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European Network  
for Smoking and  
Tobacco Prevention



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on Tobacco Control*

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Tobacco Prevention & Cessation, (Abbr: Tob. Prev. Cessation; ISSN:2459-3087) is an open access, peer-reviewed online journal that encompasses all aspects of tobacco use, prevention and cessation that can promote a tobacco free society. The aim of the journal is to foster, promote and disseminate research involving tobacco use, prevention, policy implementation at a regional, national or international level, disease development - progression related to tobacco use, tobacco use impact from the cellular to the international level and finally the treatment of tobacco attributable disease through smoking cessation.

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## Evaluating health and economic impact of tobacco control law in Georgia

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### Background

Georgia has taken a historical step towards a major improvement in public health when, in May 2017, the Parliament of Georgia adopted comprehensive amendments to the National Tobacco Control Law. Most of the amendments adopted at that time entered into force on 1 May 2018.

### Objective

The aim of the study is to learn the possible health and economic impacts of the tobacco control legislation after 1.5 years of enforcement of new and effective tobacco control measures.

### Methods

We used logical model for data collection and analysis. The model evaluates different data sources logically. We collected data from different sources before (baseline) and after one year and half of entering into force of new tobacco control regulations. Assessment of outcome is based on the combination of secondary analysis of routine health, economic, statistical, monitoring and epidemiological data as well as research commissioned to address health and economic impact.

### Results

On average, the level of compliance was around 95% in 2018, 96% in 2019 and 95% in 2020. Highest level of compliance that Georgia has in hospitality sector (98% on average) and lowest in public buildings (91% on average).

The air pollution in public entities, where it was 531  $\mu\text{g}/\text{m}^3$  on average, was exceeding the norm 15 times in 2017, and it decreased to 112  $\mu\text{g}/\text{m}^3$  at the end of 2018 and became 98  $\mu\text{g}/\text{m}^3$  in 2019 and 69  $\mu\text{g}/\text{m}^3$  in 2020. Regarding medical facilities, air pollution was 219  $\mu\text{g}/\text{m}^3$ , which exceeds the norm 6 times, but by the end of 2018 it already dropped to 97  $\mu\text{g}/\text{m}^3$  and remained near 98  $\mu\text{g}/\text{m}^3$  in 2019 and 99  $\mu\text{g}/\text{m}^3$  in 2020.

Number of hospitalizations for asthma and asthma status decreased by 4.3% during the period from 1 May 2018 to 30 April 2019 in comparison with the period from 1 May 2017 to 30 April 2018 (243 vs 254 cases). In general, data from 2018 and 2019 shows a 10% decrease in new asthma cases.

According to the data of the Ministry of Health in 2018, the number of myocardial infarction cases decreased by 32% when compared with the data of 2017. In 2019, it decreased by 6% to compare registered cases with 2018.

Turnover in food and beverage sector was 847.7 million Gel in 2017, while in 2018 it was 976.4 million. To compare turnover in the first half of 2018 to turnover in the second half of 2019, there was an increase by 81.6 million Gel. During 2018 number of employees (persons) in the sector was 23031 compared with 26002 during 2019 (11.5% increase).

Total number of restaurants and related business operators in 2017 was 3990 and at the end of 2018 it reached 4143, which is a 4% increase. The trend of growth maintained in 2019 as well – 5169 (20% increase).

In 2017 the number of hotels was 1586, and increased to 1717 (by 8%) in 2018. Number of facilities increased during 2019 as

well by 15.6%.

The number of employees in the hospitality sector has increased by 1746 persons during 2018, in comparison with the year 2017. We have a growing trend in 2019 as well.

The turnover of the business during the first half of 2018 was 345.6 million Gel, while it increased by 124.2 million Gel (by 36%) in the second half of 2018 (when new regulations were enacted) and by 54.6 million Gel (by 16%) in the first half of 2019.

An average number of visitors in the country substantially increased during 2017–2019, suggesting that smoke free policy does not had negative impact on this indicator as well.

### Conclusion

After 1.5 years of implementation of comprehensive tobacco control measures in Georgia, there was an improvement in cardiovascular and pulmonary diseases. The policy has no negative impact on economic development of the country.

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## Constitutionality of local tobacco regulation: An analysis of the case of Philippine Tobacco Institute vs city of Balanga

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In 2016, the City Government of Balanga in Bataan passed an ordinance regulating the sale of tobacco products to all its citizens born on or after 1 January 2000, to protect the health of its citizens and maintain an environment that is conducive for the well-being, welfare, and learning of the youth of the city. This was one of the most comprehensive anti-smoking ordinances and one among the most progressive in the country. Prior to the ordinance the city has been strictly regulating tobacco and alcohol use since 2010 to protect the health of its citizen.

The said ordinance is patterned after the effective measures stipulated by the WHO Framework Convention on Tobacco Control (FCTC) to which the Philippines ratified two years after the enactment of R.A. 9211 or the Tobacco Regulation Act. After the said ordinance was approved and passed by the City Council, the Philippine Tobacco Institute, representing multinational tobacco corporations, challenged the constitutionality of the ordinance. In 2018, the Court of Appeals ruled that the Ordinance contravenes R.A. No. 9211 and therefore should be struck down as unconstitutional for being an ultra vires act.

The decision of the Court of Appeals was premised upon the superiority of a municipal law (RA 9211) over a foreign law (FCTC) wherein it ruled that the foreign law finds no application in the city of Balanga because there is an existing national legislation which is RA 9211. However, since the FCTC is a foreign treaty ratified by the Senate, it can be argued that it also becomes part of the law of the land and has equal status to Acts of Congress. Since the FCTC is a later law, the principle of lex posterior derogate priori should have prevailed.

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## An unhealthy relationship: Bulgarian young people's attitudes to using tobacco products

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BlueLink's multidisciplinary research team, supported by the Smoke free Life Coalition and the Union, examined the relationship between young people in Bulgaria and the use of tobacco products, focusing on the use of heated tobacco products, e-cigarettes and hookahs. The target age group is 18–35 years. Data were collected through 2 nation-wide representative sociological surveys; 2 focus groups; an online survey for young people; and 7 semi-structured meetings/interviews. Conclusions show that smoking affects young people's health, well-being, and finances. It still has a socializing and status symbol value for many. Smoking attracts young people as a means of coping with stress or easier socialization; demonstration of maturity, freedom or financial ability; or perceived superior lifestyle. Nearly 70% disapprove of smoking partially or completely and recognizing it as a serious public health issue.

Young people support tobacco control policies: 57.9% support the total ban on smoking in public places, 63.7% do not agree that children and adolescents should see advertisements of tobacco products, 52.3% agree that the state should not allow tobacco industry (TI) interference in public health policies. The majority of young Bulgarians either support limiting TI sponsorship or are undecided about it.

An impressive one-third of young people indicate a potential to vote for political actors who support improving tobacco control, although the majority indicate that this cannot be the primary reason for making a political choice.

The prevalence of tobacco use among young people in Bulgaria remains very high and shows no tendency of dropping – 50.4% in the age group 18–35 years. Conventional cigarettes, considered the most harmful, remain the most commonly used (81.9%). However, alternative products such as hookahs, e-cigarettes and heated products are growing in popularity (a total of 20% use), attracting young people with beautiful smoke clouds, modern designs and variety of tastes or simply as an easily accessible group leisure activity such as hookah bars. In spite of the aggressive marketing by the industry, young people remain skeptical regarding heated tobacco products.

#### Conflicts of Interest

Authors declare that BlueLink is a founding member of the Smoke-free Life Coalition in Bulgaria.

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### Corporate tax revenue losses: Evidence from tobacco transnationals

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The production of tobacco is concentrated among a handful of very large transnational tobacco corporations (TTCs) that operate simultaneously in several countries. These companies do not pay their fair share of corporate income taxes to the societies in which they generate profits due to three main reasons:

1. Tax minimization strategies that take advantage of the complexities of international tax laws;

2. Tax competition between countries, which erodes nominal corporate income tax rates worldwide; and

3. Illicit trade of the tobacco products manufactured by these companies that fall in the black market.

This paper combines several data sources to empirically evaluate the amount of corporate income tax revenue lost worldwide due to these three sources during 2007–2016 [to be updated with more recent data], and finds that the tax revenue forgone from the four largest TTCs alone is of the order of US\$ 30.8 billion [to be updated with more recent data], representing more than 40% of the companies' tax revenue remittances over the period.

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### The tobacco industry supply chain database: Who supplies the tobacco industry

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#### Background

Tobacco control research and advocacy has yet to capitalize on understanding the tobacco industry supply chain.

#### Objective

To build a database to expose the processes, actors and supporting industries involved in tobacco production, laying the groundwork to expand the scope of tobacco control beyond the transnational tobacco companies (TTCs).

#### Methods

Systematic search of the academic literature and tobacco industry documentation (industry magazine advertisements) were used to build a model of the tobacco industry supply chain. These findings, updated with web searches and broadened via data from the United Nations, World Health Organization and Global Burden of Disease, are sources for the Tobacco Industry Supply Chains database. The database provides country-level information on supply chain companies, tobacco growing and trade, supplemented by health and environmental implications of involvement in the tobacco industry supply chain.

#### Results

We identify five major processes in tobacco production:

1. Growing tobacco
2. Primary processing the tobacco leaf;
3. Secondary processing into manufactured products;
4. Logistics - moving and distributing tobacco leaf and manufactured products; and
5. Selling the tobacco products.

Supporting industries supply machinery, chemicals (for example pesticides and flavorings), other product components (paper filters and packaging) and buildings (curing barns and warehousing). Our database includes 195 jurisdictions; approximately half of these host at least one of the 1000 supply chain companies or subsidiaries recorded in the database.

#### Conclusion

Researchers and campaigners seeking to design effective policies preventing the expansion of this industry and the health harms it produces, need to look beyond the TTCs to identify under-

exploited leverage points along the entire tobacco supply chain.

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## Tobacco excise duties in Belgium: A small country but cheap for tobacco products. Proposal from the Belgian Alliance for a smoke-free society to increase tobacco excise duties

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### Background

Belgium is one of the cheaper countries in Western-Europe.

### Objective

With the formation of the new government in view, the Alliance for a Smoke Free Society (ASF) decided to push for a raise in tobacco excise duties.

### Methods

To work towards a smoke free generation, the Belgian Alliance for a Smoke Free Society pleads in its policy paper for targeted tobacco excise duties policy measures:

1. Phase out the difference in consumer price between RYO-tobacco and cigarettes to prevent consumers from switching products;
2. Decrease the consumer price gap between Belgium and France and the Netherlands;
3. Increase the specific excise duty so that tax raises cannot be countered by decreasing the net price of tobacco;
4. Increase the minimum excise duty; and
5. Link the specific excise duties to inflation.

ASF made a concrete proposal to put these principles into practice, taking into account practices in neighboring countries.

### Results

The new government substantially raised excise duties on tobacco in 2021. The effects were clear: one of the brands increased its prices from €6.80 to €7.50. For the RYO tobacco 50 g of a particular brand, prices went from €9.70 to €11.00. Nonetheless, Belgium remains, together with Luxemburg, a cheap country when it comes to tobacco products. In the agreement on the Belgium–Luxemburg Economical Union there is also a chapter on common tobacco excise duties.

### Conclusion

ASF succeeded in raising taxes on tobacco products. Currently, it is too soon to view the impact of this increase on smoking rates. The corona pandemic and recent French legislation also affected sales figures. Tax revenues from the first months of 2021 will however be available at the time of the conference. The government also scheduled an increase in excise duties in the following years. The ASF meanwhile continues its efforts to raise taxes within a broader antitobacco plan.

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## Smoking inside is never okay: Strengths and limitations of mass media campaigns to protect children against secondhand and thirdhand smoke

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### Background

In 2008, 115000 children in Flanders were daily exposed to the smoke of their parents' cigarettes. We tried to decrease that number by means of the campaign 'Smoking inside is never okay' that consisted of:

1. A mass media campaign that intended to raise smoking parents' awareness of the harmful effects of secondhand and thirdhand smoke and to encourage them to smoke outside; and
2. Tools to help intermediaries discuss the subject with smoking parents.

### Objective

Evaluate the effects as well as the strengths and limitations of the campaign.

### Methods

An inquiry of parents by phone to map behavioral changes and to find out which parents still smoke in the presence of children.

### Results

Since 2008, the number of children that are daily exposed to the smoke of their parents' cigarettes decreased from 115000 to 29000. This decrease is mainly due to the steadily declining number of smoking parents, but there has also been a behavioral change. The awareness of the dangers of SHS has grown and a large majority of parents have adapted their smoking habits. The number of smoking parents stays the highest in the low-income group. Furthermore, more than half of them still smoke when their children are around, and if they do so, they do it more often at home and in the homes of their family/friends.

### Conclusion

'Smoking inside is never okay' has proven to be a successful campaign to change the behavior of smoking parents. However, mass media campaigns have their limitations. Smoking parents in lower income groups seem less perceptive to the message of the campaign. Furthermore, most of them think smokers should be left alone. To achieve a change in these parents' smoking behavior a more personalized intervention is needed.

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## Exposure to secondhand aerosol from electronic cigarettes at homes: A real-life study in four European countries

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### Background

Electronic cigarette (e-cigarette) use is known to emit toxic chemicals and deteriorate outdoor and indoor air quality. Home is a place where e-cigarette users may frequently use their devices amid increasing prohibition of e-cigarette use in public places.

### Objective

This study aims to assess the real-life scenario of bystanders' exposure to secondhand e-cigarette aerosol (SHA) at home. A one-week observational study was conducted in four countries (Greece, Italy, Spain, and the United Kingdom) in 2019 including:

1. Homes of e-cigarette users living together with a non-user/non-smoker; and
2. Control homes with no smoker or e-cigarette user.

## Methods

Indoor airborne nicotine and PM<sub>2.5</sub> concentrations were measured as environmental markers of SHA, as well as concentrations of biomarkers, including nicotine and its metabolites, tobacco-specific nitrosamines, propanediol, glycerol, and metals in participants' saliva and urine samples.

E-cigarette use characteristics, such as e-liquid's nicotine concentration, e-cigarette types, place of e-cigarette use at home, and frequency of room ventilation, were also collected. A total of 29 e-cigarette users' homes and 21 control homes were included.

## Results

The results showed that the levels of seven-day airborne nicotine were quantifiable in 21 (72.4%) out of 29 e-cigarette users' homes; overall they were low (median: 0.01 µg/m<sup>3</sup>) but significantly higher than those found in control homes (p=0.010). Concentrations of seven-day PM<sub>2.5</sub> in e-cigarette and control homes were similar. Airborne nicotine and PM<sub>2.5</sub> concentrations did not differ according to different e-cigarette use conditions. Non-users residing with e-cigarette users had low but significantly higher levels of nicotine, cotinine, 3'-OH-cotinine, and 1,2-propanediol in saliva, and cobalt in urine than non-users living in control homes.

## Conclusion

E-cigarette use at home created bystanders' exposure to SHA regardless of the conditions of use. We recommend the inclusion of e-cigarettes in smoke-free home rules to protect bystanders from any exposure to SHA.

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## How proactive are smokers in Greece with their health?

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## Background

Health monitoring is essential in disease prevention. Smokers are considered a high-risk population for smoking related morbidity and mortality; therefore, health monitoring is imperative.

## Objective

Aim of our study was to assess whether smokers are more proactive with their health than non-smokers.

