



Public Health  
England

# Waterpipe smoking (shisha) in England

## The public health challenge

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## Foreword

Tobacco use is likely to be the major preventable contributor to ill health and health inequalities in most if not all local authority areas. Although smoking cigarettes will make up the bulk of this, it is important to address other forms of tobacco use which are more common in certain communities.

Waterpipe smoking (shisha) is one such use. The populations where this is most commonly used are the same communities which are at higher risk of diseases such as heart attacks and stroke from other causes, such as genetic predisposition or diet. It is therefore important that local tobacco control strategies take this form of use into account.

Clearly any public health programme needs to be sensitive to local cultural context. However not to take action where there is a proven threat to health is to do a disservice to those who will lose loved ones to tobacco-related disease.

This guide is both informative and practical and will help local authorities take action. I am grateful to all those who have contributed, and to all those who will use this guide to improve and protect the health of their local population.

*Dr Andrew Furber, President, Association of Directors of Public Health*

## Executive Summary

Waterpipe smoking (shisha) is a way of inhaling smoke – usually tobacco smoke – which has existed for several hundred years and is a traditional practice in the Middle East and Southern Asia. In recent decades it has become more popular in western countries, particularly in young people. Waterpipe smoking creates smoke containing harmful chemicals, and the practice has been identified as a potential public health concern in the UK and elsewhere. Premises which sell shisha are required to comply with the full range of both tobacco and health and safety regulations, and the recent proliferation of ‘shisha cafés’ in the UK therefore also introduces regulatory challenges.

This document provides a summary of the current evidence of the health effects of waterpipe smoking, an overview of the prevalence of waterpipe smoking in Britain, two case studies of local authority approaches to addressing local public health and regulatory challenges, and suggested actions for Local Authorities (LAs) to consider in relation to waterpipe smoking.

The health effects of waterpipe smoking have received less research attention than cigarette smoking. However, the available evidence indicates that waterpipe smoking is associated with cancer, heart disease and lung disease. There have also been reports of increased risk of infectious disease, and the large amount of carbon monoxide created by the constant heating of tobacco by burning charcoal introduces the risk of carbon monoxide poisoning. Regular waterpipe tobacco smokers may report or display signs of addiction, and misperceptions about the potential health risks appear to be widespread. Overall, the existing evidence base underlines the need to minimise waterpipe use, particularly regular use.

Tobacco smoking remains the leading cause of preventable morbidity, mortality and health inequalities in the UK, and cigarette smoking is still the main contributor to this burden. National data indicate that current waterpipe smoking (up to once or twice per month) in the British general population is very low, at around 1%. Young adults are more likely to have tried waterpipe smoking than older adults, but current use remains low, at around 2% in 18-24 year olds. Waterpipe use is higher in black and minority ethnic groups; the prevalence of current use is close to 7% in Asian/Asian British populations. In young people, waterpipe use increases with age but is low in all age groups. Less than 1% of 11-15 year olds and less than 3% of 16-18 year olds report current use (at least once a month), and there has been no increasing trend in use in recent years. Despite a low prevalence of waterpipe use at the national level, additional data collected in specific communities’ highlight that waterpipe use is an issue of growing concern in certain areas. LAs should monitor waterpipe use and identify areas where waterpipe use is a threat to public health, and consider targeted interventions to raise awareness of the health risks, especially in young people and current waterpipe smokers.

Some LAs are experiencing regulatory challenges where a range of regulations are being breached including Smokefree legislation, age of sale, fire safety, health warnings, and tobacco product display. Waterpipe tobacco is also often imported illegally and sold without duty. Intervention by a wide range of stakeholders, including public health, environmental health, and trading standards is often required to achieve adequate enforcement.

A coordinated multi-agency approach to enforcement and prevention work in relation to waterpipe smoking is needed in some local areas. Where local action in relation to waterpipe smoking is taken, LAs should seek to identify its impact and share best practice with relevant stakeholders.

