harms of tobacco smoke. To raise knowledge about the health risks of smoking, 14 unique graphic warning labels covering 65% of the front of cigarette packaging were introduced to in May 2010. This study examined the effectiveness of the graphic warning labels in encouraging smokers to quit.

Design/Methods: The Global Adult Tobacco Survey (GATS) is a nationally representative household survey of adults 15 years of age and older. We examined GATS data

from Turkey collected in 2008 and 2012 on the awareness and effectiveness of cigarette warning labels.

Results: The GATS results show that the implementation of the graphic warning labels resulted in a significant increase in thinking about quitting (46.5% in 2008, 53.0% in 2012). This increase was most evident among women (relative change of 24.3%) and those in urban areas (relative change of 16.7%). Data collected in 2012 shows that of the newly introduced graphic warning labels, “smoking causes fatal lung cancer”, “smokers die younger”, and “smoking when pregnant” were found to be most effective in making smokers want to quit, at 27.0%, 14.9%, and 11.3%, respectively. The youngest age group, 15-24 year olds, were most sensitive to “smokers die younger” (21.3%) and female smokers were more affected than men by “smoking when pregnant” (19.7% of women, 8.5% of men).

Conclusion: Warning labels on tobacco packaging are an ideal way to warn smokers about the health hazards of tobacco use, encourage smokers to quit, and prevent nonsmokers from starting to smoke. Since the implementation of graphic warning labels and the increase in size of the warnings, there has been an increase in Turkish smokers thinking about quitting and quit intentions.