## Methods

Data derive from the most recent Health Survey conducted by the Hellenic Statistical Authority in 2019, including 8125 participants aged ≥15 years. Dataset was weighted to become representative of the Greek population for this age group. Chi-squared tests were used to assess differences between smokers and non-smokers. Analysis was performed in Stata 14.

## Results

Smoking prevalence in Greece was estimated to be 29%, higher in males than females (36% vs 22%, p<0.001). Differences were observed regarding body-mass index (p=0.0003); a higher proportion of smokers were overweight (43% vs 37%) while a higher proportion of non-smokers were obese (17% vs 21%). Vaccination against the flu virus in the past 2 years was lower in smokers than

non-smokers (22% vs 31%, p<0.001). Health monitoring by a health professional was observed in a lower proportion in smokers than non-smokers; blood pressure (p<0.001), blood cholesterol (p<0.001) and blood glucose (p<0.001) measurements were observed at lower frequency in smokers than non-smokers (54% vs 63%, 60% vs 65%, and 59% vs 65%, respectively).

## Conclusion

Smoking is associated with less health monitoring in Greece. More non-smokers monitor their health measurements and biomarkers compared to smokers. Campaigns tailored to increase smokers' awareness on health monitoring and disease prevention will aid early diagnosis and improve life expectancy.

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## Profiling smokers in Greece in 2020

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## Background

Smoking prevalence in Greece has been extensively studied in the course of the past decade, however smokers' lifestyle characteristics are not documented. Aim of our study was to identify differences in lifestyle choices between smokers and non-smokers.

## Methods

Data derive from the most recent Health Survey conducted by the Hellenic Statistical Authority in 2019 including 8125 participants aged ≥15 years. Dataset was weighted to become representative of the Greek population of this age group. Chi-squared tests were used to assess differences between groups. Analysis was performed in Stata 14.

## Results

Smoking prevalence was 29%; 25% daily and 4% occasional smokers. Smoking was observed more in males (36%) than females (22%) (p<0.001) and among the ages 35–64 years (34–38% vs <32% in the other age groups, p<0.001). Median number of cigarettes smoked per day was 15 (IQR: 15–20). Lifestyle choices differed between smokers and non-smokers; alcohol use was observed more in smokers (p<0.001), and especially in male compared to female smokers (p<0.001). Weekly consumption of fruit (p<0.001), vegetables (p<0.001) and fresh fruit/vegetable juices (p<0.001) was observed more in non-smokers compared to smokers, while soft drinks were consumed more by smokers than non-smokers on a weekly basis (p<0.001). Physical exercise was observed in a low proportion in both smokers (25%) and non-smokers (26%) (p=0.87).

## Conclusion

Smoking in Greece is observed more in males than females and among those aged 35–64 years. Lifestyle choices differ between smokers and non-smokers, with non-smokers leading a healthier lifestyle, while prevalence of physical exercise is low in Greece regardless of smoking status.

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## Strategy for a Tobacco-Free Germany 2040

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### Background

Tobacco use kills 127000 people in Germany each year. At the same time, Germany has no strategy for sustainable tobacco control and is at the bottom of the European Tobacco Control Scale that ranks the implementation of tobacco control measures in 36 European countries.

### Objective

The goal of the strategy is to achieve a tobacco-free Germany by 2040. This means that from 2040 onwards, less than 5% of adults and less than 2% of children and adolescents use tobacco or related products.

### Methods

The strategy is based on literature review of evidence-based tobacco control measures and is aligned with the WHO Framework Convention on Tobacco Control (FCTC) and international goals (e.g. Europe's Beating Cancer Plan). An expert advisory group contributed to the development of the strategy.

### Results

The strategy contains ten measures:

1. tobacco taxes,
2. cost-covered, cessation support,
3. plain packaging and a comprehensive ban on advertising, promotion and sponsorship for tobacco and related products,
4. availability reduction for tobacco and related products,
5. comprehensive protection from secondhand smoke,
6. prioritizing children's rights related to tobacco control
7. public awareness campaigns,
8. investment in development cooperation/FCTC 2030,
9. protection from interference of tobacco and related industries in policymaking, and
10. regular monitoring, evaluation and adjustment of the measures.

### Conclusion

The goal of achieving a society free of tobacco use and nicotine dependence requires strong commitment from policymakers to strengthen tobacco control and to protect public health interests from interference by manufacturers of tobacco and related products.

The Strategy for a Tobacco-Free Germany 2040 is supported by a broad coalition of organizations. In the run-up to the national elections in September 2021, it demands that legislators and the government adopt a tobacco control strategy with a binding timetable and implement the ten measures for a tobacco-free Germany 2040.

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## The UK Tobacco Industry Interference Index 2020/2021: An assessment of the implementation of WHO FCTC Article 5.3 in the United Kingdom

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### Background

The Tobacco Industry Interference Index evaluates the implementation of WHO FCTC Article 5.3 in different countries using a standardized tool developed by the South East Asian Tobacco Control Alliance which enables inter-country comparisons. There are two published editions of the Index and a third edition is scheduled to be published in November 2021.

### Objective

This paper reports on the findings of the Index for the UK for the period between January 2020 and March 2021.

### Methods

Researchers completed a questionnaire covering different forms of tobacco industry interference in policy in the UK between January 2020 and March 2021. The questionnaire consisted of 20 questions, covering 7 areas of assessment based on implementation guidelines of Article 5.3. To complete the questionnaire, the researchers conducted a search of relevant academic literature, media websites, government websites, and the Tobacco Tactics resource. This was supplemented by an expert consultation with the UK's leading tobacco control specialists.

### Results

In the 2020/2021 Index the UK's overall performance was consistent with the previous edition of the Index (exact score to be announced in November 2021). The government's policies aiming at preventing industry influence remained the same in the 'transparency' and 'preventive measures' categories. A slight improvement was reported in the scoring of the categories assessing 'industry participation in policy development', 'benefits to the industry' and 'conflict of interest'. A slight deterioration was reported in the score of the categories assessing 'industry corporate social responsibility' and 'unnecessary interactions with the industry'.

### Conclusion

The UK remains one of the global leaders in preventing tobacco industry interference in policy. However, it is concerning that there has been little progress by the national and local governments in tackling some of the persisting areas of concern, including inadequate structural mechanisms to ensure transparency, address conflicts of interest, and strengthen preventive measures.

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## Results of We Can Quit2: A pilot cluster randomized controlled trial of a community-based stop-smoking intervention for women living in disadvantaged areas of Ireland

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### Background

Tobacco use is the leading cause of preventable death worldwide. Health consequences of tobacco smoking are higher in socioeconomically disadvantaged (SED) populations, especially among women. The We Can Quit<sup>2</sup> study was a pragmatic two-arm, pilot cluster randomized controlled trial of We Can Quit (WCQ), a community-based peer-led smoking cessation intervention for women living in disadvantaged areas in Ireland.

### Objective

To explore feasibility and acceptability of trial processes including randomization of districts, recruitment and data collection, in preparation for a definitive effectiveness trial.

### Methods

The trial was conducted in four matched pairs of districts in Dublin and Cork. Women were randomized to receive the WCQ intervention (group behavioral support over 12-weeks delivered by lay trained Community Facilitators and optional access to combination nicotine replacement therapy, without charge) or control (face-to-face individual smoking cessation service delivered by health professionals from Ireland's Health Service Executive, 6/7 sessions on average). The primary outcome was recruitment of eight districts and 194 women in four waves (49 women per wave). Secondary outcomes included retention (data completion) at 12 weeks and 6 months after treatment, and smoking abstinence (self-report + salivary cotinine).

### Results

Eight districts were recruited. 208 women registered in the study; 125/188 eligible women (66.5%) gave consent. The expected sample of 49 women was reached in Wave 4. Data completion rates were: Intervention 36/65 (55.4%), Control 31/60 (51.7%) at 12 weeks; Intervention 31/65 (47.7%), Control 28/60 (46.7%) at 6 months. More participants with secondary or higher education completed data at 12 weeks than those with no formal or lower education. Twenty-three participants were abstinent at 12 weeks [Intervention 15/65 (23.12%), Control 8/60 (13.3%)].

### Conclusion

Recruitment of women from SED districts to a community-based stop-smoking trial is feasible though challenging. Preliminary abstinence rates favored the intervention. Strategies are needed to improve retention in advance of a definitive effectiveness trial.

### Conflicts of Interest

C. B. Hayes reports grants from HRB and Enterprise Ireland during the conduct of the study. C. Darker reports grants from HRB during the conduct of the study.

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## A process evaluation of We Can Quit: A stop-smoking program for women living in socio-disadvantaged areas in Ireland

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### Background

Smoking tobacco poses a serious risk of early preventable death and disease for women living with socioeconomic disadvantage (SED). 'We Can Quit' (WCQ) was a community-based smoking cessation program tailored to women living in SED areas developed in Ireland, which comprised group behavioral support delivered by trained lay local women and free nicotine replacement therapy (NRT). The intervention was pilot tested in a cluster randomized controlled trial, 'We Can Quit 2'. Qualitative results of an embedded process evaluation are presented here.

### Objective

To assess feasibility and acceptability of the WCQ program components and trial-related processes among participants and community facilitators (CFs) who delivered the program.

### Methods

The design was qualitative. The Medical Research Council's (MRC) process evaluation framework was followed. Semi-structured interviews were conducted after program delivery with intervention participants (18/50) and CFs (N=8). An inductive approach was used, and data were analyzed using thematic coding.

### Results

Peer-modelling, a non-judgmental environment, and CFs supportive role were viewed as facilitative elements. The experience of being part of the group increased participants' skills, self-efficacy and support to maintain smoking abstinence. Participants reported free NRT as helpful for cessation. Some participants expressed concerns about NRT side effects. Community pharmacists provided important guidance relating to NRT and additional support between group sessions. Provision of saliva samples proved challenging. Participants' low literacy was a barrier to engagement with the program and with trial-related materials. Hypothetical scenarios of direct or indirect observational fidelity assessment for a future definitive trial (DT) were acceptable.

### Conclusion

Program and trial-related processes were feasible and acceptable to intervention participants and facilitators, though low literacy was a barrier to retention. A future DT will need to comprehensively address this. The MRC framework proved useful to capture the experience of women smokers in SED areas of engaging with a community-based stop-smoking trial.

### Conflicts of Interest

C. B. Hayes reports grants from HRB and Enterprise Ireland during the conduct of the study. C. Darker reports grants from HRB during the conduct of the study.

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## The We Can Quit<sup>2</sup> trial knowledge exchange and dissemination plan: Future research and policy priorities from a community perspective

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### Background

We Can Quit<sup>2</sup> (WCQ<sup>2</sup>) was community-based randomized controlled trial developed to assess the feasibility and acceptability of We Can Quit (WCQ), a stop-smoking program comprising group support and free nicotine replacement therapy, designed for women living in socioeconomically disadvantaged (SED) areas in Ireland. Reengagement with stakeholders involved in trial conduct was a part of the WCQ<sup>2</sup> Knowledge Exchange and Dissemination plan.

### Objective

To discuss strategies to optimize community engagement, recruitment and retention in a future definitive trial (DT), and the policy priorities arising from the trial.

### Methods

Community stakeholders involved in trial recruitment and planning, Irish Cancer Society and Health Service Executive representatives were invited to an online interactive workshop in November 2020. Key trial findings were presented. Workshop discussion (field notes) and responses to a post-event anonymous questionnaire informed a list of challenges and suggestions for a DT and policy development from a community perspective.

### Results

Forty-one stakeholders attended the workshop, six completed the questionnaire. Significant time was needed for community engagement. Use of social prescribing was suggested as a recruitment tool. Low literacy was a barrier to women's recruitment and retention. Greater adaptation of trial data and assistance to complete forms were recommended. Women's stress and lack of support from family affected retention. An intervention boost after WCQ delivery, encouragement of women to join other healthy community programs to maintain their group and to incorporate family in the program were recommended to facilitate retention and enhance sustainability. Removal of cost and administrative barriers to access NRT and provision of stop-smoking support tailored to disadvantaged groups were identified as policy priorities.

### Conclusion

The workshop provided a suitable forum to engage community and statutory stakeholders. Results outlined important strategies

to enhance design of a DT assessing WCQ effectiveness. Lessons learned may be relevant for other community-based health promotion interventions.

### Conflicts of Interest

C. B. Hayes reports grants from HRB and Enterprise Ireland during the conduct of the study. C. Darker reports grants from HRB during the conduct of the study.

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## Adolescent behavioral response to an increase of tobacco prices

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### Background

Tax and price policies are widely recognized to be one of the most effective means of influencing smoking prevalence. Therefore, the excise tax on tobacco in the Netherlands increased in 2020, resulting in a price increase of about €1.0 per pack of cigarettes. The government intends to increase tobacco excise taxes further in the coming years, leading to a price of €10.0 per pack of cigarettes in 2023.

### Objective

This study investigated how adolescent smokers intend to change their behavior at hypothetical price increases of a pack of cigarettes, and which characteristics are associated with this intended behavior.

### Methods

Among a panel of 776 Dutch smokers between 15 and 25 years, four behavioral options were investigated separately in an online survey: smoking less, quit smoking, switch to another/cheaper product, and shopping cigarettes cross-border.

### Results

About half of all smoking adolescents were daily smokers; the others smoked occasionally. At a hypothetical price of €10.0 per pack, smoking less was the most intended response (67%), followed by switching to another/cheaper product (61%), quit smoking (49%), and shopping cigarettes cross-border (47%). Prior quit attempts, agreeing with the increase in excise tax, and the intention to quit smoking in the future increased the odds of changing behavior. Higher self-efficacy decreased the odds of behavioral change.

### Conclusion

Despite the fact that intended behavior can deviate significantly from realized behavior, an increase in excise tax will presumably result in a significant amount of quit attempts and reduced smoking among adolescents. At the same time, these favorable outcomes might be partially offset by current smokers switching to other products and buying cigarettes cross-border.

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## United States 2021 Tobacco Industry

## Interference Index: The US Implementation of Article 5.3 of the World Health Organization Framework Convention on Tobacco Control in 2020 Versus 2019

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### Background

Tobacco kills 8 million people a year worldwide. To combat the tobacco epidemic, the most powerful tool is public policy. However, reducing tobacco use through public policy is systematically challenged by Big Tobacco. Tobacco industry interference is a barrier to protecting public health from the dangers of tobacco.

### Objective

The aim of this report is to assess and systematically raise awareness of tobacco industry interference in policymaking through a standardized index. This index quantifies the extent of tobacco industry interference in US policy throughout 2020 across 20 indicators of interference to assess the level of implementation of Article 5.3 of the FCTC. Annual scores allow for comparison of the United States' implementation of the FCTC with previous indices and across countries.

### Methods

The study was conducted on information from January to December 2020. The five most circulated news sources, the top fifteen government agencies involved in tobacco control, and the websites of the five most prevalent tobacco industries in the US were systematically searched for keywords. Instances of tobacco industry interference were gathered and sorted into each of the 20 indicators, then scored from zero (no interference) through five (high interference). The higher the score, the more tobacco industry interference in public policy.

### Results

The research is ongoing and data collection has not been finalized. Final results will be presented at the conference.