## Abbreviations

- BME – black and minority ethnic
- CO – carbon monoxide
- NO – nitric oxide
- PAH – polycyclic aromatic hydrocarbon
- TSNA – tobacco-specific nitrosamine
- VA - volatile aldehydes

# 1. Background

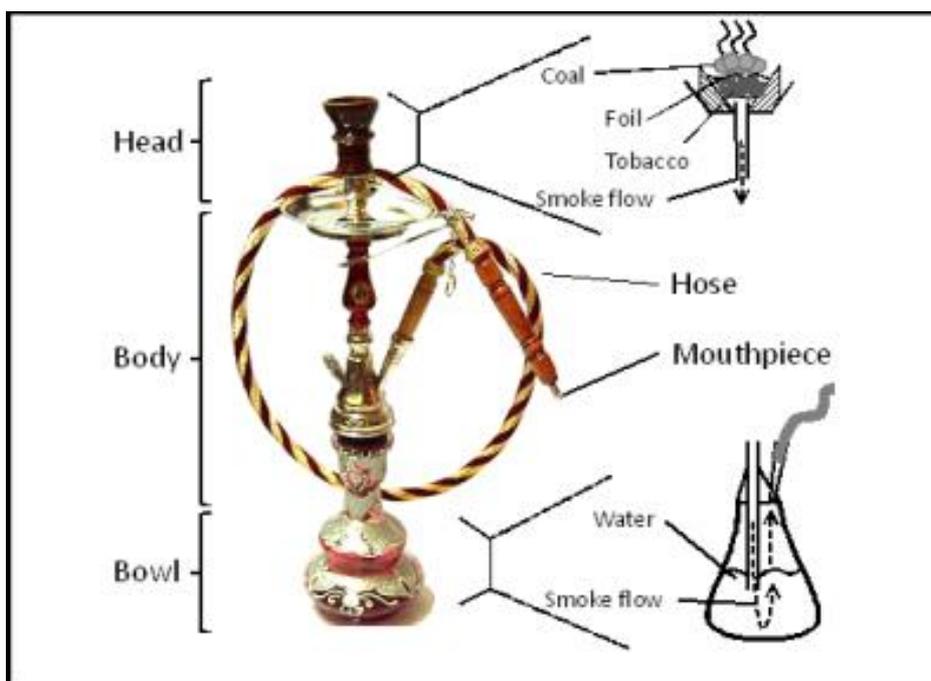
## History

Waterpipe smoking (commonly known in the UK as shisha, and elsewhere as hookah, narghile, and hubble bubble), is a method of inhaling smoke – usually tobacco smoke – which has existed for several centuries. It is a traditional practice in Middle Eastern and South Asian regions, and prior to the 1990s appeared to be becoming less common, and occurred predominantly in older men.[1] However, in recent decades it has grown in popularity, both in settings where it is traditionally used, but also in western countries, particularly among young people.[1] Likely drivers for this include the introduction of flavoured waterpipe tobacco, known as Mo’assel (Arabic for honeyed), which is used by most waterpipe smokers; the internet, mass and social media, which facilitate the marketing of shisha products; the expansion of café culture, which lends itself to an activity which is mostly practiced in the company of friends and family; and the relative lack of waterpipe-specific policies and regulations.[1] Furthermore, several studies indicate that smokers perceive waterpipe smoking to be less harmful, less addictive, and more socially acceptable than regular cigarettes, which is likely to contribute to the use of waterpipes.[2] While research into the health effects of waterpipe smoking is less extensive than that on cigarette smoking and many existing studies are of low quality, several recent reviews have reported a wide range of detrimental health effects (see Chapter 2).[3-6]

## Background Mechanism and products on the market

The waterpipe apparatus is made up of several components, including a head, body, bowl and hose (Figure 1). Tobacco is packed into an egg cup-shaped head and covered in pierced aluminium foil. Burning charcoal is placed onto the foil, heating the tobacco below it. When the user inhales on the hose, a mixture of charcoal and tobacco smoke passes through a thin pipe in the body directly into the bowl, located in the base of the apparatus. A second thin pipe connected to the hose lies above the water surface. Inhaling on the hose creates a vacuum inside the bowl, carrying the smoke to the user.

