# Hookah smoking – an overlooked aspect of tobacco control in Ireland

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**Abstract**

*Aim*

Ireland has made good progress tackling traditional tobacco products, but new products and tobacco-use behaviours are emerging that threaten the achievement of Tobacco-Free Ireland. This study describes geospatial and socio-demographic features of the hookah retail environment in Ireland and discusses public health implications.

*Methods*

Google Maps was searched to identify hookah retail outlets in Ireland. HealthAtlasIreland was used to map the outlet addresses and analyse the socio-demographic characteristics of areas with hookah retail outlets.

*Results*

Overall, 39 hookah retail outlets were identified; most (n = 32) were in Dublin. At the Electoral District (ED) level, the highest number of outlets was in North City, Dublin (n = 8). Compared to Ireland generally, EDs with hookah retail outlets had a higher proportion of younger people (aged under 35) with greater ethnic and cultural diversity.

*Conclusion*

This is the first characterisation of the hookah retail environment in Ireland. It confirms the need to ensure risk communication about tobacco product harm includes information on emerging issues, like hookah, and is tailored to the needs of populations at risk. The forthcoming Public Health

(Tobacco and Nicotine Inhaling Products) Bill is an opportunity to be more responsive to changing product and product use patterns in Ireland.

## Introduction

Hookah (waterpipe) smoking is perceived as a socially acceptable phenomenon worldwide, particularly among teens and young adults[1-2]. It is a single- or multi-stemmed smoking device used to heat or vaporise tobacco or tobacco-flavoured products, with other substances such as flavouring and other drugs like cannabis, hashish, and opioids occasionally added[1,3]. Hookah comes in two forms: classic compostable hookah and non-compostable electronic hookah, both of which use different ingredients and flavours, and have a variable amount of nicotine[2]. Hookah use is prevalent in the Middle East and North Africa; however, it is an emerging challenge in western countries where the focus has traditionally been on controlling the tobacco used in combustible cigarettes[1]. Various factors have contributed to its growing popularity among the younger generation, including its appealing flavours, availability, affordability, being socially acceptable, and being perceived as less harmful than conventional cigarette smoking[1-3]. Additionally, the growth of an underregulated café culture where hookah is served, along with the innovative marketing supporting the commercial interests of the tobacco industry, further contribute to the increase in hookah use [1,3-4]. Many of these factors follow the "playbook" of tactics used by the tobacco industry to drive the epidemic of smoking-related harm[5].

In Ireland, less attention has been paid to non-traditional tobacco products, like hookah. According to the 2022 Healthy Ireland Survey report, current smokers account for 18% of adults aged 15 and older, with 25- to 34-year-olds being the age group most likely to smoke; however, there is no available data on hookah use[6]. As Ireland becomes more demographically diverse and smoking inequalities widen, it is timely that this challenge be characterised to inform a public health response. This study aims to describe the geospatial and demographic features of the hookah retail environment in Ireland and determine its public health implications.

## Methods

A Google Maps search was conducted to identify hookah retail outlets in Ireland on October 15, 2022. The following hookah terms were used for Google Maps search: "Shisha" OR "Hookah" OR "Waterpipe" OR "Electric Hookah" OR "Electric Waterpipe". The types of hookah retail outlets were noted and categorised. The outlet addresses were mapped using Health Atlas Ireland to coordinate and then identify the associated County, Regional Health Area (RHA) and Electoral Division (ED). Descriptive statistics of the socio-demographic characteristics at the level of ED areas were presented based on the 2016 Census.