### Conclusion

Preventing tobacco industry interference in public policy is crucial to ending the tobacco epidemic. Recommendations to protect against industry interference include: ending special benefits for the industry, standardizing procedures and increasing transparency for interactions between the industry and government officials, prohibiting contributions from the tobacco industry to the government, its agencies, officials, and their relatives, and that the US ratify the WHO FCTC.

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## Illicit cigarettes in Ethiopia

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### Background

The presence of an illicit cigarette trade is used as an argument by the tobacco industry in Ethiopia to halt pro-health tobacco tax policies. The National Tobacco Enterprise (NTE) recently reported that the illicit cigarette market accounts for over 44% of the total market, and over 90% in the Eastern part of Ethiopia.

However, it is not clear how those estimates were obtained.

### Methods

We employed a cross-sectional observational study of empty packs collected in Ethiopia from retailers and from the streets in 10 towns, representing 10 regional states, and two autonomous cities. We supplemented these data by a retailers' survey to obtain information about the cigarette supply chain and cigarette prices.

### Results

The majority (80.1%) of the 6438 empty cigarette packs collected (5368 from the streets and 1070 from retailers) belonged to locally produced brands, while the remaining 19.9% were foreign packs, including those allowed to trade in Ethiopia. Based on the pre-determined criteria used for classifying a pack as illegal, we determined that the market share of illicit cigarette packs varied considerably across the country. While as many as 97.7% and 86.6% of the packs collected in Jigjiga and Dire Dawa (both in the East), respectively, were found to be illicit, the packs obtained in the South, the Southwest, and the North were mostly legal (98.2 to 99.0% of them). Some illicit brands are more expensive than the legal domestic brands even though the legally imported foreign brands are more expensive compared to the illegal foreign brands.

### Conclusion

The estimates of the size of the illicit cigarette market vary by region. In the majority of the cities surveyed the share of the illicit cigarette market was considerably lower than the estimates promoted by the tobacco industry. However, illicit cigarettes are disproportionately sold in cities near the border with Somalia. To address this alarming situation, the country needs to strengthen border control and law enforcement, especially in the East. In addition, Ethiopia needs to control the supply of cigarettes better by marking all packs for sale in Ethiopia. Currently, cigarette packs bear no indication that the proper tax was paid. Such markings can be tax stamps linked to a tracking and tracing system (T&T). A secure T&T system would reinforce the efficiency of excise taxation and reduce tax evasion.

Ethiopia should consider ratifying the WHO Protocol on Illicit Tobacco Trade, which would be an important step in joining the international community in the fight against illicit the tobacco trade.

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## Impact of tax and price reforms on companies' price decisions in the complex cigarette tax system of Indonesia

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This study evaluates how changes in various aspects of excise tax systems, including minimum prices, differential price tiers across characteristics and products influence firms' pricing decisions. We apply our model to Indonesia, where the excise tax system is particularly complex for tobacco. We obtain a large database of prices over the past decade for all tobacco products currently sold in Indonesia, directly obtained from official government courses. We find that pricing decisions are significantly affected by taxes, but this result hides important or similar contribution



of other pricing policies that are typically ignored in research that essentially focus on the tax impacts. Minimum price policies, and implied tax burdens gaps between products type can have a larger impact than taxes on tobacco pricing. The results imply that a multi-tiered, multi-products tobacco tax system likely generates important distortions that likely limit the objective of the government.

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### The pass-through of excise to consumer prices of heated-not-burn tobacco (HTP) products and cigarettes: A cross-country evidence

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#### Background

The market of heated tobacco products (HTPs) has grown exponentially in recent years and many governments have imposed taxes on HTPs to regulate its use. Countries are debating over how HTPs should be taxed, especially whether at the same or lower rates than cigarettes, considering its potential harm reduction impact.

#### Objective

To evaluate the impacts of HTP taxes on behaviors and health consequences, we first need to evaluate whether such taxes effectively raise HTP prices in ways that mediate the impact on downstream outcomes. Moreover, as most HTP brands are manufactured and marketed by large cigarette manufacturers, tax policy effectiveness also depends on companies' pricing strategies between products that are perceived as substitutes by consumers.

#### Methods

This study analyses the extent companies shift the burden of HTP and cigarette taxes to consumers into prices (i.e. tax pass-through to prices). We use the cross-country variation in statutory taxes along with retail prices of the most sold brand of heated tobacco units and their most sold comparable cigarette brand, in every country that sold or manufactured HTPs from 2014 to 2020. It is notable that in the majority of countries, HTPs have been taxed at lower rates than cigarettes, yet sold at similar prices, suggesting highly concentrated markets where taxes have little impact on prices of goods that are sold with extra profit margins (HTPs), simultaneously to selling similar products (cigarettes) in competitive markets and with small profit margins. We build a model where a representative company manufactures and sells two similar products, or close substitutes with similar production costs, but with different degrees of competition. One is sold in competitive markets while the other is sold in highly concentrated markets. If the products are close substitutes, they face the same demands. The model implies that taxes affect the sales of both products simultaneously. However, in certain market conditions – as describe above – the pass-through of taxes to prices is always larger for the product that bears the higher tax.

#### Results

We find that the direct pass-through effect of HTP taxes to prices is much smaller than that of cigarettes, which confirms the predictions of the model under current market conditions. We

also find that the pass through of cigarette prices to cigarettes prices is larger than unity. The combined pass-through (direct and indirect) of taxes to prices is negative for HTPs and cigarettes, with a larger negative effect for HTPs, leading to a negative association between tax incidence gaps and price levels.

#### Conclusion

Overall, the results strongly suggest that the only effect of differential taxation on the two tobacco products is to increase companies' profit margins, implying that the impact on demand is likely to be small. The results also suggest that increasing taxes on both products and taxing them equivalently could be an effective policy tool that simultaneously reaches the objectives of curbing tobacco use and raising additional tax revenue. They also confirm that companies respond to taxes by setting prices of HTPs and cigarettes jointly, with the goal of maximizing their profits.

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### Slovenian Coalition for Public Health, Environment and Tobacco Control: 17 years of experience of smoking cessation and counselling with the support of ENSP and Slovenian Ministry of Health

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#### Background

Tobacco products contain nicotine, which causes a rapidly developing addiction. According to the international classification of diseases, smoking is classified as an addiction with the code F17.2, and abstinence syndrome with the code F17.3.

The pharmacological and behavioral processes that determine nicotine dependence are similar to the processes of dependence on other substances. Addiction in an individual is determined by the central nervous system's susceptibility to nicotine and its metabolism in the liver. An individual's smoking is determined by his/her personality, living environment, age at the beginning of smoking, education, employment and other demographic and socio-economic determinants.

Recommendations of European Commission (State of Health in the EU 2019) recommend adoption of models of good practice of smoking cessation among countries.

#### Objective

Our objective is to help lower the number of smokers in Slovenia, increase the number of people who quit smoking, lower morbidity, help to improve the health of Slovenia and help to achieve the objectives of Tobacco-free Slovenia 2040 strategy and its 2030 objectives.

#### Methods

Slovenian Coalition for Public Health, Environment and Tobacco Control is working on models of good practice and innovative approaches in the field of smoking cessation and counselling for primary school children, secondary school children, companies employees and especially for high-risk smoking population (pregnant women, etc.). Our organization is cooperating with public healthcare institutions in this field.

The European Network for Smoking Prevention's Accredited Curriculum on Tobacco Treatment is estimated to be the

best recommendation (according to 45 medical doctors) for healthcare professionals and professionals working in the field of smoking cessation and tobacco consumption reducing (teachers, psychologists, social workers etc.).

Article 12 of FCTC also points out to awareness and participation of public and private agencies and nongovernmental organizations not affiliated with the tobacco industry in developing and implementing intersectoral programs and strategies for tobacco control.

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## The Danish model for smoking cessation

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### Background

A focus area in Denmark is to reduce social inequality in health and it is evident that smoking has a significant negative role. There is a focus on initiatives that reduce barriers for receiving professional cessation counseling and cessation medication.

### Objective

The aim is to increase the number of people, who smoke, participating in professional cessation counseling by increasing referrals, proactive recruitment and awareness of cessation offers and by making cessation medications more available.

### Methods

National grants enables Danish municipalities to work targeted with the mentioned aims. A national and local focus on proactive recruitment. The Danish Health Authority has had the effect of the completed grants evaluated.

### Results

The target group were more likely to complete a course compared with other participants. Regarding a grant, targeting socially vulnerable 74% of the target group were smoke-free by the completion of the course, for participants who did not receive subsidized cessation medicine it was 66%. After six months, the percentage of smoke-free participants was 48 and 42%, respectively.

### Conclusion

Subsidized cessation medicine has a positive and statistic significant effect on the likelihood of the participant staying smoke-free six months after the cessation course, even when cost is only partially covered. Receiving subsidized cessation medicine can help local cessation services in recruiting, but it can also have a stigmatizing effect if only for the socially vulnerable.

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## How sex, age and education determine the potential impact of mass media campaigns: Results of the International Tobacco Control (ITC) Netherlands Project

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### Background

Media campaigns are an important part of a comprehensive tobacco control strategy, but they may not work equally well for everyone. Indeed, little is known about the link between media campaigns and smoking cessation for different subgroups, despite the well-documented differences in smoking prevalence and cessation based on characteristics such as sex, age and education.

### Objective

This study investigated the relationship between exposure to media campaigns and outcome measures associated with smoking cessation, specifically focusing on whether this relationship differs based on an individual's sex, age or education.

### Methods

We use survey waves from the period 2008–2017 of an ongoing cohort study – the International Tobacco Control (ITC) Netherlands Project – to measure the impact of four national campaigns: ‘In every smoker there's a quitter’ (n=1447), ‘You can really quit smoking with the right help’ (n=1567), ‘Stoptober’ (n=1371) and ‘Towards a Smoke-free Generation’ (n=1258). First, we examined whether exposure to the campaigns differed for respondents based on sex, age and education. Using Generalizing Estimating Equations, we then examined the relationship between exposure to these campaigns and psychosocial mediators for smoking cessation (attitude about quitting, self-efficacy, subjective norms, quit intentions) and quit attempts, also examining whether these relationships are further determined by sex, age and education.

### Results

Of all four campaigns, average exposure to Stoptober was highest. Initial results also suggest that campaign exposure tended to be greatest amongst those who were female, low educated, and 40+ years. The full and final results will be presented at the conference.

### Conclusion

Exposure to Dutch campaigns was not equal across population subgroups and so tailored campaigns may be necessary to sufficiently reach those in the other groups. The findings of this study will provide insight into whether campaigns can reduce or increase the gap in smoking prevalence.

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## Trend analyses of teenage e-cigarette use in Ireland (2015–2019) show higher use for boys but more rapid increase for girls

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### Background

E-cigarette ever use and current use among teenagers has been increasing worldwide, including in Ireland. Boys are widely observed to have higher prevalence compared with girls.

### Objective

We set out to identify trends in e-cigarette ever use and current use between 2015 and 2019, particularly in relation to gender differences.

## Methods

Data drawn from two Irish waves of the European School Survey Project on Alcohol and other Drugs (ESPAD) yielded a total valid sample of 3421 16-year-olds from a stratified random sample of schools (n=50), comprising 1472 students (born in 1999) in 2015, and 1949 students (born in 2003) in 2019. Trends in e-cigarette ever and current use were examined using a multivariable logistic regression model using e-cigarette ever (Table 1) and current (Table 2) use as the dependent variable, for all and by gender.

## Results

E-cigarette ever use increased from 23% to 39% and current use from 10% to 18%, (2015 vs 2019, respectively). The rate of increase is significantly greater for girls AOR 2.67 (95% CI: 2.02–3.54) vs 2.04 (95% CI: 1.55–2.68). Smoking and e-cigarette use are linked and never smokers becoming e-cigarette ever users has risen from 33% to 67%. Peer smoking is also significantly associated with e-cigarette ever and current use, and the association is particularly strong for boys if 'Most/All friends smoke' AOR=5.90 (95% CI: 3.31–10.52) vs 3.50 (95% CI: 1.79–6.84) for girls. Less parental monitoring is associated with greater e-cigarette use, more so for boys AOR=5.50 (95% CI: 2.85–10.61) vs 5.31 (95% CI: 3.01–9.37) for girls.

## Conclusion

Boys are currently at greater risk of e-cigarette use but girls are increasingly at risk. Peer influences and less parental monitoring are significant risk factors for use, operating differently for girls and boys, and providing potential mechanisms for interventions to prevent an increasing risk of nicotine addiction.

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## Modifying teenage e-cigarette use: Variables identified through a logistic regression analysis of e-cigarette ever use

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### Background

Teenage e-cigarette ever use has risen significantly in recent years in Ireland similar to trends elsewhere in Europe, the US and Asia-Pacific region, leading to concerns about e-cigarettes promoting experimentation, and progression to current smoking.

### Objective

We set out to establish a profile of young ever e-cigarette users by examining individual, peer, and familial associations with ever e-cigarette use among those aged 15–17 years.

### Methods

A stratified random sample of 50 schools was surveyed in 2019, with 3495 students aged 15, 16 and 17 years. Bivariate and multivariable logistic regression analyses were performed using Stata version 16.

### Results

Prevalence for ever use of e-cigarettes among those aged 15–17 years in Ireland is 37%. Ever tried cigarettes had an adjusted odds ratio (AOR) of over 4 for ever e-cigarettes use (AOR=4.15; 95% CI: 1.29–13.41, p<0.05), ever cannabis use (AOR 2.21; 95% CI: 1.11–4.41, p<0.05), and ever inhalants use (AOR=2.51; 95% CI: 1.07–5.88, p<0.05). Children with university educated mothers had higher odds of trying e-cigarettes (AOR=3.46; 95% CI: 1.40–

8.54), p<0.05), and fathers not significantly (AOR=2.10; 95% CI: 0.97–4.55, p=0.058). Reading books for enjoyment (AOR=0.32; 95% CI: 0.16–0.64, p=0.001), a household having rules relating to smoking in the house (AOR=0.53; 95% CI: 0.30–0.94, p<0.05), and perceiving moderate risk in using e-cigarettes (AOR=0.20; 95% CI: 0.07–0.67, p<0.05) were associated with lower AOR. E-cigarette ever use, adjusted for covariates, was not significantly associated with gender, age, perceived familial wealth, household composition, academic attainment, sports or hobbies, age of smoking initiation, truancy, peer risk activities /peer support, and familial regulation/ satisfaction.

## Conclusion

The marked increase in Irish teenagers' e-cigarette ever use is part of a pattern of teenage polysubstance use. Several modifiable social determinants were identified including, perceiving risk in e-cigarette use, and living in a household with rules related to smoking. Raising awareness among higher educated parents of the risk of e-cigarette use by teenagers, may be of benefit.

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## Youth access to tobacco products in Armenia

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### Background

Armenia is a middle-income country with adult male smoking prevalence of 51.5% and youth smoking prevalence among those aged 11, 13 and 15 years of 1.3%, 3.5% and 4.4%, respectively. Sales of tobacco products to minors (<18 years) has been banned since 2005 by the national tobacco law in Armenia, with provisions including compliance checks and penalizing the retailers.

### Objective

The study aimed to investigate youth access to tobacco products and to explore adult behavior of sending a minor to buy cigarettes.

### Methods

In 2018, we conducted an interviewer-administered population survey among adults in randomly selected households in 14 communities in Armenia. The study instrument included questions on demographics, smoking characteristics, and past-month witnessing an underage sale or per-item sale of cigarettes and/or adults requesting minors to purchase cigarettes.