Figure 1: Diagram of a waterpipe with schematic [3]



The most popular waterpipe product on the market is Mo'assel (also known as ma'assel, moassel, Mu'essel or mu'assel), a sweetened and flavoured tobacco mixture. Typically this will contain 30% tobacco; the remainder consisting of a honey and treacle-like mixture.[7] Mo'assel is manufactured in a range of fruit and other flavours. A survey of customers in shisha premises in London's City of Westminster in 2011 found that 98% were using Mo'assel tobacco.[8]

A number of other substances can be used for waterpipe smoking. One is a sweetened and flavoured non-tobacco mixture commonly known as 'herbal', whose mechanism of action is identical to Mo'assel. Herbal has often been marketed as a 'healthy' alternative to tobacco; however, as explained in Chapter 2, it is unlikely to be less harmful.[3] Another involves the tobacco mixture being replaced by chemically-treated porous rocks commonly known as 'steam stones' which release aromatic smoke-like vapour when heated.[9] There is very little existing evidence on the safety of steam stones; however the porous rocks are heated using charcoal and therefore users may be exposed to harmful products of combustion including carbon monoxide (CO) and polycyclic aromatic hydrocarbons (PAH).[10]

There are also products marketed as 'e-shisha', which are designed to mimic the taste and/or experience of waterpipe smoking without the combustion of tobacco or any other substance. Products include electronic shisha pens, which are similar to electronic cigarettes, and e-hookah heads, which are attached to traditional waterpipes and allow the pipes to be used in the normal way. The mechanisms of these products are similar to e-cigarettes. They contain an atomiser and e-liquids (which may or may not contain nicotine) and produce a vapour which can be inhaled. E-shisha products should be considered to be similar to e-cigarettes and are not therefore included within the scope of this document.

### **Waterpipe culture**

Waterpipe smoking is a cultural activity and commonly occurs in groups where the waterpipe may be shared, such as at social or family gatherings. Key motives for using shisha have been found to be socialising, relaxation, pleasure and entertainment.[2] Waterpipe smoking also appears to function as an adjunct activity; that is, smokers engage in other forms of activity while smoking, such as watching television, playing cards, studying, or conversing with one another.[11, 12]

Waterpipe smoking often occurs in bars and cafés, and there has been a proliferation of shisha establishments in the UK in recent years. Data collected by the British Heart Foundation found that the number of shisha bars in the UK rose from 179 to 556 (a rise of 210%) between 2007 and 2012.[13] In a recent study of UK students over half of respondents who had ever smoked a waterpipe said they had initiated waterpipe smoking in a shisha café.[14]

Patterns of waterpipe use tend to be quite different from those commonly seen with cigarette smoking. Waterpipe smoking sessions usually last around 45 minutes, but in some cases extend to several hours [8, 12]; however research indicates that most users are infrequent smokers and that around half of lifetime users have only smoked a waterpipe up to three times.[14, 15]

### **Waterpipes as a public health problem**

Despite a low prevalence of waterpipe use in the UK general population as well as in other western countries (see Chapter 3), waterpipes have been identified as a potential public health concern.[3, 16] A range of health harms have been reported, misperceptions about their health effects are widespread, and use in certain population groups, including young people and some ethnic minority groups, is higher than in the general population.[16] Waterpipes, and in particular their use in shisha bars/cafés, also raises

concerns in relation to the risk of second-hand smoke exposure. Waterpipe smoking is subject to UK smokefree legislation which prohibits smoking in all enclosed public places and workplaces.<sup>1</sup> It is therefore illegal for business premises providing waterpipe smoking (i.e. shisha bars/cafés) to permit shisha use indoors or in areas that are substantially enclosed.

This document provides an overview of the existing evidence of the health harms related to waterpipe smoking (Chapter 2), an overview of waterpipe smoking in the UK (including prevalence in the general population and sociodemographic groups and attitudes to waterpipe smoking, Chapter 3), and includes two case studies of local authority approaches to addressing local challenges related to waterpipe smoking (Chapter 4). It concludes with recommendations for local authority action in relation to waterpipe smoking (Chapter 5).

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<sup>1</sup> Guidance on dealing with non-compliance with smokefree legislation is available from the Chartered Institute of Environmental Health [http://www.cieh.org/policy/smokefree\\_workplaces.html](http://www.cieh.org/policy/smokefree_workplaces.html). Guidance on the legislative requirements for shisha tobacco, provided by the Chartered Trading Standards Institute, is available from the Niche Tobacco Products Directory <http://www.ntpd.org.uk/legislation>.

## 2. Health effects of waterpipe smoking

The health effects of waterpipe smoking have received less research attention than cigarette smoking. However, the evidence base is developing and several recent reviews have reported a range of harmful effects similar to those caused by cigarette smoking. [3, 5, 6] This chapter provides an overview of the health effects of waterpipe smoking, including non-communicable disease, infectious disease, acute risks, and the risk of addiction.