**Results**

*Distribution of hookah retails*

In total, 39 hookah retail outlets were identified in Ireland, and these are profiled in Table 1. Restaurants (n = 12, 30.8%) and bars/pubs (n = 14; 35.9%) made up two-thirds of the retail outlets. Only one-fifth (n = 8, 20.5%) of hookah retail outlets were tobacco shops. Most hookah retail outlets (n = 32, 82.1%) were concentrated in Dublin, while the remaining were scattered in other counties. Regional Health Areas A (n = 16, 41.0%) and B (n = 16, 41.0%) had the highest retail densities. At the ED level in Ireland, hookah retail outlets were dispersed over 21 different EDs. North City, Dublin, has the highest number of hookah retail outlets (n = 8, 20%), followed by Royal Exchange A, Dublin (n = 4, 10.3%), and Royal Exchange B, Dublin (n = 3, 8.0%).

| Table 1: Results of Google Maps search* of Hookah/Shisha retail outlets in Ireland (n = 39) | | |
|---|---|---|
| **Variable** | **n** | **%** |
| **Distribution by type of retail outlet** | | |
| Café | 5 | 12.8% |
| Restaurant | 12 | 30.8% |
| Bar/pub (includes sport bar and tea house) | 14 | 35.9% |
| Tobacco shop | 8 | 20.5% |
| **Distribution by county** | | |
| Dublin | 32 | 82.1% |
| Cork | 2 | 5.1% |
| Waterford | 2 | 5.1% |
| Limerick | 1 | 2.6% |
| Laois | 1 | 2.6% |
| Galway | 1 | 2.6% |
| **Distribution by Regional Health Area** | | |
| Area A | 16 | 41.0% |
| Area B | 16 | 41.0% |
| Area C | 3 | 7.7% |
| Area D | 2 | 5.1% |
| Area e | 1 | 2.6% |
| Area F | 1 | 2.6% |
| **Distribution by Electoral Division** | | |

| | | |
|---|---|---|
| North City, Dublin - 2075 | 8 | 20.5% |
| Royal Exchange A, Dublin - 2144 | 4 | 10.3% |
| Royal Exchange B, Dublin - 2145 | 3 | 7.7% |
| Wood Quay B, Dublin - 2162 | 2 | 5.1% |
| Rotunda B, Dublin – 2089 | 2 | 5.1% |
| Mountjoy A, Dublin - 2073 | 2 | 5.1% |
| Saint Kevin's, Dublin – 2146 | 2 | 5.2% |
| Blanchardstown-Coolmine, Dublin - 4010 | 2 | 5.1% |
| Park, Waterford – 24031 | 2 | 2.6% |
| Merchants Quay F, Dublin - 2124 | 1 | 5.1% |
| Merchants Quay C, Dublin - 2121 | 1 | 2.6% |
| Rathmines East B, Dublin - 2135 | 1 | 2.6% |
| Tallaght-Kingswood, Dublin - 3036 | 1 | 2.6% |
| Nuns Island, Galway – 26014 | 1 | 2.6% |
| Portarlington South, Laois - 8070 | 1 | 2.6% |
| Shannon A, Limerick – 20034 | 1 | 2.6% |
| St. Patrick's A , Cork– 17051 | 1 | 2.6% |
| Whitehall C, Dublin – 2092 | 1 | 2.6% |
| Shandon B, Cork – 17056 | 1 | 2.6% |
| Rotunda A, Dublin – 2088 | 1 | 2.6% |
| Mansion House B, Dublin - 2118 | 1 | 2.6% |