### Results

Of 705 participants, 29.8% were male and 20.4% were smokers (63.8% of males, 2.0% of females). In total, 65.3% of participants reported that they had seen a minor purchasing cigarettes in the past month. Regarding adults promoting minors purchasing cigarettes, 12.8% of participants reported that they had sent a minor to buy cigarettes for themselves (the participant) or for family members; twice as many smoker versus non-smoker participants reported doing so (21.5% vs 10.6%, p<0.001). Nearly one-fifth of participants (16.8%) had witnessed per-item sale of cigarettes.

### Conclusion

Despite the existing law restricting the sale of tobacco products to children and youth, minors still purchase tobacco products

in Armenia, sometimes by adult request. To prevent youth from smoking and reduce the overall smoking prevalence among adults in Armenia in the future, study findings underscore the need for strict enforcement of the law prohibiting tobacco sales to minors, ongoing surveillance, and educational campaigns on the importance of youth prevention.

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### Public attitude towards tobacco taxation policy in Armenia

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#### Background

As recommended in Article 6 of the World Health Organization Framework Convention on Tobacco Control, price and tax measures are important means to effectively reduce tobacco consumption and encourage tobacco users to quit. This is particularly relevant in low- and middle-income countries.

#### Objective

The study aimed to investigate the public attitude towards tobacco taxation in Armenia.

#### Methods

In 2018, we conducted an interviewer-administered population survey in 14 communities in Armenia. We utilized random sampling strategy to identify households; then applied the KISH method to select an adult respondent in each household. The study instrument included questions on smoking characteristics and attitude towards tobacco taxation in Armenia.

#### Results

Overall, 705 participants completed the survey, and 20.4% were smokers. In total, 38.5% believed that cigarette tax in Armenia was too high, with more smokers than non-smokers indicating this (46.7% vs 36.4%,  $p=0.009$ ). Two-fifth (40.4%) were strongly against future tax increase; nearly twice as many smokers as non-smokers opposed the tax increase (66.4% vs 33.5,  $p<0.001$ ). One-third (33.9%) indicated that tobacco products in Armenia are not affordable (38.7% vs 32.6%,  $p=0.034$ , smokers vs non-smokers, respectively). Over one-third (36.7%) believed that increasing cigarette prices would not prevent youth from starting to smoke. The majority (62.5%) did not consider price as a factor influencing smoking rates, and half thought that price does not influence smoking behavior (47.5%). However, 34.3% reported that smokers would switch to less expensive cigarettes if prices increased. Most respondents (65.2%) strongly agreed that cigarette taxes should be used to pay for smoking-related healthcare costs.

#### Conclusion

Though the tobacco tax in Armenia is below the recommended level, targeted interventions are needed to overcome negative attitudes of the public and particularly smokers while implementing tobacco price and tax recommendations. Directing cigarette taxes towards covering smoking-related healthcare costs could be one strategy to bolster support for such policies.

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### Tobacco industry interference in Guatemala

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#### Background

Guatemala is an upper-middle-income country with weak tobacco control. In 2018 a law proposal was introduced to Congress to include pictorial health warnings (PHW), restrict advertising and ban tobacco industry contributions.

#### Objective

We sought to evaluate tobacco industry interference in the drafting, approval, and implementation of tobacco control policies in Guatemala.

#### Methods

Using the Tobacco Industry Interference Index (TIII) from the Southeast Asia Tobacco Control Alliance (SEATCA) we assessed tobacco industry interference. Three researchers compiled information publicly available between 2020–2021 using online search engines and governmental agencies, and local news sources.

#### Results

Guatemala's government has no mechanisms to regulate the interaction with the industry, nor requires disclosure or prohibits contributions of any type. In 2018, San Carlos University proposed Law 5461 'Law for Tobacco Control and its Products' to Congress and was assigned to the Health Commission. The proposal was discussed 6 times between April to August 2019 by the Commission and has not been discussed since then. During this period the industry edited the proposal and was given time frames to do so. In addition, after the COVID-19 lockdown, tobacco front groups made contributions estimated in US\$ 2 million (diagnostic tests and medical supplies). Moreover, Tabacalera Centro Americana, a Philip Morris subsidiary, supports The Mesa de Competitividad de Alta Verapaz (MancoVerapaz), a project that seeks to economically develop the Northern area of Guatemala. MancoVerapaz has invested to this date US\$ 90 million.

#### Conclusion

Law proposal 5461 has not been approved by Congress in Guatemala due in part to tobacco industry interference. Furthermore, the Guatemalan government (including Ministries) and Congress currently receive contributions from the industry. This close relationship is, in part, due to the lack of regulations and specific policies to control tobacco industry interference in Guatemala.

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### Blended care for smoking cessation support in Dutch GP practices

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#### Background



Blended care, the use of eHealth applications combined with behavioural smoking cessation support (SCS), has multiple advantages. It could potentially be more effective and better suited to the wishes and needs of patients and professionals compared to behavioral SCS alone. However, little is known about the provision of blended care for SCS in Dutch GP (general practitioner) practices, as well as the factors influencing implementation.

#### Objective

To investigate the provision of blended care for SCS in Dutch GP practices and to identify facilitators and barriers regarding the implementation of blended care for SCS.

#### Methods

Two complimentary methods were used. An online survey was conducted among a representative group of Dutch GP practice professionals (n=137; 22% response) and semi-structured interviews were conducted with 18 GP practice professionals who provided blended care for SCS. The interviews were guided by attributes of Rogers' Diffusion of Innovations theory: relative advantage, complexity, compatibility, trialability, and observability.

#### Results

Based on the survey, we found that 38% of the professionals recommended eHealth applications for SCS and 21% reported to provide blended care for SCS. Reasons for not advising eHealth applications were a lack of knowledge and a preference for the current SCS offered. Based on the interviews, multiple facilitators for the adoption of blended care were identified, such as improvement of quitters' motivation, user-friendliness, and trialability of eHealth. The main barrier for professionals to start using blended care was the time investment necessary for adoption due to a lack of clear and reliable information provision and education about blended care.

#### Conclusion

Blended care seems a promising SCS method, but the adoption rate in Dutch GP practices is limited. Based on the findings, implications for improving blended care for SCS in Europe will be discussed.

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### Tobacco, human rights, and environmental due diligence

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Action on Smoking and Health (Washington D.C.), the Belgian Alliance for a Smoke Free Society, Smoke Free Partnership and Unfairtobacco, drafted a submission as input for the public consultation by the European Commission on mandatory human rights and environmental due diligence, focusing on the negative impacts of the tobacco industry to the environment, the right to health, and numerous other human rights. The submission was joined by 69 organizations. Participants will take away the following key messages:

1. Mandatory human rights and environmental due diligence for companies is absolutely necessary to achieve the Sustainable Development Goals, to protect and fulfil human rights obligations

and avoid environmental destruction.

2. The tobacco industry has an ecological footprint which is comparable to that of entire countries. The human rights violations include the worst form of child labor in tobacco growing, according to ILO.

3. Mandatory human rights and environmental due diligence should include transparent reports on standardized criteria, the obligation to develop and implement an ambitious plan of action, permanent monitoring structures, enforcement and sanctions.

The panelists will also discuss the opportunities and advantages for pursuing tobacco control goals through non-traditional topics and avenues, for example, through calls for human rights or environmental comments.

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### Tobacco Industry Interference and public tobacco control policies during COVID-19 in Argentina: Global Tobacco Industry Interference Index 2021

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#### Background

Argentina has one of the highest tobacco consumption rates in Latin America. Since 2011, the National Tobacco Control Law (NTCL) has proven to be insufficient to limit tobacco industry (TI) interference. Compounding this situation is the lack of ratification of the Framework Convention on Tobacco Control (FCTC) and thus the lack of protection of tobacco control policies from IT commercial interests. The Global TI Interference Index provides information on how the Argentine government acts in relation to the TI interference.

#### Methods

The questionnaire developed by the Southeast Asia Tobacco Control Alliance based on the provisions of Art.5.3 of the FCTC was used and a scoring system was applied to perform the assessment. The study is based on Argentinian tobacco control regulation and publicly available information for the period 2020 and the first quarter of 2021.

#### Results

Compared to the Global Index published in 2020, Argentina has worsened in many ways in terms of transparency since the COVID-19 pandemic. This investigation proved that government officials and the TI had met in different opportunities, and various State agencies have participated together with non-governmental organizations sponsored by the TI. Furthermore, the TI interference detected has affected the design, planning and implementation of tobacco control policies throughout the country.

#### Conclusion

Through this research, it becomes clear that there is a need to modify the NTCL in order to completely ban all forms of tobacco products marketing. Moreover, Argentina should ratify the FCTC to guarantee the protection of the right to health. Finally, the government should develop a Code of Conduct which includes clear and binding guidelines; thus, restricting interactions between public officials and the TI.

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## Onko application: Contents for smoking cessation

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### Background

Onko Application is a continuation of the project of the Institute for Oncology and Radiology of Serbia – ‘Knowledge Against Cancer’ (2015, 2017) encompassing the educational material for cancer patients (22 brochures) which contains information and answers to frequent patients' questions. It is sponsored by the Ministry of Health of Serbia. The educational material, which also includes smoking cessation content, is adapted for mobile-phone use via an application. The app was published on Google Play Store in June 2019 and on the App Store in February 2020. The application is free and in the Serbian language.

### Objective

The goal of ‘Knowledge Against Cancer’ was to prepare brochures that are science-based, easily understandable, and which provide answers to numerous questions of patients, their families, and the general population about cancer, its treatment, and smoking cessation support.

### Methods

Analysis of reports on app downloads and usage statistics of the Onko Applications.

### Results

The application currently has about 1300 active users (2000 downloads since the publication), 406 of which are registered users (both sexes, average age of 44 years). The Smoking Cessation Brochure in Oncology Patients has 639 views and has received the top mark on a 1–5 scale.

Survey completion is enabled only to registered users, and the survey has been completed by 3.5% of registered users, all of whom are female and predominantly highly educated. The results of the survey have shown that The Smoking Cessation Brochure is useful, its content is appropriate, the text is clear, and that it provides answers to practical questions.

### Conclusion

The creation of this application enables greater access to information in the field of cancer prevention, treatment, and smoking cessation support, thus improving the quality of services provided to oncology patients and affecting the decision towards smoking cessation and inclusion in clinical treatment.

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## Cigarette price increases, advertising ban, and pictorial warnings as determinants of youth smoking initiation in Poland

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### Background

There has been no study so far on the effects of cigarette price increases and other tobacco control policies on smoking behavior among young people in Poland.

### Objective

To study the determinants of cigarette smoking initiation among young people in Poland.

### Methods

The study uses survival analysis techniques and data from the group of youth smoking surveys [the group includes: the 2003, 2009, and 2016 Global Youth Tobacco Surveys (GYTS) and the 2019 PolNicoYouth survey; students aged 11–18 years]. Split-population duration models are employed.

### Results

There was a correlation between cigarette prices and the hazard of smoking initiation in all models (hazard ratio from 0.86 to 0.91). Lower hazards of smoking initiation were also associated with a comprehensive advertising ban (hazard ratio from 0.69 to 0.70) and with the introduction of pictorial warnings (hazard ratio from 0.65 to 0.68). The effects of smoke-free laws were non-significant.

### Conclusion

The study concludes that increased cigarette prices and higher excise taxes, could decrease cigarette smoking initiation among Polish adolescents. Minimizing promotional elements from cigarette packs and making the health warning more visible through packaging laws could further accelerate the decrease in smoking initiation.

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## The COVID-19 crisis: An opportunity for the tobacco industry or for tobacco control?

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### Background

The Tobacco Industry (TI) has used the COVID-19 crisis as an opportunity to build opposition to tobacco control policy proposals and weaken or delay the implementation of existing Tobacco Control (TC) protections. Examples of TI success can be found in Armenia, Russia, and Turkey, where the TI managed to delay the implementation of approved TC protections, gain exceptions for the regulation of nontraditional products, and lower tobacco taxes. Examples to the contrary can be found in Ukraine, Romania, and Kazakhstan, where tobacco control advocates responded with agility to successfully protect TC policy gains, call out the TI and its tactics to great effect, and win the approval of a comprehensive tobacco control bill.

### Objective

Identify the factors which enabled the success or failure of these two competing agendas within each country and tease out insights, commonalities, and lessons learned that can help strengthen and

protect tobacco control policies elsewhere.

### Methods

Overview of the messaging, actions, tactics, and particular set of national circumstances that:

1. enabled the advancement of the TI agenda, or
2. enabled TC advocates to deflect TI lobbying and protect and advance TC policies.

### Results

TEconomic arguments during the pandemic have been particularly effective. The crisis has also afforded the TI the chance to engage in Corporate Social Responsibility activities, aiding its ability to exert influence. Despite this, in countries where tobacco control advocacy is strong, advocates have been successful in countering the narrative of the tobacco industry and even ensured TI allies pay a political price.

### Conclusion

Monitoring and countering the TI are essential to protecting public health. In presence of a strong TC advocacy movement the industry is severely limited in its ability to push its own agenda forward. Unfortunately, the opposite is true in its absence.

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## Mexico 2021 Tobacco Industry Interference INDEX

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### Background

The Mexico TIII provides an overview of how the FCTC Article 5.3 Guidelines are implemented in Mexico, linked to the protection of tobacco control policies from tobacco industry interference.

### Objective

This research focuses on how the tobacco industry interferes in designing and implementing public health policies in Mexico.

### Methods

The index is conducted through a questionnaire. The indicators/questions are taken directly from Article 5.3 of the WHO FCTC and adapted to Mexico's situation. This questionnaire is intended to quantify the intensity, frequency, or severity, of a given interference scenario occurrence.

### Results

Although there are important advances in the country, such as the approval in the Chamber of Deputies of the reform to the General Law for Tobacco Control in Mexico after 13 years, the level of industry participation has increased in the development of policies with clear examples of direct interference of representatives or allies of the tobacco industry in the Chamber of Deputies during the parliamentary process. In addition, more reform initiatives favor industry interests, with lax regulations towards electronic nicotine delivery systems and heated tobacco products.

Also, Since September 2020 neither of the Chambers has updated their lists of lobbyists.

CSR activities during the pandemic have also increased, mostly due to direct donations from the tobacco industry to governments. Codentify, a coding system developed by Philip Morris International is used by the Tax Administration Service for cigarette authentication. Besides, the company continues to be an ally of the social program 'Jóvenes Construyendo el Futuro'.

### Conclusion

The electoral legislation is not adequately protected against conflict of interest, through complete information of contributions by the tobacco industry to candidates or political parties. This is especially relevant in 2021 when the Chamber of Deputies will be renewed.

### Funding

The research was done with the support of the Smoke-Free Southeast Asia Foundation and the Global Center for Good Governance in Tobacco Control.

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## Confronting tobacco industry attacks against tobacco control advocates: Case studies and strategic responses. Panel presentations followed by a discussion

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For years, multinational tobacco companies have positioned themselves as part of the solution to the global tobacco epidemic by promoting so-called reduced-risk products, promoting conflicted science, and branding themselves as concerned with health and other positive values. The latest tactic has focused on directly attacking tobacco control organizations and their funders.