### Chemical composition

Waterpipe smoking creates smoke containing chemicals which are linked to cancer, heart disease and lung disease. Harmful chemicals from waterpipe smoking are derived from two sources: the charcoal and the tobacco. A review of harmful substances found in Mo'assel tobacco smoke showed significant quantities of tar, CO, nitric oxide (NO) and various carcinogens.[3] Other studies have shown that urinary levels of cancer-causing tobacco-specific nitrosamines (TSNAs) can also be markedly raised among waterpipe smokers.[17] Burning charcoal used to heat waterpipe tobacco is known to emit large quantities of CO and PAH, the latter of which are carcinogenic.[18-20] Furthermore, side stream smoke (smoke that is directly emitted into the atmosphere from the burning charcoal and tobacco) contains significant quantities of these chemicals.[21]

Waterpipe users typically smoke tobacco; however, as explained in Chapter 1, some non-tobacco products, usually known as 'herbal', are marketed for waterpipe use. These are often marketed as a 'healthier alternative' to tobacco waterpipe products. However, studies have shown that the smoke contains similar amounts of toxicants known to contribute to the risk of cancer, cardiovascular disease, and lung disease to waterpipe tobacco smoke, including CO, NO, PAH, and volatile aldehydes (VA). [22, 23] This suggests that inhaling smoke from non-tobacco-based waterpipe products does not present any less disease risk than smoke from tobacco-based waterpipe products.

### Respiratory disease

Much of the research on the health effects of waterpipe smoking has focused on respiratory disease. Numerous studies have demonstrated that waterpipe smoking reduces markers of lung function, and a 2011 meta-analysis concluded that the reduction in lung function seen in waterpipe smokers may be similar to that seen in cigarette smokers.[24-28]

Several studies have demonstrated an association between waterpipe smoking and chronic obstructive pulmonary disease, and a meta-analysis published in 2016 estimated a pooled OR of 3.18 (95% CI 1.25-8.08), although heterogeneity between the studies was very high.[6] There is also some evidence that waterpipe smoking increases the risk of bronchitis, with the same meta-analysis estimating a pooled OR of 2.37 (95% CI 1.49-3.77) based on two studies.[6]

### Cancer

Two recent meta-analyses have investigated the association between waterpipe smoking and cancer.[6, 29] Overall, very few studies have been conducted and the methods and findings are inconsistent. Both meta-analyses found a significant effect on the risk of lung cancer (pooled OR 2.12 (95% CI 1.32-3.42) [6], pooled OR 4.58 (95% CI 2.61-8.03) [29]). One of the meta-analyses found an effect on the risk of oesophageal cancer (pooled OR 3.63 (95% CI 1.39-9.44) [29]); however, in the second meta-analysis the effect was not statistically significant (pooled OR 4.14 (95% CI 0.93-18.46)[6]). An association with oral

cancer has also been identified (pooled OR 4.17 (95% CI 2.53-6.89) [6]). The evidence on other types of cancer is extremely limited, but cannot be ruled out.

### **Heart disease**

Numerous studies have reported that waterpipe smoking increases blood pressure and heart rate in a similar way to cigarette smoking, indicating its potential as a risk factor for heart disease.[24, 30, 31]

Evidence on the long term effect of waterpipe smoking on the heart is limited, and existing studies have been prone to bias and confounding.[5] However, published studies have suggested an association between waterpipe smoking and cardiovascular disease.[5]

### **Infectious disease transmission**

As described in Chapter 1, waterpipe smoking is often a social activity which sees users share a waterpipe. This introduces the possibility of infection transmission.[32] A recent meta-analysis found no association between waterpipe smoking and hepatitis C, although this was based on only three cross-sectional studies.[6] There have been reports of increased risk of other infections, such as tuberculosis, but the evidence remains limited.[33, 34]

### **Carbon monoxide poisoning**

CO poisoning is a key concern with waterpipe smoking. The risk of CO poisoning from waterpipe smoking is even greater than from cigarette smoking, due to the large amount of CO created by constant heating of tobacco by burning charcoal, the main source of CO in waterpipe smoking. Charcoal is also used to heat non-tobacco 'herbal' products, and therefore the risk is not reduced in people that use these products.

