WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL

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Report on the cigarette ventilation meeting

Report by the Convention Secretariat

Purpose of the document

This report summarizes the findings of the face-to-face meeting on cigarette ventilation, convened by the Convention Secretariat in cooperation with the World Health Organization, following decision FCTC/COP8(21). The meeting took place 18–19 November 2019 in Bilthoven, Netherlands.

Action by the Conference of the Parties

The Conference of the Parties is invited to note the report.

Contribute to the SDGs, if applicable: Target 3.a and Goal 3.

Link to the workplan and budget item: None.

Additional financial implications if not included in the workplan and budget: None.

Related document(s): Report of the meeting to review the latest available scientific evidence on the impact of cigarette ventilation on cigarette use.

BACKGROUND

1. In decision FCTC/COP8(21), the Conference of the Parties (COP) requested the Convention Secretariat in cooperation with the World Health Organization (WHO) to hold a face-to-face meeting on cigarette ventilation with a wide range of relevant experts, Party representatives and observers accredited to the COP, who are independent of the tobacco industry, to gain an overview of the latest scientific evidence on the impact of cigarette ventilation on cigarette use, and to report back their findings to the Ninth Session of the COP.

2. The meeting was jointly organized by the Convention Secretariat and WHO and hosted by the Government of the Netherlands at the National Institute of Public Health and the Environment on 18–19 November 2019 in Bilthoven. There were 40 meeting participants and most of them participated in person: 23 experts from academia and public health and regulatory institutions, including the chairpersons of the WHO Study Group on Tobacco Product Regulation (TobReg) and the WHO Tobacco Laboratory Network; two experts nominated by nongovernmental organization observers; nine Party representatives, including those from the host country; three from WHO; and three from the Convention Secretariat.

3. Scientific evidence on the impact of cigarette ventilation on cigarette use was collected by several experts who produced background papers that were made available to participants before the meeting. A meeting report[1] was prepared by WHO in cooperation with the Convention Secretariat, and it was shared with the participants for comment and input. The final meeting report was used as a resource for the Convention Secretariat in developing this report.

4. Cigarette ventilation[2] is one of the design features of cigarettes. The *Partial guidelines for implementation of Articles 9 and 10 of the WHO FCTC*,[3] in its Appendix 2, provide a list of design features of cigarettes including ventilation, which is one of the important design characteristics used in ventilated tobacco products. Subsequently, the recommendations in section 3.3 of the Partial guidelines equally apply to cigarette ventilation.

5. During the meeting, participants reviewed the latest available scientific evidence on the impact of cigarette ventilation on cigarette use. This review could help regulators gain a better understanding of the use of ventilation in cigarettes and, subsequently, could help in strengthening the implementation of Articles 9 and 10 of the WHO Framework Convention on Tobacco Control (WHO FCTC), and the related Partial guidelines by the Parties to the Convention.

6. The meeting was structured to provide a platform for discussion of the following main topics related to cigarette ventilation: (1) introduction to cigarette ventilation and possible implications for public health; (2) exploration of cigarette ventilation mechanisms, market availability and prevalence of use; (3) potential effects of cigarette ventilation on human smoking topography and behaviour; (4) effects of cigarette filter ventilation on machine-measured yields; (5) effects of cigarette ventilation

[1] The summaries of the background papers and the final meeting report are published in the WHO FCTC implementation database (https://untobaccocontrol.org/impldb/article-9/, under "Resources": "Report of the meeting to review the latest available scientific evidence on the impact of cigarette ventilation on cigarette use").

[2] Types of ventilation in cigarettes: paper ventilation; filter ventilation; ventilation holes; and other design features relevant to and which may influence cigarette ventilation, such as paper porosity. Most of the impact on use is related to filter ventilation; therefore, this is used interchangeably with cigarette ventilation.

[3] https://www.who.int/fctc/treaty_instruments/guidelines_articles_9_10_2017_english.pdf?ua=1.

on product appeal and consumer perception/use; (6) exploration of potential health effects of filter ventilation on consumers; and (7) regulatory and policy considerations for ventilated cigarettes.

7. The main findings and key observations that emerged during the discussion of the above-mentioned topics are grouped and presented in three key areas, as follows: (a) cigarette ventilation and its possible health, behavioural and public health implications; (b) potential regulatory and policy actions; and (c) research and information gaps. Other important considerations discussed among experts and other participants, which were taken into account along with the key findings of each of the background papers, are enumerated in the table available in the final meeting report.