Google Maps search was done on 15/10/2022

Fig. 1 depicts the geospatial distribution of hookah retail outlets in Ireland and illustrates the concentration of outlets in Dublin County (n = 32, 82.1%).
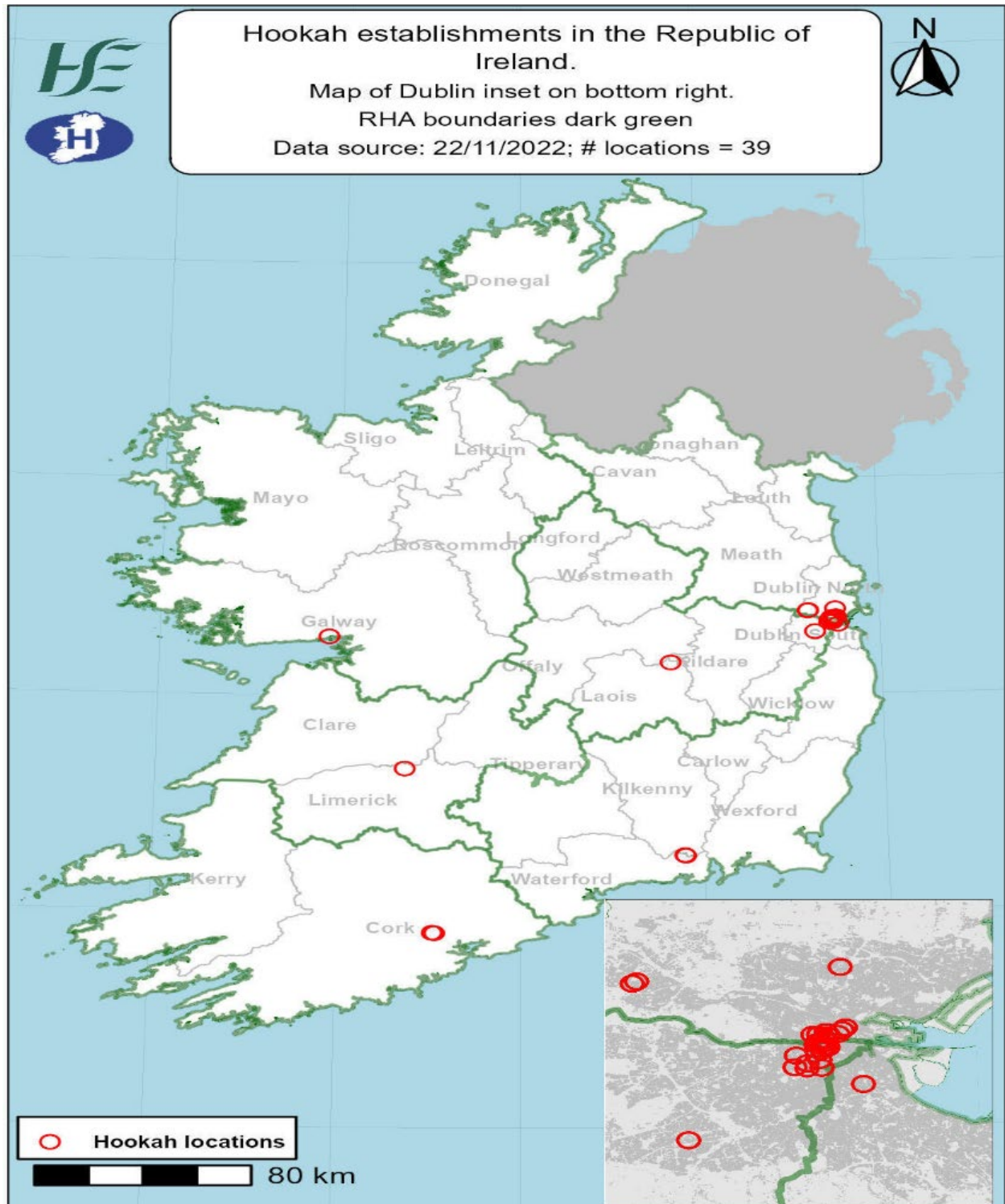
**Figure 1: Hookah establishments (n = 39) in the Republic of Ireland based on Google Maps Search**

*Sociodemographic characteristic*

The age distribution of the people at the EDs where hookah retail outlets were situated is shown in Figure 2. In comparison to the national level, most EDs with hookah retail establishments (n = 16) had a relatively young population, with higher-than-average proportions of the population younger than 35 years. In Mountjoy A, Dublin; Shannon A, Limerick; Rotunda, Dublin; and North City, Dublin, for example, nearly 60% of the population was under 35 years of age.