Waterpipe smokers have reported symptoms consistent with CO poisoning, including light-headedness and nausea.[35] In one study, waterpipe smokers reported feeling a 'buzz' when smoking, which could be a sign of CO poisoning.[36] Chronic CO exposure is a risk factor for cardiovascular disease.

In one case in the UK, 11 patients who had been attending a basement party were found to have blood carboxyhaemoglobin levels ranging from 7.3-25.0% (normal range 0-2%; for >2 cigarette packs per day, 8-9%) after waterpipe smoking. An atmospheric carbon monoxide level of 440ppm was observed in the basement where the party was being held (Existing studies suggest that exposure to air with CO levels greater than 100 ppm is dangerous to human health).[37, 38] A number of other non-fatal cases of CO poisoning have been reported.[39-44]

### **Waterpipe smoking and addiction**

Existing studies indicate that daily waterpipe smokers could have levels of nicotine approximately equivalent to a ten-a-day smoker.[45] A recent review exploring the association between waterpipe use and dependence found that while information with regard to population-level prevalence of dependence induced by waterpipe tobacco smoking is lacking, regular waterpipe tobacco smokers may report or display signs of addiction.[46] These include experiencing withdrawal, altering their behaviour in order to access a waterpipe and having difficulty quitting, even when motivated to do so.[46] This is supported by a number of studies conducted in London.[8, 12, 14]

In many groups, including most waterpipe users in Britain, however, waterpipe smoking is mostly infrequent and occurs predominantly in social situations (see Chapter 3). As a result, the pattern of waterpipe dependence is likely to differ from that seen in regular cigarette smokers.[47]

## **Public perceptions of the health effects of waterpipe smoking**

A 2012 systematic review assessed public perceptions of the health risks associated with waterpipe smoking in Western and Middle Eastern society. The Western studies, all of which were conducted in the USA, consistently found that the majority of respondents were aware of the adverse health effects.[2] The Middle Eastern studies reported similar findings.

Most studies also showed that a high proportion of respondents believed waterpipe smoking was less harmful than cigarettes. Reasons for this include the false belief that water in the bowl has filtering properties, that the smell and flavour of waterpipe smoking indicate low levels of harm, that there is little or no nicotine, and that there is lower exposure to chemicals.

The review also identified a number of studies highlighting that waterpipe smokers may feel less addicted to waterpipe than cigarette smoking, that a high proportion do not consider themselves to be dependent on waterpipe smoking, that the risk of addiction is perceived to be low, and that users believe quitting waterpipe smoking is easy.

## **Summary and implications**

Recent reviews have called for well-designed longitudinal studies with high quality and consistent measurement of exposure to waterpipe smoking. However, the available evidence indicates that there are significant health risks associated with waterpipe smoking, and that misperceptions about the potential health risks are widespread. The existing evidence base supports the need to monitor waterpipe smoking and minimise use, particularly regular use.

### 3. Waterpipe smoking in the UK

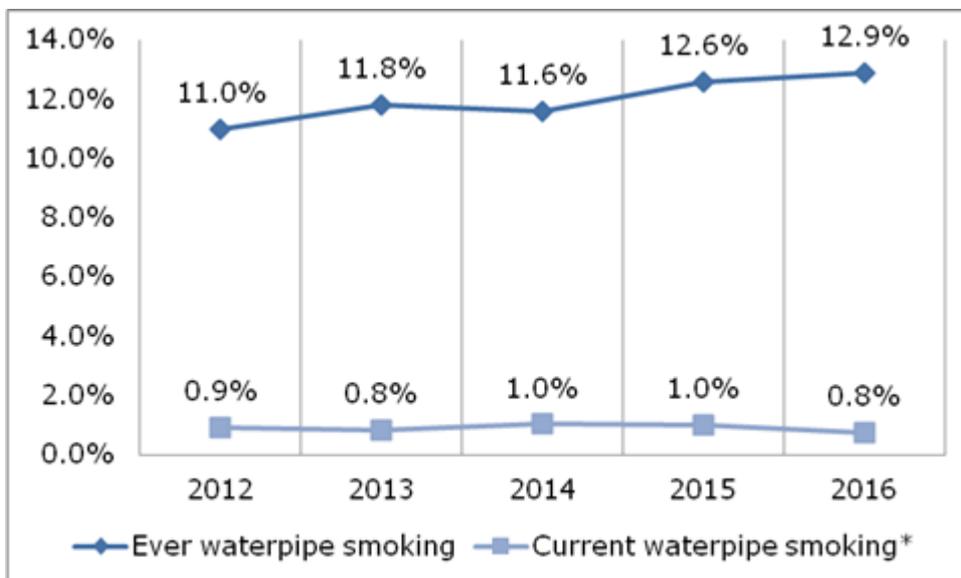
This chapter summarises a range of data on waterpipe use and awareness among adults and young people in the UK.