SUMMARY OF TECHNICAL DISCUSSIONS

Cigarette ventilation and its possible health, behavioural and public health implications

8. Ventilation holes around cigarette filters are one of many cigarette design features, and they are one of the product characteristics that contributes to the dilution of mainstream cigarette smoke, resulting in lower emissions of tar and nicotine as measured by machine-determined methods. Cigarette ventilation increases the appeal of the product by making the smoke milder, smoother and easier to inhale. This design feature appeals primarily to health-concerned smokers, women and younger smokers.

9. Decades after the introduction of ventilated cigarettes in the 1970s, the tobacco industry rarely publicly acknowledges the existence of cigarette ventilation. However, the proxies related to it, such as International Organization for Standardization (ISO) "tar" numbers and "Light/Mild" or "Smooth/Fine" descriptors, have continued to be largely exploited by the tobacco industry in promoting such cigarettes – until countries banned such descriptors. Filter ventilation is an inherently deceptive technology, and its promotion by the tobacco industry has been misleading consumers so that they may believe that ventilated cigarettes are less harmful than higher-yield or non-ventilated cigarettes. Packaging of these products (the use of various colours for the different strength of products, before the introduction of a standardized/plain packaging) could also have contributed to this misinformation.

10. Cigarette ventilation influences the burning process and chemical composition of cigarette smoke, and its impact on machine-measured emissions. A key consequence of cigarette ventilation is elasticity, leading to increased yields of harmful smoke constituents with higher elasticity of smoking, so that smokers smoke more (compensation) to obtain satisfying nicotine blood levels, irrespective of the stated smoking-machine yields. The uptake of higher amounts of smoke and toxicants, including tobacco-specific nitrosamines, and smoke-volatile organic compounds will ultimately reach deeper and more peripheral portions of the lungs, causing damage. Worsening of lung cancer risk and increased lung adenocarcinomas may be due, at least in part, to increased cigarette filter ventilation, which is a modifiable cigarette design feature of no public health benefit.

11. In summary, the experts that reviewed the available evidence at the meeting, categorized the following as substantiated by strong evidence:

- Cigarette ventilation promotes appeal and product preference, but does not reduce disease risk.

- Cigarette ventilation-related communication misleads consumers about the health risks of smoking and reduces consumer health-risk perception of smoking.

- The majority of consumers are either unaware of vents or their function, and may unknowingly block filter vents or otherwise increase smoking intensity. Subsequently, machine yields do not reflect human exposures.

- Cigarette ventilation changes combustion and dilutes cigarette smoke, which changes the physical and chemical profiles, and biological properties, as assessed in *in vitro* and *in vivo* toxicology tests of smoke (based on machine tests).

- Removal of pack descriptors is insufficient to eliminate the risk of misperceptions about using ventilated products.

- Filter ventilation enables product elasticity – compensation by smokers to obtain satisfying blood nicotine levels – which prevents reduction in actual exposures to nicotine and tar yields.

- The proportion of market share of ventilated cigarettes increases with the income levels of countries.

- Ventilation is not the only mechanism used by the tobacco industry to promote smoothness; others are sugars, menthol and physical parameters (physical dimensions, such as length and diameter [slim cigarettes], density, filter material and the presence of other components such as capsules).

Potential regulatory and policy actions

12. Taking into account the available facts and evidence on cigarette ventilation listed in paragraph 11, it might have been expected to see examples of policy and regulatory measures to address these issues. However, to date, countries have generally not taken regulatory steps to restrict or ban the use of ventilation, even though there are countries that have undertaken successful measures to reduce product attractiveness to children, primarily by regulating/banning flavours. In regulating emissions, setting a narrow range of allowed emissions may be an indirect way of restricting ventilation. Regulatory action to focus on preventing the appeal to and ease of initiation by youth, as well as consumer deception, would likely be supported by many countries.

13. Regulatory and policy measures could be targeted directly to cigarette ventilation, or indirectly to characteristics that influence cigarette ventilation. As a starting point, section 3.3 of the Partial guidelines could be used by Parties to require the tobacco industry to disclose the use of, or any changes to, cigarette ventilation. Furthermore, section 3.3.2.2 of the Partial guidelines under "Tobacco Products – Regulation in relation to attractiveness" recommends: "Consistent with 3.1.2.2, Parties should regulate all tobacco product design features that increase the attractiveness of tobacco products, in order to decrease the attractiveness of tobacco products", which could provide the basis to initiate regulatory action to restrict or ban cigarette ventilation.