Figure 2: Age distribution at Electoral Division which had Hookah retail outlets, Census 2016
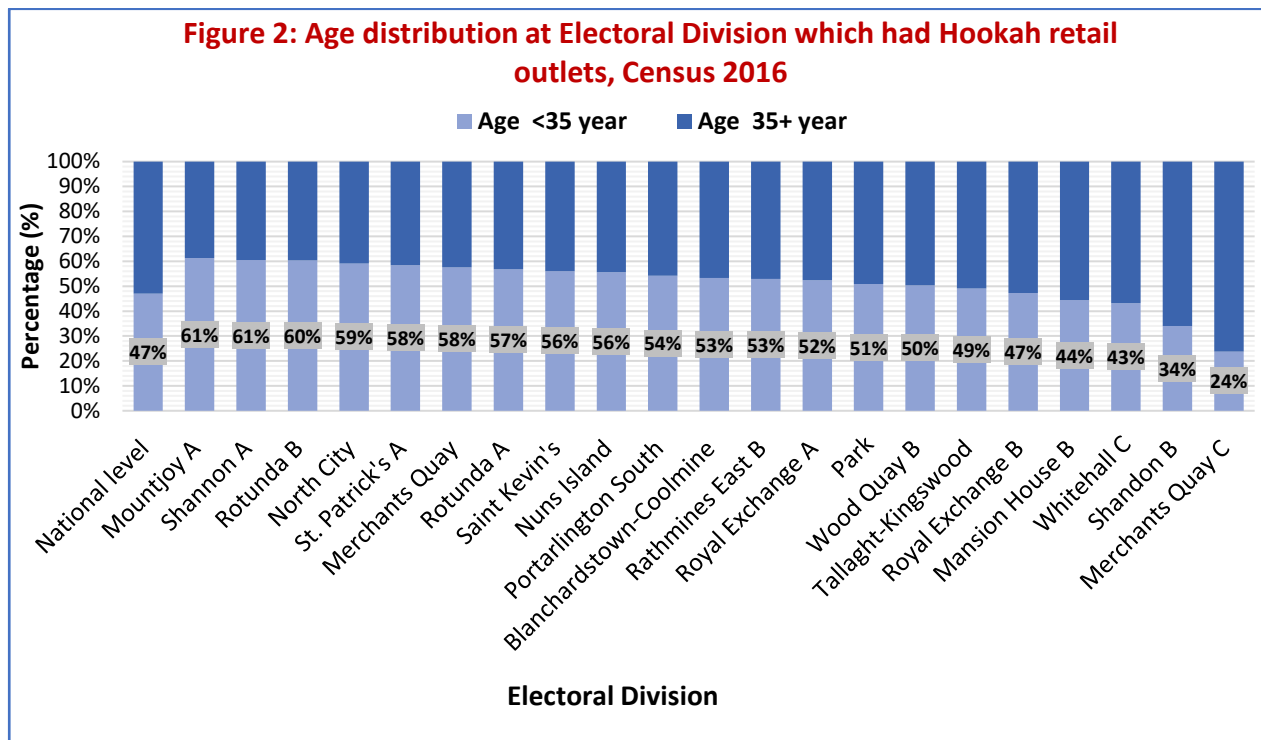
**Ethnic background**

Fig. 3 presents the ethnic and cultural structure of the population in the Electoral Divisions that had hookah retail outlets. At the national level, non-white Irish groups comprised one-fifth (19%) of the population. However, in almost all (n = 19) EDs where hookah retail outlets were located, people from backgrounds other than white Irish people were more prevalent than the national average.