#### National estimates of waterpipe use

##### Adults

The main source of data on adult waterpipe use in Britain is the ASH Smokefree GB survey. Between 2012 and 2016 this annual cross-sectional survey obtained data on waterpipe use in 12,000-12,500 adults. ‘Ever’ waterpipe use, defined as using a waterpipe at least once in a lifetime increased very slightly during this period, from 11% to 12.9% (Figure 1:2); however, current waterpipe use, defined as up to once or twice a month, remained at around 1%.

**Figure 1:** Adult waterpipe use in Great Britain, 2012-2016



\*Up to once or twice per month

Source: ASH Smokefree GB survey (conducted by YouGov)

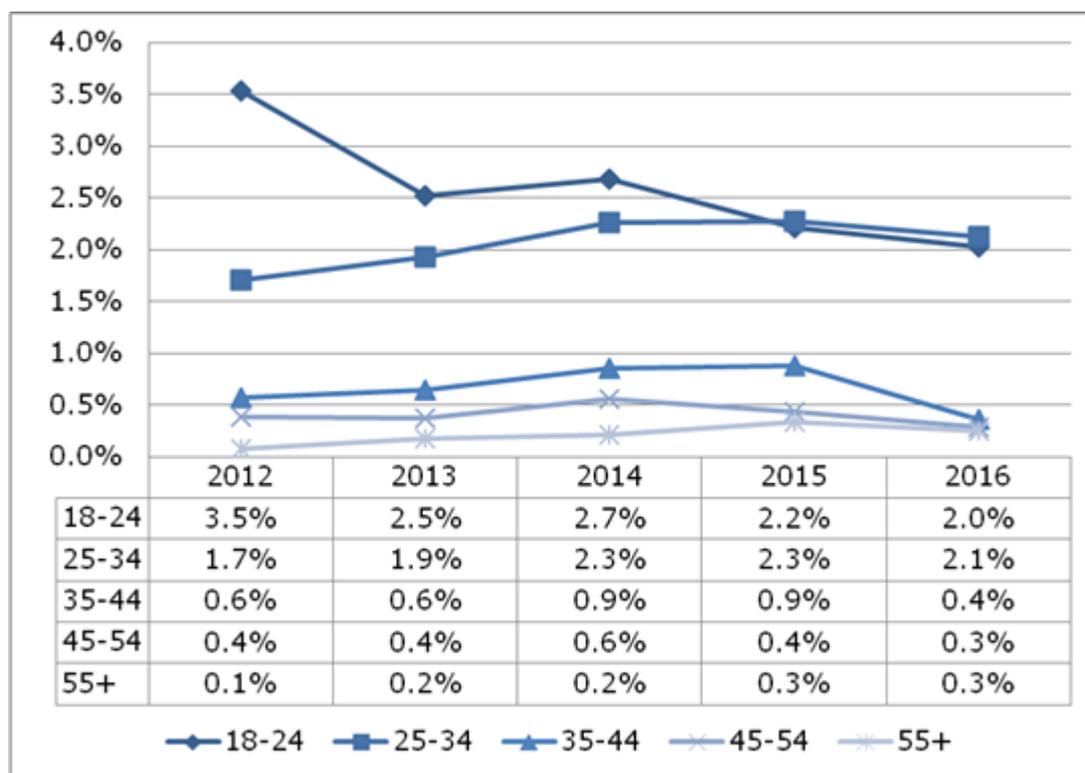
While waterpipe use in the general population is low, there are variations by sociodemographic group. Table 1 demonstrates that young adults are more aware of waterpipe smoking than older adults, and that a higher proportion have tried waterpipe smoking at least once. Nevertheless, current waterpipe use is low in all age groups. Figure 3 shows that there has been little change in waterpipe use in different age groups since 2012.

