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Impact of flavour restricting policies on non-cigarette tobacco products

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Flavours increasingly drive the use of emerging non-cigarette tobacco products (e-cigarettes, cigarillos, waterpipe and oral nicotine products). One study found over 15 000 different flavour descriptors being offered online in 2016–2017.¹ Commonly marketed flavours include tobacco, mint/menthol, fruits/candy (grapes, mango, melon, strawberry, apple, peach, berry), crème/butter, cinnamon, cheesecake, coffee/tea/chocolate, alcoholic beverages and non-identifiable ‘concept’ flavour varieties (eg, ‘Indian Summer’, ‘Cosmopolitan’).² Underlying these flavours are flavouring chemicals, some of which have known respiratory toxicity (eg, diacetyl, cinnamaldehyde).³

National and subnational jurisdictions around the world have various regulatory authorities to address flavoured tobacco products in a number of ways, ranging from packaging and labelling rules, to restricting the use of specific flavourings via product standards, and as far as banning characterising flavours in all or in certain classes of tobacco products. A recent global review of national policies restricting flavours in tobacco products⁴ revealed that 11 countries and the 28 European Union (EU) member states restrict flavours in some tobacco products. Similarities exist in the rationale for policy, with the protection of children and public health commonly cited. The most common tobacco products covered by existing flavour policies are cigarettes, with only the EU regulating a small portion of e-cigarette liquid flavours. The definition of flavour varies across policies restricting flavoured tobacco products. Some definitions are based on the presence of distinct or noticeable sensory effects (taste and aroma); others refer to additive agents or ingredients, without reference to a requirement for noticeable or distinct characteristics in taste or aroma.

In the USA, premarket applications for tobacco products, such as e-cigarettes, certain cigars and hookah products, currently on the market were due to the US Food and Drug Administration’s Center for Tobacco Products (FDA CTP) by 9 September 2020.⁵ Over the past 2 years, FDA CTP has been reviewing millions of premarket applications for e-cigarette products and weighing the evidence for population-level public health risks, taking into account evidence that non-tobacco flavours in these products have been associated with appeal and use, especially among youth and young adults. In December 2021, FDA CTP issued the first marketing denial orders for e-cigarettes after determining that the applications for about 55 000 flavoured e-cigarette products lacked sufficient evidence for a

benefit to adult smokers adequate to overcome the public health threat posed by empirical evidence of ‘alarming levels’ of youth use of these products.⁶ In May 2022, FDA CTP announced a proposed rule under consideration that would prohibit characterising non-tobacco flavours, such as fruit flavours, in all cigars and their components to reduce their appeal, particularly to youth and young adults.⁷

The goal of this special issue is to bring together timely multidisciplinary research findings on how restricting characterising flavours in non-cigarette tobacco products (including but not limited to e-cigarettes, cigarillos and little cigars) impacts product appeal (especially to youth), user behaviour (including initiation of tobacco use among non-users and transitions between tobacco products among current users), chemistry and toxicity of flavoured products and short/long-term health outcomes to inform tobacco product standards and policies. This special issue includes empirical papers that explore the effects of flavour restrictions on youth and adult current tobacco product users before and after flavour-related policies took effect either at state or national levels. Additionally, this issue includes timely empirical studies, reports and commentaries examining how tobacco product composition and marketing strategies have been modified by manufacturers, distributors and sellers in response to flavour restrictions.

A collection of studies included in this supplement examine optimal regulations pertaining to flavour policies that would provide balance between increasing effectiveness of intended consequences (to reduce use among youth)⁸ while minimising unintended consequences among adult users, including switching to combustible or alternative flavoured products,^{9–11} turning to illegal marketplaces¹² and use of mislabelled,¹³ adulterated^{14–16} or do-it-yourself (DIY) user-made products.¹⁷ As suggested by Gravely and colleagues,⁹ optimal policies restricting flavours in e-cigarettes would have the greatest positive impact on youth and never-smokers and would also have little negative impact on adults who use flavoured e-cigarettes as a method of quitting smoking. Studies included in this supplement suggest that a comprehensive approach that targets multiple aspects of the product, the user and the marketplace needs to be considered. One area to consider for more research is in product labelling, such as when plain packaging is used that has no flavour descriptors¹⁸ or colours that suggest the presence of flavours. As shown by several laboratory studies included in this supplement,^{13–17} prohibitions based solely on an additive or ingredient may be challenging to identify or enforce. Moreover,



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regulations specific to components that could be used to modify tobacco products by manufacturers^{13–16} or DIY products¹⁷ by users are an area that needs attention.

Studies in this supplement also suggest a need for comprehensive flavour policies covering multiple tobacco products, since availability of other classes/types of flavoured products may cause users to switch to other flavoured tobacco products that remain on market.^{9–11} Comprehensive regulation of all flavoured products would also avoid potential loopholes that may be exploited by industry.¹⁹ Finally, even the best regulation will not be effective if not enforced.⁸ The studies in this issue point to various areas, such as monitoring use patterns,^{8–10 20–22} interactions with local policies,²² product testing^{13 15–17} and industry monitoring,^{18 19} that are important to assemble an effective compliance enforcement plan.

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