Figure 3: Ethnic and cultural background at Electoral division level which had Hookah retail outlets, Census 2016
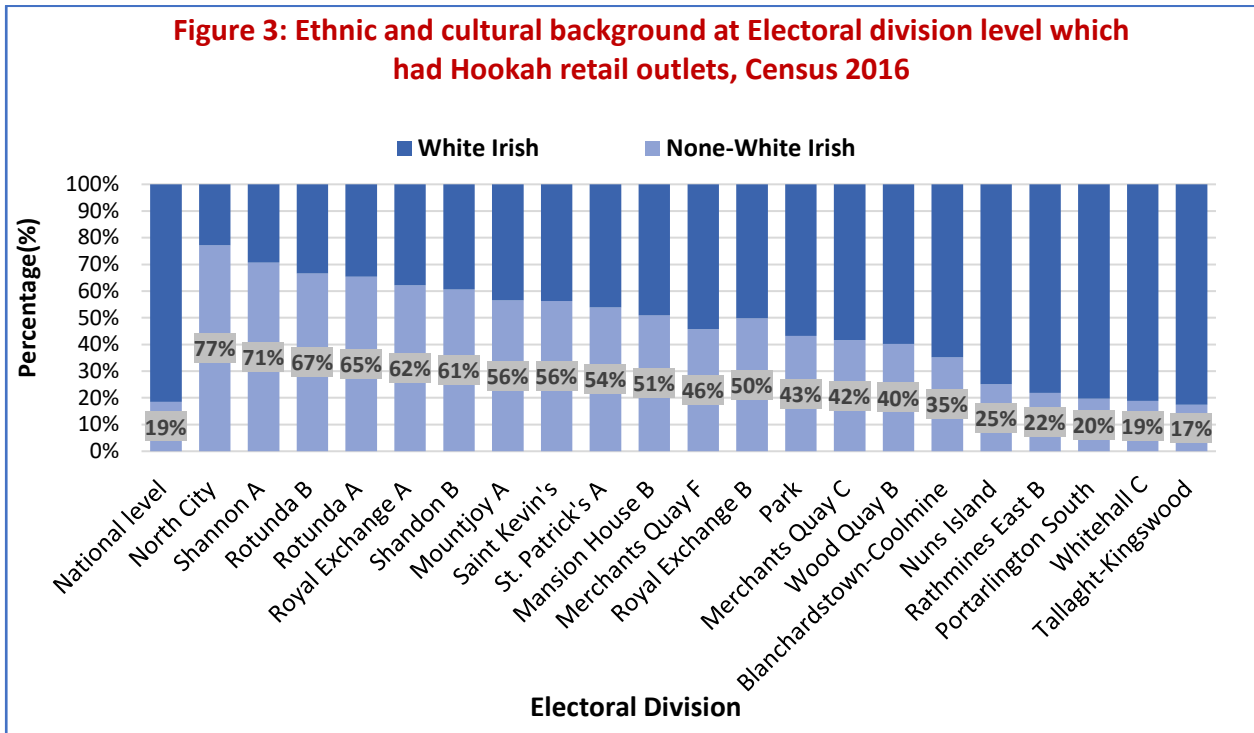
## Discussion

Tobacco use is a complex and changing global epidemic, and tobacco control efforts must remain vigilant to new threats. This is the first study to examine the hookah retail environment in Ireland. A total of 39 hookah retail outlets were found; most were bars, restaurants, and cafes, and were concentrated in Dublin, with retail concentrated in a small number of EDs within the city. The EDs with hookah retail outlets had distinct demographic features, with younger and more ethnically diverse populations than Ireland generally.

*The role of hookah retail environments in smoking and the importance of regulation*

Hookah retail was concentrated in Dublin County (82%). At the electoral division level, North City and Royal Exchange A have the highest proportions of hookah establishments. This is significant because the physical, economic, and social environment in which people live their lives powerfully shapes public health[7].  The supply of tobacco products at retail outlets drives demand, and there is evidence linking the more widespread availability of tobacco to increased smoking initiation and relapse after quitting attempts. For example, a systematic review examined the association between the density and proximity of tobacco product retail outlets and smoking outcomes. Across studies, it was found that higher densities were associated with higher smoking prevalence, increased tobacco use and smoking initiation, and poorer quitting outcomes[8]. Given the importance of the tobacco retail environment to product use behaviour, retail-level regulations are key to reducing smoking prevalence, beginning with the licencing of tobacco outlets[8]. According to recent

New Zealand research, strengthening tobacco retail regulation to reduce the number by 95% versus present numbers is central to the country's ambitious Smoke Free Aotearoa plans[9].

Under Ireland's current registration system, which requires retailers who want to sell tobacco products to apply to the Environmental Health Service and pay a one-time registration fee. Once registered, the retailer can sell at an unlimited number of retail locations for an indefinite period without having to re-register. An alternative, more robust, and modern licencing system has been proposed to replace the registration system for retailers of tobacco products through the Public Health (Tobacco and Nicotine Inhaling Products) Bill[10]. Under this system, each retail shop will require its own licence, which would need to be renewed annually. The licencing system will make it easier to enforce essential tobacco control laws, such as the prohibition on selling tobacco to minors or advertising at the point of sale. It also serves as a reminder to retailers and customers alike that tobacco and nicotine inhalation products are not ordinary products and thus call for extra regulation[10]. It is important that outlets selling all tobacco products, including hookah, which is different from combustible cigarettes and is predominantly sold through bars, restaurants, and cafes in Ireland, are addressed through licencing.