Over the last year, industry front groups and allies have mounted an aggressive campaign to oppose proven tobacco control policies and advocacy organizations. The Campaign for Tobacco-Free Kids and international partners have observed similarities among these tactics, including: messages claiming tobacco control is a sinister agenda pushed by 'foreign' funders and key organizations; accusing the global tobacco control community of ignoring evidence about the effectiveness of 'new' tobacco and nicotine products as an aid to quitting traditional cigarettes; and spokespeople directly linked to tobacco companies showing up repeatedly in the attacks. These efforts appear to fit a global pattern to discredit tobacco control organizations and individual champions and weaken the international tobacco control community.

Around the world, tobacco control advocates are not only succeeding in limiting the damage from these attacks, they are successfully moving the tobacco control agenda forward by employing strategic responses.

The seminar's objective is to illustrate strategies to monitor and strategically respond to these attacks. A panel of tobacco control advocates from Romania, Kazakhstan, and Ukraine will present their experiences with these attacks and how they dealt with them. Participants will also share their experiences and recommendations.

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## Impact of a brief tobacco cessation training program on the practices of healthcare professionals



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### Background

Many smokers want to quit, however most do not succeed on their own. The provision of brief tobacco cessation support following the 5As (Ask, Advise, Assess, Assist, Arrange) algorithm has been found to increase the likelihood of a quitting attempt, yet the delivery of routine brief tobacco cessation interventions by health professionals in Europe remains low. Health professionals reportedly lack the knowledge and the required skills to help smokers quit.

### Objectives

To assess the impact of a brief tobacco cessation training program on health professionals' smoking cessation practices.

### Methods

An already established questionnaire was used to compare healthcare professionals' (n= 133) practices before and at three months after attending a three hour training program in Malta between September 2018 and June 2019. The program addressed tobacco use and tobacco cessation with emphasis on the 5As algorithm.

### Results

Sixty-three participants submitted their follow-up questionnaire (47.4% response rate). Participants were significantly more likely to "assist", "arrange", recommend the use of the telephone quitline for smoking cessation, refer patients to tobacco cessation resources in the community, provide recommendations for smoking cessation medications, and review barriers to quitting at follow-up. The increase in the delivery of tobacco cessation practices varied by profession; doctors, followed by allied health professionals (professionals complementary to medicine) were more likely to report a significant increase in the delivery of brief tobacco cessation interventions.

### Conclusions

This study has shown that health professionals who attend a brief tobacco cessation training program are more likely to comprehensively address tobacco use, as is recommended in international tobacco cessation guidelines. Furthermore, this study highlights the potential role allied health professionals or professionals complementary to medicine can play in tobacco control through the provision of brief tobacco cessation interventions in their clinical practice, calling for more training initiatives for such professionals.

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## Tobacco industry: How they 'survived' in COVID-19 pandemic period

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COVID-19 and smoking are another story written by this pandemic evolution in 2020. This virus has attracted the attention of the whole world and since its appearance has generated many discussions between experts, authorities, general public. In this context, tobacco industry intervened through numerous scientific and non-scientific statements. 2021 brought hope to the world, but

the challenges and successes of 2020 should not be immediately forgotten. More than 3 million deaths by COVID-19 and over 8 million by tobacco are the actual challenging problems of the world. I am discussing in my presentation what are the maneuvers of the tobacco industry, how they tried to convince people that they are a corporate that is socially responsible and what their real intention are worldwide but also in Romania.

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## Provision of tobacco cessation support: A comparative study of five different WHO European Region countries

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### Background

The WHO Framework Convention on Tobacco Control (WHO FCTC) was adopted in 2003 and since then almost all countries worldwide have signed and ratified it. Despite this, the level of implementation of the WHO-FCTC differs between regions and countries. In order to have successful tobacco control policies, offering help to quit is of paramount importance.

### Objective

This study aimed to compare and analyze tobacco cessation support measures in five different WHO European Region countries.

### Methods

Data were received from the 2019 WHO reports on the Global Tobacco Epidemic of the European Region countries. Five WHO European Region countries (Albania, Austria, Israel, Greece, and Sweden) were selected for the analysis. Countries were selected based on their geographical location. Three of them are part of the European Union. Additionally, four are high income, while Albania is considered a middle-income country.

### Results

Sweden records the best performance on the provision of tobacco cessation services while Albania, the worst. Among the selected countries, only Sweden had fully implemented the EMPOWER policy measures for cessation support programs, while all the other countries recorded a moderate level of implementation. Austria, Israel, and Sweden have a toll-free telephone quitline/help line with a person available to discuss live cessation with callers. NRTs are legally sold in all countries except Albania. However, Sweden was the only country where NRTs are partially covered by national/federal health insurance or the national health service. Bupropion and varenicline are not available in Albania while only in Israel and Sweden the cost is partially covered by health insurance/national services. Smoking cessation support differs

between countries as well as differences exist in cost coverage.

### Conclusion

Progress has been made in the implementation of tobacco cessation policies in different countries but there is still room for improvement. The provision of a comprehensive tobacco cessation support should include both pharmacological and non-pharmacological approaches. The cost of these services should be covered by the health insurances and/or the national health systems. Albania should intensify the efforts in improving the level of implementation of cessation policies in comparison to the other countries.

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### Questioning the sex-specific differences in the association of smoking on the survival rate of hospitalized COVID-19 patients

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### Background

In the absence of a universally accepted association between smoking and COVID-19 health outcomes, we investigated this relationship in a representative cohort from one of the world's highest tobacco consuming regions. This is the first report from the Middle East and North Africa that tackles specifically the association of smoking and COVID-19 mortality while demonstrating a novel sex-discrepancy in the survival rates among patients.

### Methods

Clinical data for 743 hospitalized COVID-19 patients were retrospectively collected from the leading center for COVID-19 testing and treatment in Lebanon. Logistic regression, Kaplan-Meier survival curves and Cox proportional hazards model adjusted for age and stratified by sex were used to assess the association between the current cigarette smoking status of patients and COVID-19 outcomes.

### Results

In addition to the high smoking prevalence among our hospitalized COVID-19 patients (42.3%), enrolled smokers tended to have higher reported ICU admissions (28.3% vs 16.6%,  $p < 0.001$ ), longer length of stay in the hospital ( $12.0 \pm 7.8$  vs  $10.8$  days,  $p < 0.001$ ) and higher death incidences compared to non-smokers (60.5% vs 39.5%,  $p < 0.001$ ). Smokers had an elevated odds ratio for death (OR=2.3,  $p < 0.001$ ) and for ICU admission (OR=2.0,  $p < 0.001$ ) which remained significant in a multivariate regression model. Once adjusted for age and stratified by sex, our data revealed that current smoking status reduces the survival rate in male patients (HR=1.9; 95% CI: 1.029–3.616,  $p = 0.041$ ) but it does not affect survival outcomes among hospitalized female patients (HR=0.79; 95% CI: 0.374–1.689,  $p = 0.551$ ).

### Conclusion

A high smoking prevalence was detected in our hospitalized COVID-19 cohort combined with worse prognosis and higher mortality rate in smoking patients. Our study was the first to highlight potential sex-specific consequences for smoking on COVID-19 outcomes that might further explain the higher vulnerability of death from this disease among men.

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### Cigarette and e-cigarette dual users, exclusive users, and COVID-19

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### Background

The relationships between current cigarette and electronic cigarette (e-cigarette) dual use, exclusive use, and COVID-19, are still unclear.

### Objective

This study aims to assess the association between different tobacco use patterns and coronavirus disease 2019 (COVID-19) symptoms, testing, self-reported infection and social distancing behaviors in the United Kingdom (UK).

### Methods

Data come from the first wave of the Centre for Longitudinal Studies (CLS) COVID-19 survey, comprising four birth cohorts (N = 13077, aged 20–63 years) surveyed between 2 and 31 May 2020, during the COVID-19 pandemic. Sociodemographic characteristics and COVID-19-related measures (symptoms, testing, diagnosis and social distancing behaviors) were compared across different product user groups (non-users, exclusive cigarette users, exclusive e-cigarette users, and dual users). Multivariable logistic regression models were used to explore associations between COVID-19-related outcomes and different smoking patterns.

### Results

Across all four cohorts, 12.6% and 4.9% of the respondents were current exclusive cigarette and e-cigarette users, respectively, with approximately 3% of the respondents being dual users. Significant differences in prevalence were observed between different tobacco use patterns and COVID-19 symptoms ( $p = 0.02$ ), self-reported infection ( $p = 0.04$ ) and social distancing behaviors ( $p < 0.001$ ). Current cigarette and e-cigarette dual use was associated with 2.15-fold higher odds for reporting COVID-19 infection (AOR=2.15; 95% CI: 1.15–4.05). Compliance of social distancing behaviors were the lowest for current dual users (AOR=0.58; 95% CI: 0.41–0.83) and exclusive cigarette users (AOR=0.72; 95% CI: 0.63–0.92).

### Conclusion

Findings highlight dual users' higher prevalence of having COVID-19 symptoms, infection and in-compliance of social distancing. Self-reported infection was associated with dual product use; dual and exclusive cigarette users were linked to poor adherence to social distancing behaviors. Smoking cessation support among these populations should be reinforced as preventive measures to tackle the pandemic.

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## Tobacco industry tactics against tobacco flavor bans in Europe with a focus on the UK and Poland

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Pre-Conference Event - 10 June 2021: ENSP Scientific Webinar 'Effects and Challenges in Enforcing Ban on Flavored Tobacco Products'.

Adding menthol flavor to cigarettes masks the negative sensations of smoking, raising smoking uptake and reducing quitting. Thus, it is not surprising that the tobacco industry and associates have attempted to prevent, delay and circumvent menthol and flavor bans globally.

### Objective

The objective of this presentation is to illustrate how this interference occurred pre and post the menthol ban which was part of the 2014 EU Tobacco Products Directive (TPD) legislation.

### Methods

The two European countries with highest menthol use pre ban are used as case studies. The main focus of the Poland case study is pre ban activity whereas the main focus of the UK case study is post ban activity.

### Results

The pre ban tobacco industry activity did impact the eventual legislation and we present recommendations to tighten the ban based on post ban tobacco industry activity.

### Conclusion

The recommendations include banning menthol as an ingredient and extending legislation to all tobacco products and accessories.

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## Menthol smokers' behavioral responses to the European Union ban on menthol: Findings from Wave 2 of the ITC Netherlands Survey with New Cohort

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Pre-Conference Event- 10 June 2021: ENSP Scientific Webinar "Effects and Challenges in Enforcing Ban on Flavoured Tobacco Products".

### Background

Menthol cigarettes threaten tobacco control efforts by increasing the palatability and attractiveness of smoking, which can facilitate initiation and sustain use. In May 2020, menthol was banned as a characterizing flavor in cigarettes and roll-your-own tobacco in the European Union (EU).

### Objective

The objective of this study was to examine behavioral responses to the EU menthol ban among adults in the Netherlands who reported smoking menthol cigarettes prior to the ban.

### Methods

Cross-sectional data came from the International Tobacco Control Policy Evaluation Project (ITC) Netherlands with New Cohort Wave 2 Survey conducted from September to November 2020 among a nationally representative sample of adult smokers and recent quitters (N=1,926) in the Netherlands. Respondents completed the survey using computer assisted web interviews (CAWI). Descriptive and bivariate analyses were conducted in STATA using weighted data.

### Results

14.2% (n=291) of respondents reported that they smoked menthol cigarettes before the menthol ban. After the ban, 10.2% of pre-ban menthol smokers quit smoking entirely and 20.8% reduced the amount they smoked. Three-quarters smoked non-menthol cigarettes (75.8%). Other product replacement behaviors included: smoking roll-your-own tobacco cigarettes with menthol filters (20.9%), using other menthol tobacco products such as cigars (9.5%), and using e-cigarettes (15.9%). One-third of respondents reported that they found a way to get menthol cigarettes (33.2%), while 18.9% reported that they did something else.

### Conclusion

Findings suggest that the EU menthol ban increased quitting and reduced consumption among pre-ban menthol smokers in the Netherlands four to six months after its implementation. However, a majority of menthol smokers responded to the ban by using non-menthol cigarettes and one-third found a way to get menthol cigarettes. Results highlight the need for strategies to increase cessation support and ensure policy compliance.

### Conflicts of Interest

G. T. Fong reports that he has been an expert witness/consultant for governments defending their country's policies/regulations in litigation.

### Funding

C. N. Kyriakos is funded by the Imperial College London President's PhD Scholarships. Additional support is provided to G. T. Fong by the Ontario Institute for Cancer Research and the Canadian Cancer Society O. Harold Warwick Prize. The ITC Netherlands Project has received funding support from: Longfonds (Lung Foundation Netherlands), Hartstichting (Netherlands Heart Foundation), KWF Kankerbestrijding (Dutch Cancer Society), Trombosetichting Nederland (Thrombosis Foundation), Diabetesfonds (Diabetes Fund), and the Canadian Institutes for Health Research Foundation Grant (FDN-148477).

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## The impact of Canada's menthol cigarette ban on quitting among menthol smokers and projections of impact in the European Union: Findings from the ITC Project

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Pre-conference Event - 10 June 2021: ENSP Scientific Webinar 'Effects and Challenges in Enforcing Ban on Flavored Tobacco



Products’.

### Background

Menthol in cigarettes has been long-recognized as an additive that reduces harshness and enhances appeal, which results in greater uptake by youth and lower rates of quitting by adult smokers. Despite the extensive evidence supporting banning menthol in cigarettes, only in recent years have countries done so. Canada was one of the first countries to ban menthol cigarettes in 2015–2017. The ITC Project recently published a pre-post evaluation of the impact of the menthol ban across provinces covering 83% of the Canadian population. The ITC evaluation study found that the Canadian menthol ban increased quit attempts (+9.7%) and quitting (+7.5%) among menthol smokers compared to non-menthol smokers, and reduced relapse among menthol smokers who had quit before the ban (-7.5%). Importantly, there was no significant increase in illicit purchasing. The EU banned menthol cigarettes in May 2020.

### Objective

To use the effect size of the Canadian menthol ban on increased quitting (+7.5%) to estimate the possible impact of the EU's menthol ban.

### Methods

The number of menthol smokers in each of the 28 EU Member States was obtained from the Eurobarometer 2017 Survey and multiplied by 7.5% to obtain the expected additional quitters due to the EU menthol ban.

### Results

From the 2017 Eurobarometer Survey, 7.7% of the 109 million smokers (8.4 million) were menthol smokers. If the impact of the EU menthol ban was equal to Canada's menthol ban, there would be additional 627661 quitters (95% CI: 550248–714945). The greatest number of additional quitters would be in the UK (123686), Poland (97469), France (73112), and Germany (67957).

### Conclusion

These projected estimates highlight the enormous potential of population-wide policies to significantly reduce smoking. The ITC Project is positioned to evaluate the actual impact of the EU menthol cigarette ban in Spain, The Netherlands, and England.

### Conflicts of Interest

G. T. Fong reports that he has been an expert witness/consultant for governments defending their country's policies/regulations in litigation.

### Funding

C. N. Kyriakos is funded by the Imperial College London President's PhD Scholarships. Additional support is provided to G. T. Fong by the Ontario Institute for Cancer Research and the Canadian Cancer Society O. Harold Warwick Prize. The ITC Netherlands Project has received funding support from: Longfonds (Lung Foundation Netherlands), Hartstichting (Netherlands Heart Foundation), KWF Kankerbestrijding (Dutch Cancer Society), Trombosetstichting Nederland (Thrombosis Foundation), Diabetesfonds (Diabetes Fund), and the Canadian Institutes for Health Research Foundation Grant (FDN-148477).