**Table 1:** Adult waterpipe use in Great Britain by age, 2016

|  | 18-24 | 25-34 | 35-44 | 45-54 | 55+   |
|--|-------|-------|-------|-------|-------|
| More than 3 to 4 times a month                     | 0.7%  | 0.8%  | 0.1%  | 0.1%  | 0.2%  |
| Once or twice a month                              | 1.4%  | 1.4%  | 0.3%  | 0.2%  | 0.1%  |
| Once or twice every 2 to 3 months                  | 1.7%  | 0.6%  | 0.8%  | 0.2%  | 0.1%  |
| Once every 6 to 12 months                          | 4.4%  | 3.4%  | 0.6%  | 0.3%  | 0.2%  |
| Less often   | 19.4% | 25.7% | 12.7% | 6.1%  | 2.6%  |
| Never  | 57.3% | 55.5% | 70.0% | 77.9% | 77.5% |
| Don't know/ can't remember                         | 2.8%  | 2.7%  | 2.5%  | 1.7%  | 1.1%  |
| Not applicable – do not know what a shisha pipe is | 12.4% | 10.0% | 13.2% | 13.7% | 18.4% |

Source: ASH Smokefree GB survey (conducted by YouGov)

**Figure 2:** Current waterpipe smoking\* by adults in Great Britain by age groups, 2012-2016



\*Up to once or twice per month

Source: ASH Smokefree GB survey (conducted by YouGov)

While current waterpipe use varies little by socioeconomic group (ASH Smokefree GB survey, data not shown), it varies substantially between ethnic groups. Data from the Smokefree GB survey in 2012 and 2013 estimate the percentage of ever users from mixed/multiple ethnic groups at 32.6% and Asian/Asian British at 26.5%. Similar patterns were estimated for frequent waterpipe use. [16]

**Table 2:** Waterpipe use by ethnic group, 2012 & 2013

|                                       | Ever waterpipe use | Frequent waterpipe use<br>(at least once or twice a month) |
|---------------------------------------|--------------------|--|
| White                                 | 10.1               | 0.5  |
| Mixed/multiple ethnic groups          | 32.6               | 4.9  |
| Asian/Asian British                   | 26.5               | 6.7  |
| Black/African/Caribbean/Black British | 13.7               | 4.2  |

Source: Grant et al. 2014 [16]