14. Going one step further, it should be noted that although there is evidence to support the adoption of restricting or banning filter ventilation, several mechanisms would need to be considered and set up before such a measure can be recommended, in an effort to limit any potential unintended consequences (for example, in case of the perception that these versions are safer, this could increase initiation and discourage cessation, as well as lead to increased addiction to nicotine). From the regulatory and enforcement perspective, considering that there is no evidence to support the setting of different specific allowable ventilation rates (for example, prescribing a reduction of filter ventilation by X%), a ban

would be more practical to enforce and more feasible than implementing a complex approach with a specific rate of filter ventilation.

15. Further, even before considering a ban on cigarette ventilation, basic measures to reduce tobacco demand should be in place first, and should be seen as a prerequisite for any policy on cigarette ventilation, as recommended by TobReg. Communication would also be key to prevent the tobacco industry from using to its advantage any measure introduced on cigarette ventilation. Furthermore, communication to the public and decision-makers is a critical component and must be carefully crafted prior to introducing any such measure to prevent or minimize unintended consequences, as described above. This can be achieved through providing the rationale for any policy intervention, targeting appropriate groups with clear messages explaining the changes and what they could mean, and providing cessation support to these groups as needed, among others.

16. In policies that are directly linked to or relate to design features that are affected by cigarette ventilation, such as the current regulations that limit tar (T), nicotine (N) and carbon monoxide (CO) (collectively known as TNCO) yields must be addressed in countries that have these regulations if measures are to be introduced to restrict or ban cigarette ventilation. It must also be noted that other policies targeted at addressing the appeal of products, such as plain packaging and banning product descriptors, would enhance the potential impact of a restriction/ban of cigarette ventilation.

17. Countries that contemplate any regulation of cigarette ventilation should be prepared for – and should have the necessary capacity – to support such regulatory actions.

Research and information gaps

18. There were many research gaps identified during the meeting. While striving to gather more evidence on the impact of various aspects of cigarette ventilation on tobacco use, it was concluded that other research might be needed on the potential impact of any policies contemplated to restrict or ban cigarette ventilation. In addition, it would be useful to conduct more research to gather country-specific evidence. This, however, should not prevent those Parties that are willing to further regulate cigarette design features, including cigarette ventilation, to do so, utilizing the existing scientific evidence and taking into account the recommendations of the *Partial guidelines for implementation of Articles 9 and 10 of the WHO FCTC.*

19. Some of the research gaps identified during the meeting include the following:

- Understanding further the impact of cigarette ventilation on public health; this includes investigation, at the country level, of the impact of cigarettes that vary in ventilation on biomarkers of exposure.

- Studying consumer perception and responses, for example, through an assessment of the contribution of cigarette ventilation on consumer appeal; the study of consumer perceptions of ventilated and unventilated cigarettes, especially among adolescents; and of consumers' responses and behaviour toward major changes in cigarette design.

- Educating the public and preventing unintended consequences, for example, exploring effective communication strategies and approaches that have the potential for wider outreach.

- Gathering country data on brands and monitoring market trends, for example, through an assessment of the prevalence and extent of filter ventilation among cigarettes in all countries.

- Evaluating the effects of filter ventilation on smoke particle size distribution and the chemical profile of particles, and reporting by brand and sub-brand, as well as the mechanisms for reporting.

- Further investigating the influence of cigarette ventilation on cigarette use, including gathering evidence on uptake by youth of different ventilated products compared to adults.

- Exploring the possible effects of cigarette ventilation, independently from other design features, for example, from the use of additives.

- Evaluation of the health effects of cigarette ventilation, for example, studying the development of dependence symptoms and cessation attempts, as well as cancer and non-cancer outcomes associated with cigarette ventilation.

- Gaining further knowledge about industry manipulation of products, possible evasion of regulations and unintended consequences, for example, how manufacturers might subvert regulations that have a cross-influence on cigarette ventilation by manipulating other design features.

- Understanding the influence of filter ventilation on subgroups of consumers, especially children and women, including new epidemiological studies following the implementation of any new regulations that might be introduced in line with the recommendations above.

ACTION BY THE COP

20. The COP is invited to note this report.

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