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**Health beliefs, smoking behaviors and attitudes towards the tobacco flavor ban among smokers**

## of menthol, other flavored and unflavored cigarettes: Findings from the EUREST-PLUS ITC Europe Surveys

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Pre-Conference Event - 10 June 2021: ENSP Scientific Webinar ‘Effects and Challenges in Enforcing Ban on Flavored Tobacco Products’.

### Background

Since May 2017, the tobacco flavor ban came into force in the European Union as an effect of the 2014 EU Tobacco Product Directive (TPD), however menthol cigarettes could be sold until May 2020. The tobacco control measure was aimed to change health beliefs and smoking behaviors of millions of menthol cigarette smokers.

### Objective

To assess patterns and changes in health beliefs, smoking behaviors and attitudes towards the tobacco flavor ban among smokers of menthol, other flavored and unflavored cigarettes.

### Methods

Social and behavioral patterns of smoking behaviors and cessation as well as health beliefs and attitudes towards the tobacco flavor ban were analyzed on the basis of cross-sectional dataset from the 2016 EUREST-PLUS ITC Europe Surveys (Wave 1) that have been conducted on a total sample of 10760 adult current smokers from eight European Union Member States (Germany, Greece, Hungary, Poland, Romania, Spain, England, and the Netherlands). The analysis of changes in health beliefs, prevalence of cigarette smoking by tobacco flavor and cessation behaviors following the implementation was based on longitudinal data from Wave 1 (2016; pre-TPD) and Wave 2 (2018; post-TPD) of the EUREST-PLUS ITC Europe Surveys from above eight EU countries (N=19691). All analyses were conducted

among smokers of menthol and other flavored cigarettes (or combined group) when compared with smokers of unflavored cigarettes. Cross-sectional data were analyzed in SPSS Complex Samples Package using univariate, bivariate and multivariate regression models adjusted for few selected confounding factors. Longitudinal analyses of health beliefs, smoking and cessation behaviors were based on descriptive statistics and used the SAS-callable SUDAAN (Version 11.0.1).

### Results

When compared to smokers of unflavored cigarettes (Wave 1), menthol cigarette smokers were less likely to smoke daily and less addicted from tobacco when analyzed by the Heavy Smoking Index. Results of Wave 1 also show that health smokers of flavored cigarettes were also more likely to believe than unflavored cigarette smokers that menthol cigarettes are less harmful (32% vs 13%) and smoother (57% vs 20%). They are more convinced that smoking causes lung and throat cancer, lung cancer and heart attacks among non-smokers, bronchitis, impotence and asthma in children. The study findings also show that smokers of menthol cigarettes were much less likely (25%) to support the tobacco flavor ban than other cigarette smokers (48–50%), including smokers of other flavored cigarettes. 16% of menthol cigarette smokers and 10% of other flavored cigarette smokers intended to quit smoking after the flavor ban enforcement although quit intention rates varied substantially between countries. Furthermore, 27% said they will find a way to get menthol tobacco product banned. After the tobacco flavor ban enactment, significant but small decline in the prevalence of menthol and other flavored cigarette use between survey waves has been found in the pooled sample of all countries. This decline was primarily driven by flavor smoker's switching to unflavored tobacco (23% among menthol and 62% among other flavored cigarette smokers), rather than quitting smoking (14% and 9%, respectively). Almost 52% of menthol and 11% of other flavored cigarette smokers continued to smoke their flavored cigarette brands. It could be partly caused by positive changes in health beliefs of flavored cigarette smokers between 1st and 2nd wave of the survey, for example in the increase of smokers of flavored cigarettes who believe that smoking causes mouth cancer, COPD, and blindness.

### Conclusion

Smokers of different cigarette flavors in Europe differ on smoking behaviors, cessation characteristics, health beliefs and their attitudes towards the tobacco flavor ban. The lower dependence of menthol cigarette smokers could lead to greater success rates if quit attempts are made, however cross-country differences in smoking behaviors, quitting intention and health beliefs could lead to the TPD ban on cigarette flavors having differential impact if not accompanied by implementing additional measures such as target-tailored smoking cessation support or public awareness campaigns.

### Conflicts of Interest

G. T. Fong has served as an expert witness on behalf of governments in litigation involving the tobacco industry. A. McNeil is a UK National Institute for Health Research (NIHR) Senior Investigator. The views expressed in this article are those of the author and not necessarily those of the NIHR, or the UK Department of Health and Social Care.

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### Smokers' support for the ban on sale of slim cigarettes

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### Background

Tobacco use kills around 0.7 million people annually in the European Union (EU). Within these countries, a big number of smokers consumes cigarettes with specific characteristics (i.e. slim or flavored cigarettes). Inclusion of the slim cigarettes ban during the last revision of the EU Tobacco Products Directive (TPD) was broadly discussed but, unfortunately, was not finally included in the law.

### Objective

This study aims to examine smokers' support in six EU countries for the ban on sale of slim cigarettes.

### Methods

The research analysis includes cross-sectional data on attitudes of adult smokers (n=5592) from the second wave of the EUREST-PLUS ITC Europe Surveys (ITC 6E). The survey wave was conducted in 2018 in Germany, Greece, Hungary, Poland, Romania and Spain. Descriptive statistics and logistic regression analysis (with the use of SAS-callable SUDAAN Version 11.0.3) were used for estimating the smokers' support for the slims ban by sociodemographic characteristics, smoking behaviors and beliefs on slim cigarettes harm and for examining specific factors associated with the support.

### Results

Support for a slims ban substantially varied across analyzed countries, being the lowest in Greece (18.0%; 95% CI: 13.7–23.3) and the highest in Romania (33.8%; 95% CI: 29.2–38.8). Female smokers and all smokers with a moderate income, daily and menthol smokers, those not planning to quit smoking as well as smokers believing that slims are less harmful than regular cigarettes, were less likely to support the slims ban.

### Conclusion

This study reports that support for the ban on sale of slim cigarettes is at a low level in analyzed countries. It can result both from characteristics of smoking behaviors, including cessation plans, and from misperceptions of smokers on the harmfulness of slim cigarettes. There is an urgent need for additional research on the slim cigarettes harm and for population-based and target-tailored public awareness campaigns addressed to slim cigarette smokers.

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### For a tobacco-free Slovenia 2040: With support of NGOs

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Slovenia wants to reduce the number of chronic non-communicable diseases by a third by 2025, and to become a tobacco-free country by 2040. That means that by that time, less than 5% of adults will smoke, and pregnant women and young people will generally refuse to smoke.

The strategy was placed for public discussion in the summer of 2019 and is currently waiting for approval in Slovenian National Assembly.

In Slovenia, about one in four adults still smokes. Individuals

usually start smoking as children, adolescents or, less frequently, as young adults under the age of 25 years. It is rare to start smoking after the age of 25 years.

Source: Strategy FOR A TOBACCO-FREE SLOVENIA 2021-2040, summer 2019

<https://www.gov.si/drzavni-organi/ministrstva/ministrstvo-za-zdravje>

The strategy optimistically predicts that Slovenia will be a tobacco-free society by 2040 - meaning that by that time, less than 5% of the population over the age of 15 will use tobacco products.

By 2030, the number of smokers is expected to fall from 24.2% (2014) to 15% of the adult population, and the share of those who are daily smokers is expected to fall from just under 19% (2014) to 12% over the same period.

The strategy also aims to more than halve the number of 11-year-olds who have ever tried smoking by 2030 (from 2.2% in 2018 to less than 1% in 2030), and to halve the number of 13-year-olds who use tobacco (from 10.4% in 2014 to less than 5% in 2030).  
<https://www.gov.si/assets/ministrstva/MZ/DOKUMENTI/Javne-objave/Javne-razprave/Strategija-za-zmanjsevanje-posledic-rabe-tobaka-Za-Slovenijo-brez-tobaka-20192030-predlog-za-javno-razpravo.docx>

In August 2019, the Slovenian Ministry of Health appointed Coordination Group for Tobacco and Related Products. The group consists of 16 delegates, including 2 from non-governmental organizations, one of which is the Slovenian Coalition for Public Health, Environment and Tobacco Control.

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### 5 years' experience of the Quitline in Hungary: Where do we go next?

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### Background

Quitting smoking greatly reduces the risk of developing smoking-related diseases. During the last ten years, Hungary has strengthened its comprehensive tobacco control effort, and the anti-smoking measures have decreased the prevalence of smoking (2009: 31.4% to 2019: 27.3%). The Quitline was established in 2012, and since 2015 the National Koranyi Institute of Pulmonology National Methodology Centre for Smoking Cessation Support championed this service.

### Objective

To assess the effectiveness of the Quitline and identify strategies for further development of the original World Health Organization (WHO) program along individual preferences.

### Results

During 2015–2020, the Quitline conducted 12159 calls with around 4000 clients with whom a counseling process took place, and an additional 803 relatives who were interested in aiding smokers' cessation. Nearly half of the Centre's clients registered by telephone, and the rest were referred as patients. Common counseling topics were the improvement and maintenance of motivation and an overview of personal reasons (47%), overall reduction of smoking (35%), and problem solving and planning to cope with highly stressful situations (27%). In 2020, both the



interest to quit and quit success rate declined significantly. Quit rate declined to 6.3% from 17.9% (the average of previous years).

### Conclusion

The Quitline allows to contact hard-to-reach groups of people and can provide tailored support in their fight to quit smoking. The significant decrease in quit rate in 2020 may be due to pandemic anxiety and maladaptive stress management. We are adapting to new circumstances to improve the help and motivation we can offer.

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### Illicit trade of cigarettes and HTPs in Ukraine

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This study investigates the volume of illicit tobacco trade in Ukraine and focuses on traditional cigarettes and heated tobacco products. Traditionally, Ukraine is the leading source for illicit cigarettes trafficked into the European Union (EU) market. In 2018, the illicit outflow from Ukraine to the EU was estimated at more than 4 billion cigarettes. In 2017, the Parliament of Ukraine approved the so-called '7-year plan' which affected excise taxation by the one-time increasing of the specific excise tax rate for cigarettes in 2018, followed by a gradual 20% increase every year from 2019 to 2025. Moreover, starting from 1 January 2021, the excise tax system for tobacco products included new taxation categories for heated tobacco units (HTU). These reforms have shifted the public discussion on the illicit trade from outflows to the EU to counterfeit, so-called 'duty-free' production and inflows from the countries which have lower tobacco taxes. To evaluate the share of illicit tobacco trade, the survey of tobacco consumers was conducted in April 2021. Preliminary results show that the illicit market of manufactured cigarettes is 15.4% of sales, while in the case of heated tobacco products it is approximately 3.5%.

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### Trends in cigarette affordability and taxation in nine Balkan countries

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### Background

Smoking prevalence is high in many Balkan countries (Serbia=40.9%; Greece=39.6%; Bulgaria 39.5%, Bosnia and Herzegovina=38.7%; Croatia 36.5%, etc.). Tobacco taxation

plays an important role in both decreasing tobacco consumption and increasing quitting rates, especially among youth. The World Health Organization (WHO) considers a total tax of 75% of the retail price to be best practice.

### Objective

This work aimed to examine trends in cigarette prices, affordability, and taxation from 2008 to 2018 in nine Balkan countries.

### Methods

Data from the latest (2019) available WHO report on the global tobacco epidemic for nine Balkan countries (Albania, Bosnia and Herzegovina-BiH, Bulgaria, Croatia, Greece, Montenegro, Romania, Serbia, and North Macedonia) were examined. Prices of a 20-pack of cigarettes of the most sold brand are in US\$. Affordability was measured as percentage of GDP per capita required to purchase 100 packs. Total tax is presented as a percentage of the total retail price of a pack.

### Results

Cigarettes were most affordable in North Macedonia (2.55%) and Croatia (2.69%) and least affordable in BiH (5.85%). Except for Romania, Bulgaria, and North Macedonia (no change), in all other countries, cigarettes were less affordable in 2018 compared to 2008. The price of a 20 cigarettes pack of the cheapest cigarette brand ranged from 1.43 US\$ in North Macedonia to 4.63 US\$ in Greece. Similar discrepancies were found in the most sold brand of cigarettes (1.50 dollars in North Macedonia and 5.40 dollars in Greece). From 2008 to 2018, total tax increased from below to above 75% in BiH, Croatia, Greece, Montenegro, North Macedonia, and Serbia, while remained above 75% in Bulgaria. Total tax increased in Albania (50% to 67%) but slightly decreased in Romania (72% to 69%).

### Conclusion

There is heterogeneity in taxation between the studied Balkan countries. While cigarette taxation rates reached WHO best practices in all but two countries, improvement of tobacco taxation in order to reduce affordability of cigarettes should be a priority for these countries where smoking prevalence remains high.

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### Revision of policies on tobacco and other nicotine-containing products, smoking cessation in the Russian Federation and the Eurasian Economic Union

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### Background

The tobacco and other nicotine-containing products' (TNCP) market and legal regulation, and State guarantees on smoking cessation, undergo changes in the Russian Federation and the supranational Eurasian Economic Union (EAEU).

### Objective

To review recent amendments in regulation of TNCP and



smoking cessation, to provide recommendations for public health protection.

#### Methods

Review of recent amendments of legislation of the Russian Federation and the EAEU, including the Law 'On protection of health of citizens from impact of ambient tobacco smoke and the consequences of consumption of tobacco', the EAEU Technical regulation on tobacco products; the 'Concept for the implementation of the State policy to counteract the consumption of tobacco and other nicotine-containing products in the Russian Federation for the period up to 2035 and the future perspective', Tax Code; the Code of Administrative Offences, the Law on Advertising, other legal documents of the Federal and regional governments and ministries, and available comments.

#### Results

The Government of the Russian Federation has officially adopted a single approach to regulation of TNCP. However, recent amendments of legislation and legal initiatives of supranational EAEU suggest that tobacco industry continues its efforts to secure special regulatory regime for novel products, based on false statements on risk reduction. For example, heated tobacco is currently regulated legally as nicotine-containing product, but not as tobacco in Russia. State guarantees on tobacco cessation, awaiting implementation since adoption in 2013, have been revised as well.

#### Conclusion

To protect public health, it is important to promote a large-scale smoking cessation program, funded by the state, to reduce the number of TNCP dependent individuals. Direct foreign investment, tax privileges to TNCP industry should be eliminated. Public health, healthcare and consumer protection professionals should stop cooperating with tobacco industry supported organizations. EAEU should consider joining WHO FCTC to benefit health and prevent tobacco industry interference.

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### Raising awareness is not overrated

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#### Background

E-cigarettes are commonly presented as socially acceptable, safer alternatives for smoking and devices for smoking cessation, however the long-term effects of the products are still unknown. Several attempts at educating the public about the concerns of these devices have over the course of time been deemed futile and redundant.

#### Objective

This study examines the effectiveness of awareness programs in a small group of adolescent students.

#### Methods

This study collected the response of a group of teenage students to information about the use of e-cigarettes. The students were given a two-part questionnaire and were required to fill it in before and after an 8-minute seminar on e-cigarettes.