*Protecting vulnerable population groups*

Although the Healthy Ireland Surveys do not record the pattern of hookah use, this study points to the sociodemographic characteristics of the population in areas where hookah retail outlets are dispersed and helps inform the targeting and tailoring of actions to address the risk. The study found that younger age groups ( < 35 years old) are more prominent in EDs with hookah retails than in Ireland generally. According to the 2022 Healthy Ireland Survey,  the overall smoking prevalence nationally was highest among the age group of 25-34 years[6]; however, these data do not capture the type of tobacco product used. Given the role that the tobacco retail environment plays in initiating and continuing smoking and considering that hookah is commonly not perceived to be as harmful as traditional combustible cigarettes, this underscores the vulnerability of these local populations and the potential contribution of hookah retail outlets to an environment that normalises tobacco product use. The common addition of flavours to hookah is a particular risk for young people, given that the use of characterising flavours to distract from the harmful nature of the product has been a key tobacco industry tactic to sustain youth initiation of cigarette smoking[11-12].

The current study also found greater ethnic and cultural diversity in EDs where hookah retail outlets are located compared to Ireland generally. In countries, such as Middle Eastern nations, where hookah is a common type of tobacco product, use is more socially acceptable and associated with café culture, which is an important social gathering place[1,13]. With globalisation, an important feature in the continuing tobacco epidemic, people, social norms, and practices, as well as the influence of the tobacco industry, can move between countries to shape and sustain tobacco use

patterns[2]. For example, hookah smoking is the second most popular tobacco consumed among college students in the United States, after only cigarette smoking[11]. This underlines the need for Ireland's continuing engagement with coordinated global efforts to tackle the tobacco epidemic through the Framework Convention on Tobacco Control[14].

**Conclusions**

While this first study examining the hookah retail environment in Ireland makes an important contribution to tobacco control, it also has some limitations. The study may have excluded certain retail outlets because the search for hookah retail establishments was conducted using Google Maps; however, this is a likely application through which interested people would locate a hookah retail outlet in Ireland. While the sociodemographic profile of the people where hookah retail outlets are located was profiled, no inferences could be made about product-use behaviours in these areas. The study relied on Census 2016 data, which may not capture the current sociodemographic figures in these EDs.

Nevertheless, important public health implications arise from this study. There is evidence in this study that populations exposed to the hookah retail environment in Ireland are predominantly younger than the population of Ireland in general. The common addition of characterising flavours means hookah smoking may increase the risk of smoking initiation. Characterising flavours in cigarettes and roll-your-own tobacco is already prohibited in the EU and the USA; however, regulations for flavoured hookah products are suboptimal[15]. The gap that allows for flavourings to be added to tobacco when smoked through hookah needs to be addressed. Using any form of hookah is hazardous to health. Based on this study, risk communication from the HSE Tobacco-Free Ireland Programme has been reviewed and revised by the lead author to ensure that accessible information is available, underlining the risks of hookah smoking. Given the ethnic and cultural profile of EDs where hookah retail outlets are concentrated, there is an opportunity for local public health to lead on community engagement to enable local population groups to better understand and address the risk. Finally, given the global nature of the tobacco epidemic and the increasingly diverse population in Ireland, there is a need to review and ensure behavioural risk surveillance in Ireland is responsive to new and emerging threats.

In conclusion, as the country moves forward towards achieving the tobacco endgame, it is important that efforts are made to address other less prevalent tobacco products, like hookah. As highlighted, hookah has particular features that may make current tobacco control tactics less effective in tackling its use. Finally, this study underlines the need to ensure that the protection of children, young people, and vulnerable population groups remains at the centre of efforts to deliver a Tobacco-Free Ireland.

**Declaration of Conflict of Interests:**

None declared.

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