#### Results

Before the seminar, 15.38%, 57.69% and 26.9% chose open, not open, and maybe (in openness to smoking), respectively, 38.46%,

34.6% and 26.9% chose safer, same and not safer, respectively, and 19.23% and 65.38% chose yes and no for cessation or not, respectively. After the seminar, 7.69% and 92.3% chose open and close, respectively, and 7.69% and 92.3% chose safer and not safer, respectively. They all at each point had the option to include other answers.

#### Conclusion

As predicted, there was higher percentage of students who believed e-cigarettes are safer alternatives. This drastically changed after the seminar and the change in interest in e-cigarettes post seminar is quite notable. The intentional small number of students in this survey emphasizes the need for continuous awareness programs especially for such young age groups.

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### Symposium: Tobacco industry interference in Europe

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#### Background

The tobacco industry uses various tactics to prevent and delay regulation. The Tobacco Industry Interference Index is a report on how countries are implementing the WHO Framework Convention on Tobacco Control (FCTC) Article 5.3 guidelines. Art. 5.3 and its guidelines provide governments with ways to protect their policymaking against tobacco industry interference.

#### Objective

The objective of the Index is to expose tobacco industry interference in policymaking in countries and to give recommendations on how governments can improve their safeguards against the industry.

#### Methods

In-country researchers fill in a questionnaire with 20 questions based on Art. 5.3 Guidelines. A scoring system is applied to make an assessment.

#### Results

Country reports are used for public awareness raising and advocacy within each country. A European report presents case stories from countries. The scores of each country are compared with other countries to develop a ranking.

#### Conclusion

Progress of the implementation of Art. 5.3 varies widely around the globe and in Europe. More awareness raising and exchange about best practice is necessary.

#### Symposia Presentations

1. European Regional Report: Overview and examples from the European region (speaker: Laura Graen);
2. The EU Tobacco Industry Interference Index (speaker: Irina Kubinschi);
3. One of the worst ranked countries in Europe (speaker: tba); and
4. One of the best ranked countries in Europe (speaker: tba).

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### Do the subsequent waves of the pandemic scare Polish smokers the same?

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### Background

According to the data from research, published during the epidemic, smokers are at higher risk of developing severe disease and death due to COVID-19. Data suggested as well bigger interest of smokers in quitting smoking due to this information.

### Objective

To analyze whether the sustained pandemic keeps a motivation in smokers to quit attempts.

### Methods

Data were collected by counsellors from the Polish Quitline. Callers answered questions on how the pandemic influenced their decision about quitting. Data were collected from April 2020 to April 2021 and have been divided into three sections reflecting the three waves of pandemic:

15 April to 30 May 2020 – 453 questionnaires;

15 September 2020 to 17 January 2021 – 612 questionnaires;

19 March to 14 April 2021 – 160 questionnaires.

The data were analyzed using Microsoft Excel 2010.

### Results

During the first wave of the pandemic, over 48% of surveyed callers declared that their decision to quit smoking was influenced by the threat of coronavirus. Almost 6% admitted that they had not planned to quit smoking earlier, and 42.5% of the respondents said that the epidemic situation accelerated their decision.

During the second wave, we have noticed a slight decrease in motivation driven by COVID-19. In that time the threat of COVID-19 prompted 42.5% of respondents to quit smoking. Just over 40.5% had already planned to quit smoking, and only less than 2% had made the decision because they were afraid of the coronavirus.

During the third wave we have observed that the epidemic threat had an impact on the decision to quit smoking in 30% of respondents. All of them declared that the epidemic only accelerated their decision.

### Conclusion

The results of the survey showing that at the beginning of the pandemic, smokers realized that smoking increased their risks. The willingness to quit, influenced by fear of SARS-CoV-2, was declared by people who had already planned quitting and smokers who had not considered quitting before; this positive effect decreasing with successive waves of the epidemic. The fear of COVID-19 did not affect unmotivated smokers and was less likely to accelerate the decision to quit in those who wished to quit. The beginning of the pandemic and the related threat was an important moment in which the tendency to change health behavior, including quitting smoking, increased. It seems that there has been a habituation effect over time. If we want to maintain a high motivation to quit smoking, we need to diversify and strengthen messages and methods of reaching smokers.

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## Changes in smoking behavior due to the COVID-19 pandemic in Spain

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### Background

Confinement and other measures to address the COVID-19 pandemic have affected health-related behaviors, such as smoking, through the 3 mechanisms postulated by the COM-B model of behavior change: capability, opportunity, and motivation to smoke or to quit.

### Objective

To review the main published data on the impact of the COVID-19 pandemic on smoking behavior in Spain.

### Methods

We summarize data from studies conducted in Spain analyzing the impact of COVID-19 on tobacco use – selected in the framework of an ongoing systematic review or published in reports available on the internet.

### Results

Three articles based on convenience sample surveys show heterogeneous results about the percentages of smokers who increased, decreased or quit smoking during the pandemic.

From a random sample of telephone users, the OEDA-COVID survey showed that 2.6% of respondents quit tobacco use and 1.2% started smoking during confinement. Among those who were already smokers, 5.7% increased their use and 8.1% reduced or completely quit.

Health support for smoking cessation was significantly decreased in Spain as a result of the pandemic, with a 60% reduction in sales of varenicline and bupropion in November 2020 compared to February 2020.

According to official statistics, cigarette and cigar sales during 2020 in Spain accounted for 92% and 95% of the previous year's sales, respectively. In contrast, sales of rolling tobacco and pipe tobacco were 104% and 144%, respectively.

### Conclusion

The COVID-19 pandemic may have affected tobacco use in Spain through different mechanisms, such as changes in the perceived risk of smoking, the emergence of barriers to accessing effective help to quit. As a result, many smokers may have changed their smoking patterns, and it is possible that those who reduced their tobacco use outnumbered those who increased their use. There is an urgent need to re-establish help for smokers to quit.

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## Health or money, that's the dilemma: Opinions on increasing the taxation of tobacco products in a sample of university students from humanities and science faculties

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### Background

On the occasion of WNTD (World No Tobacco Day) 2021, the team of UNITAB (Unit of Tobaccology of Sapienza University of Rome) ran a survey among university students to determine their smoking habits and the grade of agreement to an increase in tobacco taxation.

## Methods

The survey is based on the structure of previous questionnaires that were used for WNTD 2014 and 2019, in order to compare the results. A google form was distributed among students. Analysis was focused on the question: 'Would you agree with a 1€ tax increase on every cigarette/tobacco pack with a prevention purpose?'. We also asked for possible motivations for the answer, divided then into three categories (ethics, economics, and health).

## Results

We received 157 answers to the tax increase question, with 101 motivations given. 69.4% of the sample agreed with the proposal (57% among smokers/former smokers and 81% among non-smokers). The motivations given in order of importance were: economical (52.6% among the respondents), followed by ethical issues (32% of the sample) and health-related motivations (14%).

## Conclusion

Data seem to show some grade of awareness of public health issues related to tobacco taxation among young people. However, this agreement rate appears to be in contrast to previous data collected in 2014 and 2019 campaigns, this could be due to the increased risk perception related to the COVID-19 pandemic or to the renewed importance of the health sector because of the pandemic emergency. The fact that the majority of students agreed with an increase in the tobacco tax proposal could be a good starting point to enforce public health intervention on this topic; however, it's important to underline that the economical motivation was the most common one, which could suggest that future sensibilization campaigns should concentrate more on the economic implications of smoking.

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## Mobile apps and artificial intelligence (AI) based tools for analysis, prediction and prevention of tobacco and alcohol relapse: A review of past and current market

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## Background

Substance addictions, for example from tobacco and alcohol, are very common at population level, generate the risk of massive mental and somatic problems and are difficult to be effectively treated. Addicts are not commonly and often asked, assessed, advised, assisted and followed up in addiction's diagnostics and treatment. A big problem in effective prevention and treatment of tobacco and alcohol addictions is very high risk of relapse and lack of effective tools that can continuously and objectively analyze, predict and prevent it. The progress of new technologies, including mobile apps and AI-based tools seem to close this gap on therapeutic tools market and may help therapists and patients in effective struggle with addiction relapse.

## Objective

To review the most common and comprehensive mobile applications, including tools based on AI algorithms, aimed to

strengthen treatment of tobacco and alcohol dependence through analyzing, predicting and preventing addiction relapse.

## Methods

Brief narrative review of scientific articles and research, development and commercial reports on the role of mobile applications in treatment of tobacco and alcohol dependence that have been published since 2000, with special focus on those using AI-algorithms for predicting addiction relapse. The search was made on Google Scholar, WorldWideScience, Medline, PubMed and on the Directory of the Open Access Journals as well as on websites of major international health organizations, mobile apps producers and pro-health start-ups.

## Results

New technologies meet and create new market, social, mental and health needs. Tobacco and alcohol industry accommodates its marketing strategy to new challenges. Past, current and potential tobacco and alcohol consumers are massively exposed to Internet and social media marketing and to the offer of alternative products (for example, vaping tobacco or alcohol), and new generations do not know how to effectively function without smartphone or access to social media. On the other side, mobile applications give a response to these needs and create an opportunity to combine all anti-tobacco or anti-alcohol interventions in one tool:

1. permanently collect, store and analyze broad spectrum of various data on tobacco and alcohol use and cessation habits;
2. screen tobacco and alcohol users due to the strength of addiction, cessation's intention and stage, the potential risk of tobacco or alcohol related disease, characteristics and progress in addiction treatment, etc.;
3. prevent tobacco and alcohol use, dependence and relapse through rising awareness on their harm, cost and access to educational and treatment tools and services as well as through short and long-time prediction of addiction relapse; and
4. make tobacco and alcohol treatment faster, more comprehensive, ergonomic and effective.

Unfortunately, there are still not many mobile apps that are dedicated for tobacco or alcohol consumers and only very few that use AI-algorithms for analysis, prediction and prevention of addiction relapse. Nevertheless, those based on digital therapeutic system equipped with machine learning or automated natural dialogue language seem to offer very high (over 70–80%) efficacy of relapse prediction and be characterized by high values in sensitivity and specificity tests.

## Conclusion

1. Mobile applications seem to be promising tools for strengthening prevention and treatment of tobacco and alcohol dependence;
2. They offer various functions that may substantially improve traditional treatment and make them much more effective and ergonomic;
3. Mobile apps may increase a proportion of tobacco and alcohol dependent patients who decide to be treated from substance abuse in cessation clinics;
4. With these tools, we may have a permanent access to bigger number of patients and broader spectrum of predictors what may have an impact on progress in research on prevention and treatment of tobacco and alcohol dependence;
5. AI-algorithms and new analytical methods may help in sufficient prediction of tobacco and alcohol relapse and creation

of chatbots (as virtual assistants) that could support therapists in their diagnostic and treatment activities; and

6. There is a urgent need for conducting further research and development projects and clinical trials that precisely report on safety and effectiveness of mobile apps based on AI-algorithms and chatbots in tobacco and alcohol treatment.

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### Tobacco cessation help in the dental healthcare setting of Turkey

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#### Background

Assisting patients with smoking cessation must be one of the most important primary care tasks of dentists. The benefits of discontinuing smoking behavior are well established both on oral health and systemic health.

#### Objective

We analyzed if dental patients received enough support during their previous dental visits.

#### Methods

An in-person cross-sectional survey was completed at the Department of Periodontology, Eskisehir Osmangazi University, Turkey, from March 2019 to September 2019 by patients (N=226). The survey analyzed patients' oral health, patient's smoking habit, previous attempts to quit smoking, and expectations from dentists regarding smoking cessation.

#### Results

68% of patients tried to quit previously, 38% of the patients were current smokers, 8% were former smokers. Smoking caused a negative effect on the periodontium, increasing the risk for incidence and progression of periodontitis. Patients' knowledge of the negative effects of smoking was high and most the patients expected to receive information from their dentists regarding cessation. However, the dentists asked about patients' smoking habits but did not help them to quit during dental visits.

#### Conclusion

Increased awareness of the roles of dentists in smoking cessation and prevention activities is needed in the dental healthcare system of Turkey.

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### The challenges in the deployment of a legal ban on tobacco advertisement on the example of Poland

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#### Background

In order to counteract addiction to the use of tobacco and related products and protect public health against its consequences, Polish law prohibits the advertisement and promotion of tobacco products, electronic cigarettes, refill containers, and props, as well as objects presenting these products, including at points of sale (POS).

#### Objective

To identify if the law banning the advertisement and promotion of tobacco and related products in POS is followed near the school settings.

#### Methods

A cross-sectional study based on an author-delivered questionnaire was carried out in 3 districts of Warsaw, Poland, in the area of high schools. The study focused on the availability and visibility of objects that may suggest advertising and promotion of tobacco products and electronic cigarettes.

#### Results

The analysis concerned 123 POS of which 112 were available to observe. The outdoor tobacco products advertisement was not found in the study, however, some form of advertisement or promotion inside the stores was observed in 83% of visited POS, and in 79.5% the law was not respected. The proportion of open POS that advertised indoors cigarettes, HTPs, or e-cigarettes was 22%, 20%, and 45% of which 36%, 50%, and 67.3% advertised flavored cigarettes, HTPs, or e-cigarettes. The most frequent form of tobacco advertisement in POS was branded objects such as change and counter mats visible in 6 out of 10 POS against binding prohibition.

#### Conclusion

According to the proven high exposure of Polish youth on tobacco advertisement and promotion in POS, to decrease tobacco consumption in this vulnerable group, to increasing control over the enforcement of law in terms of advertisement and exposure of tobacco products should be considered.

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### Quitting tobacco awareness social media campaign: Health promotion interventions should be focused on young females

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#### Background

'Commit to quit' is the theme of the WHO World No Tobacco Day (WNTD) 2021. On this day, the Tobaccology Unit of Sapienza University of Rome, Italy (UNITAB) organized an awareness



campaign for quitting tobacco smoking, in collaboration with the students' association 'Sapienza in Movimento'.

### Objective

Main aims were: to increase the number of students interested in quitting tobacco smoking, giving them the chance to be helped for free by UNITAB and to inform students through social media on the dangers of tobacco and new tobacco products (HTPs and e-cigarettes) and on how Big Tobacco targets young people to gain new clients.

### Methods

Instagram short videos, infographics on tobacco side effects and online quitting support services by WHO were shared. Contents were developed around the idea of 'did you know...?', using catchphrases to deliver little known information. We created a Google form survey to collect smoking habits of the sample.

### Results

We collected 157 answers to the questionnaire: 56.7% of the respondents were female. Half of the sample (49%) is a smoker/former smoker: 54.5% female, 45.5% male. The increase in female smokers could be a result of marketing strategy by Big Tobacco, using products (such as HTPs) more appealing in terms of fashion characteristics (pink colors or diamond parts). This assumption is reinforced by the results of HTPs use in the female sample, 59.1% versus 31.9% in males.

### Conclusion

These preliminary data show that women are becoming more influenced by the tobacco epidemic, turning upside down the classic duo man-smoker.

Our goal for the future is to collect more information about this growing trend, to raise awareness on the dangers of smoking and to contrast the Big Tobacco attempt of getting new clients targeting youngsters and particularly women on social media.

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## Create a profile to intervene and help, studying the demographic characteristics of smokers within a university population

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### Background

The 31st of May is World No Tobacco Day, the UNITAB (Unit of Tobaccology) of Sapienza University of Rome organizes health promotion initiatives every year to inform students on the dangers of smoking and to help them to quit. This year, a survey was run among students to gather information on smoking habits.

### Objective

Data were analyzed to determine the demographic profile of students who smoke in order to better define the young to target for future smoking cessation campaigns.

Quitting attempts were also investigated, to better understand the characteristics of those who tried to change their smoking habits, considering that these students of the sample might be more sensible to quitting interventions.

### Methods

A Google Form questionnaire was shared on Social Media during the week of the 31 May, collecting 157 answers. We asked each

participant for demographic data, course of study, age of smoking initiation, and number of quitting attempts.

### Results

The smoking initiation age was divided into 3 groups: 14.4% of the sample reported to have started at an age <15 years; 48.6% 15–17 years, and 36.8% at age ≥18 years.

Concerning the relationship between course of study attended and smoking status, 70.3% of humanities students reported to be smokers/former smokers versus only 45% of science students. At least one serious quitting attempt was reported by 74% of the smokers sample, with a mean of 2.38 ± 1.31 tries.

### Conclusion

It was possible to define a smoker profile more sensitive to the smoking cessation topic. All this information is important to have a precise target in the quitting interview held by our UNITAB team, after getting in touch with the students who ask for our help to quit smoking.

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## Use of Heated Tobacco Products (HTP) among university students: Misconceptions and motivations to start smoking

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### Background

The WHO promoted the World No Tobacco Day on 31 May: on that date, the Unit of Tobaccology (UNITAB) of Sapienza University of Rome carried out a sensibilization campaign on social media.

### Objective

One of the main aims of the campaign was to inform students about the Heated Tobacco Products (HTP) misconceptions, that is the underestimated dangers of their usage as well as the Tobacco Industry's strategies to make them more appealing to young people. Our aim was to estimate the HTP use among students, and the reasons of its consumption.

### Methods

We administered a questionnaire to the students who logged into UNITAB Instagram account. Questions were related to the kind of the device smoked, the reasons why they started to use HTP as well as the duration of their habit.

### Results

We gathered answers from 157 subjects: among these, 49% were smokers or former smokers, mostly of roll-your-own or normal cigarettes, while only 11% reported the use of e-cigarettes and 25% claimed to use HTP. As for the reasons they started to use HTP, 37% reported it could reduce the health damage, 26% for curiosity and 18.5% to reduce the number of smoked cigarettes. It is interesting to note that only 7.4% tried HTP to quit smoking.

### Conclusion

Data suggested that the use of HTP is mostly supported by the false beliefs of the minor impact on the health status. However, from a public health perspective, it is important to spread the message that these products are not any healthier than normal cigarettes. Moreover, considering that curiosity led more than 25% of the present students to smoke HTP, future campaigns should target

youth to fight the marketing strategies of Big Tobacco.

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## The case for requiring warnings directly on individual cigarettes

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This presentation will provide the rationale to require a health warning directly on cigarettes.

With on-cigarette warnings, smokers would be exposed to health messages all year, every day, and every time they smoke. The measure would decrease smoking at no cost to the government. On-cigarette warnings would denormalize the product, make cigarettes less attractive, prompt discussion, and help combat contraband by providing a legitimating marking for a particular country.

Many youth experiment with smoking by 'borrowing' a cigarette from a friend/sibling. Social smokers may borrow a cigarette. Children see cigarette butts in ashtrays at home. Smokers may bring a single cigarette without packaging when going outside to smoke. A warning on a cigarette is unavoidable, including when smokers have a cigarette in hand when smoking for 5 minutes. In many countries, especially in low- and middle-income countries, cigarettes are often available for sale individually, without packaging. These are all excellent communication opportunities. The content of an on-cigarette warning could include a variety of rotated health messages, pictograms, and messages such as a toll-free quitline number, 'Quit smoking save money', or a message about litter. On-cigarette warnings complement package warnings.

Extensive and continually increasing research from many countries provides compelling evidence of the effectiveness of the measure. Tobacco companies have long used branding and designs on the cigarette itself for promotional purposes - if tobacco companies can use the cigarette to promote smoking, health departments should be able to use the cigarette to discourage smoking.

On-cigarette warnings are included in FCTC Article 11 guidelines on packaging and labelling. No country has yet required the measure, though Canada has had a public consultation, and a bill has been introduced in the UK Parliament. Singapore has required a tax marking directly on cigarettes. Health warnings directly on cigarettes are inevitable and should be considered worldwide.

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## Patterns of e-cigarette, conventional cigarettes and dual use among Spanish adolescents: A national study

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### Background

In recent years, studies have highlighted the upward trend in e-cigarettes use among adolescents, as well as the ability to e-cigarette use to lead to subsequent conventional cigarette use.

### Objective

The study aim was two-fold:

1. To examine the progression from e-cigarettes use to conventional cigarette use.
2. To analyze the differences between dual users and only cigarette users, in a Spanish adolescent population.

### Methods

Data were obtained from the ESTUDES, a representative survey of addictive behaviors of Spanish adolescents aged 14-18, which comprise 38,010 adolescents (Mage=15.69; SD=1.188; 51.4% females).

### Results

Lifetime e-cigarette use increased the likelihood of subsequently conventional cigarette use by 1.581 times (95% CI: 1.485–1.683), and the odds of conventional cigarette use in the last month by 1.517 times (95% CI: 1.403–1.641). Further, dual users (i.e. e-cigarette and conventional cigarette use) compared to only cigarette smokers show greater severity in tobacco patterns, evidenced by a higher percentage of daily smokers (25.51% vs 12.14%), an earlier age of smoking onset (13.75 vs 14.67), a greater number of cigarettes per day (5.96 vs 4.97), and a lower risk perception of e-cigarettes (12.18% vs 18.66%) and cigarettes (91.30% vs 94.02%) ( $p<0.001$ ).

### Conclusion

These findings call for the need to conduct several changes in Spanish regulatory law, such as the regulation of advertising, marketing, taxes, and consumption permits, alongside the prohibition of sale to adolescents and the presence of flavors.

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## Knowledge, attitudes, and training in tobacco control among dental students in a public dental school in Catalonia

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### Background

Dental students are part of the future health labor force, and hence it is important to know their knowledge, attitudes and training in tobacco control to reduce tobacco-related health conditions.

### Objective

To assess dental students' knowledge, attitudes, and perception on training in tobacco control, including tobacco dependence and treatment.

### Methods

We conducted a cross-sectional study at a public dental school in Catalonia, 2020–2021. We employed a self-administered questionnaire in which questions consisted of true or false statements about clinical students' knowledge about tobacco-related issues. We assessed their attitudes towards smoking with a 5-point Likert scale categorized in two statements. We asked whether they received training in several tobacco-related topics. We estimated frequencies and percentages and calculated logistic regressions models adjusting for independent variables: sex, dental school year and smoking status.

### Results

162 (82.2%) dental students participated (75.9% women). In all, 26.7% were smokers (32.4% of men and 25% of women). Few respondents (34.5%) knew the test to assess smokers' nicotine dependence, and only 50.0% knew which are the effective smoking cessation therapies. Most participants (97.4%) had been taught about health risks of smoking, 52.9% about the reasons why people smoke and only 25.6% on how to provide smoking cessation aid. Almost 100% knew the association between tobacco use and oral cancer and periimplantitis. But only 75% knew the association between tobacco and tooth decay prevalence. In general, the students did not report differences in the training received. A significant difference was observed by sex in the training received on the risk of smoking (male: AOR=0.08; 95% CI: 0.01–0.54), in training related to passive/active smoking by sex (male: AOR=0.27; 95% CI: 0.09–0.81), tobacco consumption (never smoked: AOR=4.76; 95% CI: 1.41–16.07) and grade (5th grade: AOR=3.65; 95% CI: 1.15–11.62); and by grade relates to training in pharmacological treatments to quit smoking besides NRT (5th grade: AOR=2.43; 95% CI: 1.08–6.04).

### Conclusion

Dental students report lack of sufficient knowledge and training to assess and treat tobacco dependence. There are knowledge issues and clinical competences that should be deepened in their training as health professionals.

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## Changes in electronic cigarette use and label awareness among smokers before and after the European Tobacco Products Directive implementation in six European countries: Findings from the EUREST-PLUS ITC Europe Surveys

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### Background

Article 20 of the European Tobacco Product Directive (TPD), which went into effect in May 2016, regulates electronic cigarettes (e-cigarettes) in the European Union (EU).

### Objective

The aim of this study was to evaluate changes in e-cigarette use, design attributes of the products used and awareness of e-cigarette labelling and packaging among smokers from six EU Member States (MS) before and after TPD implementation.

### Methods

Data come from Wave 1 (2016, pre-TPD) and Wave 2 (2018, post-TPD) of the ITC Six European Country Survey among a sample of smokers and recent quitters who use e-cigarettes from six EU MS. Weighted logistic generalized estimating equations regression models were estimated to test the change in binary outcomes between Waves 1 and 2 using SAS-callable SUDAAN.

### Results

In 2018, current daily/weekly e-cigarette use among adult smokers was just over 2%, but this varied from the highest in Greece (4%) to lowest in Poland (1.2%). From Waves 1 to 2, there was a significant increase in respondents reporting noticing and reading health and product safety information on leaflets inside e-cigarette packaging (8.39–11.62%,  $p < 0.001$ ). There were no significant changes between waves of respondents reporting noticing or reading warning labels on e-cigarette packages/vials.

### Conclusion

E-cigarette use among smokers in these six EU countries is low. Although reported noticing and reading leaflets included in the packaging of e-cigarettes increased significantly from before to after the TPD, there was no significant change in reported noticing and reading of warning labels. Findings indicate the importance of continued monitoring of TPD provisions around e-cigarettes.

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## Confronting tobacco industry attacks against tobacco control advocates: Case studies and strategic responses; panel presentations followed by a discussion

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For years, multinational tobacco companies have positioned themselves as part of the solution to the global tobacco epidemic by promoting so-called reduced-risk products, promoting conflicted science, and branding themselves as concerned with health and



other positive values. The latest tactic has focused on directly attacking tobacco control organizations and its funders.

Over the last year, industry front groups and allies have mounted an aggressive campaign to oppose proven tobacco control policies and advocacy organizations. The Campaign for Tobacco-Free Kids and international partners have observed similarities among these tactics, including: messages claiming tobacco control is a sinister agenda pushed by “foreign” funders and key organizations; accusing the global tobacco control community of ignoring evidence about the effectiveness of “new” tobacco and nicotine products as an aid to quitting traditional cigarettes; and spokespeople directly linked to tobacco companies showing up repeatedly in the attacks. These efforts appear to fit a global pattern to discredit tobacco control organizations and individual champions and weaken the international tobacco control community.

Around the world, tobacco control advocates are not only succeeding in limiting the damage from these attacks, they are successfully moving the tobacco control agenda forward by employing strategic responses!

The seminar's objective (if in person) webinar (if online) is to illustrate strategies to monitor and strategically respond to these attacks. A panel of tobacco control advocates from Romania, Kazakhstan, and Ukraine will present their experiences with these attacks and how they dealt with them. Participants will also share their experiences and recommendations.

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### The importance of school intervention programmes in promoting health literacy and healthy lifestyles

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Adolescent school education is a crucial part of societal development, not only for a country's economy but primarily as a critical determinant of population health. Within this context, health literacy plays a vital role as it empowers adolescents to increase control over their health and seek further information and take responsible actions. Hence, health literacy is the self-perceived ability of an individual to access the needed information, understand the information, appraise and apply the knowledge into informed decision making. Indeed, adolescence is a developmental phase in planning health behaviours that will carry into later life. Amongst these health behaviours, tobacco use is a crucial determinant of future health status both due to its detrimental impact on human health and the fact that most adult smokers experiment with cigarettes and establish nicotine addiction during adolescence. Moreover, reproductive health literacy is also essential, especially among females, in which adolescent perceptions may influence reproductive health decisions and menstrual hygiene practices. Within Greece, due to youth experimentation with tobacco and the lack of information on effective reproductive health interventions in school settings, there is a need to assess the current status quo and subsequently design acceptable awareness creation and advocacy programs.

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### Change of smoking patterns in Serbia during Covid-19

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#### Introduction

Recent research shows that in many countries smokers who increased smoking during the COVID-19 pandemic outnumbered those who decreased it, in spite of higher exposure to COVID-19 severity and death. In this study we compared changes in smoking behavior in the initial and latter stage of pandemic, as well as factors associated with lower intensity of smoking.

#### Methods

We conducted two rounds of survey on representative samples, the first in the initial stage of pandemic (11-19 May 2020) and the second in the latter stage (04-11 June 2021). A multinomial logistic regression was run to estimate associations between smokers' characteristics and lower intensity of smoking. Opposite to the majority of studies which assess psychological factors affecting smoking, we focused on factual determinants of the change in smoking intensity.

#### Results

The share of smokers who claimed to smoke more increased significantly, from 22.7% in May 2020 to 35.2% in June 2021. The share of smokers who reported a decrease in smoking only slightly increased, from 11.7% to 13.3%. Persistence of the pandemic considerably increased intentions to cease smoking, from 26.3% to 40%. The higher education, income fall and occasional smoking increase odds to reduce smoking during the pandemic. Smokers who are older than 24 years, were not infected by COVID or consume more alcohol are less likely to curb their tobacco consumption.

#### Conclusions

This research highlights that the majority of smokers do not realize that they are particularly exposed to health risks related to COVID-19, thus smoking the same or more until they get COVID-19 infected. Therefore, tobacco control policy needs to be more proactive in creating public campaigns which demonstrate the severity of COVID-19 impact on smokers' health. Such campaigns should especially target those groups of smokers who are less able to curb their smoking intensity.

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### The COVID-19 pandemic and tobacco use among young population: A scoping review

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#### Introduction

The COVID-19 pandemic started in Wuhan in China and obligated countries worldwide to establish restricted measures and lockdowns. Universities started to operate on-line and exit from home was done only in a limited period time during the day.

These measures impacted mental health of young population and an increase was observed in depression, anxiety and stress prevalence. Usually, young students to overcome these stressing conditions increased use of alcohol, tobacco and other substances. This study aimed to assess the tobacco use among young population during the COVID-19 pandemic.

#### **Methods**

A scoping review was conducted for the period April 2020 till September 2021. PubMed database was searched by using as keyword COVID-19, tobacco use, restricted measures, young population, students and combination of them. Articles that had at least abstract in English were included in the analysis. Letter to the editors, articles written in other languages rather than English, systematic reviews and qualitative studies were excluded.

#### **Results**

In total 7 studies were included in analysis after the scoping review. Most of the studies were conducted in Europe (5 in total with 2 conducted France and 1 in Germany, 1 in Spain and 1 in Sweden) while the rest took place in USA (1) and Brazil (1). Most of the studies were cross sectional while cohort and retrospective studies were also included in the analysis. Only one study was focused on e-cigarettes use. Tobacco use differs in the study. Five studies reported a reduction, in one study prevalence increased while in one prevalence remained stable. E-cigarette prevalence decreased from 17.3% to 11.3% (p-value <0.001). Tobacco consumption decreased in France (18.5% vs. 14.8%) and Sweden (18.9% vs. 14.7) while a drop was reported on around 67.5% of students in Brazil.

#### **Conclusion**

The result of the current study reports that COVID-19 period had a significant impact on young population lifestyle. A decrease of tobacco use (e-cigarette use was also decreased) was observed in most of the studies. These results mainly differs from studies conducted in general population that reports an increase of tobacco consumption. It's of paramount significance that health authorities to exploit this chance to help young population to keep this health behavior change.

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