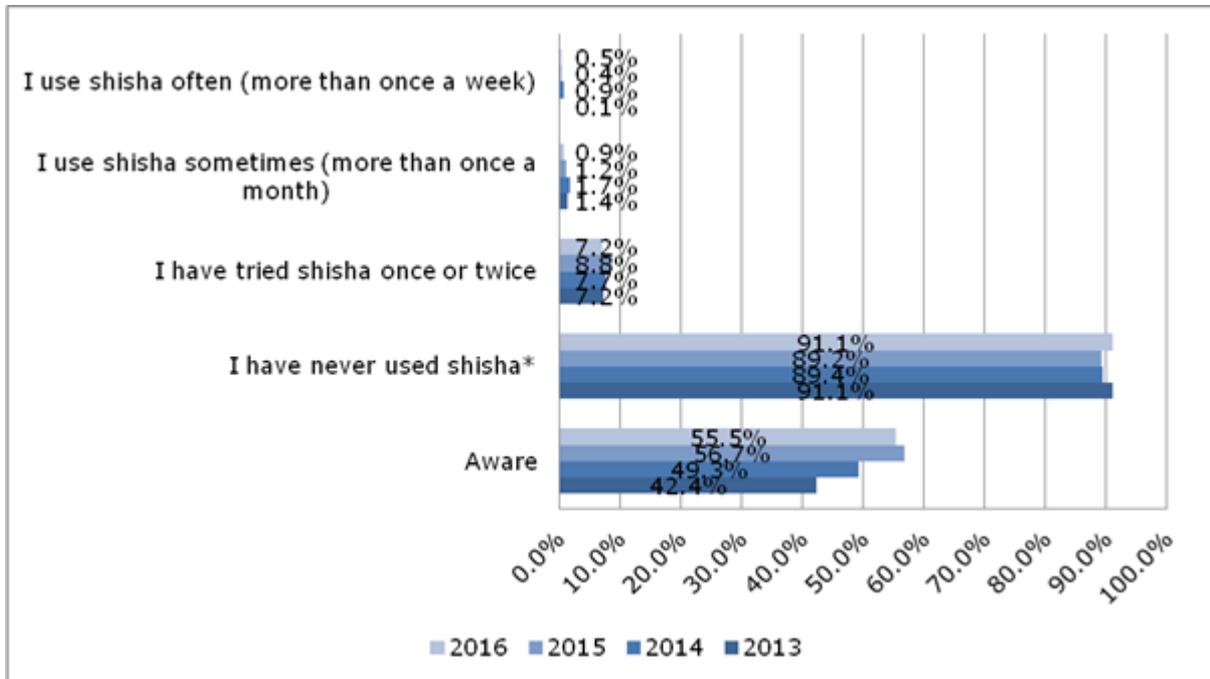
### **Young people**

National data on waterpipe awareness and use in young people have been collected annually in the ASH Smokefree Youth survey since 2013 (n=2000-2400). The survey suggests that there has been a slight increase in awareness of shisha in 11-18 year olds since 2013 (Figure 4); however, there has been very little change in current or ever use. Among the minority that have ever used shisha, the majority report having tried shisha only once or twice.

The Smokefree Youth survey suggests that current waterpipe use is slightly higher in young males than young females, and that it increases with age; however, even in 16 to 18 year olds current use (at least once a month) is low at around 3% and is relatively stable over time (

Table 3). Current waterpipe smoking is highest in regular cigarette smokers, although the precision of these estimates is low due to small numbers of current cigarette smokers in the sample.

Figure 3: Awareness and use of waterpipes among 11 to 18 year olds, 2013-2016



\*Include those who are not aware of shisha

Source: ASH Smokefree Youth surveys (conducted by YouGov)

**Table 3: Waterpipe use in young people by demographic group**

| Once a week                         |      |      |        |          |         |                                       |              |
|-------------------------------------|------|------|--------|----------|---------|---------------------------------------|--------------|
|                                     | All  | Male | Female | 11 to 15 | 16 - 18 | At least one cigarette per week       | Never smoker |
| 2013                                | 0.1% | 0.2% | 0.1%   | 0.1%     | 0.3%    | 2.2%                                  | 0.0%         |
| 2014                                | 0.9% | 1.1% | 0.6%   | 0.3%     | 1.8%    | 10.4%                                 | 0.1%         |
| 2015                                | 0.4% | 0.5% | 0.3%   | 0.3%     | 0.5%    | 2.9%                                  | 0.1%         |
| 2016                                | 0.5% | 0.8% | 0.1%   | 0.1%     | 1.0%    | 8.3%                                  | 0.0%         |
| Once a month                        |      |      |        |          |         |                                       |              |
|                                     | All  | Male | Female | 11 to 15 | 16 - 18 | Smoke at least one cigarette per week | Never smoker |
| 2013                                | 1.4% | 1.7% | 1.0%   | 0.3%     | 3.1%    | 12.3%                                 | 0.3%         |
| 2014                                | 1.7% | 1.7% | 1.8%   | 0.5%     | 3.7%    | 10.9%                                 | 0.4%         |
| 2015                                | 1.2% | 1.1% | 1.4%   | 0.5%     | 2.4%    | 8.2%                                  | 0.1%         |
| 2016                                | 0.9% | 1.1% | 0.6%   | 0.3%     | 1.8%    | 9.9%                                  | 0.2%         |
| Current use (at least once a month) |      |      |        |          |         |                                       |              |
|                                     | All  | Male | Female | 11 to 15 | 16 - 18 | Smoke at least one cigarette per week | Never smoker |
| 2013                                | 1.5% | 1.9% | 1.1%   | 0.4%     | 3.4%    | 14.5%                                 | 0.3%         |
| 2014                                | 2.6% | 2.8% | 2.4%   | 0.8%     | 5.4%    | 21.3%                                 | 0.4%         |
| 2015                                | 1.6% | 1.6% | 1.6%   | 0.8%     | 2.9%    | 11.1%                                 | 0.2%         |
| 2016                                | 1.3% | 1.9% | 0.8%   | 0.4%     | 2.7%    | 18.2%                                 | 0.3%         |

Source: ASH Smokefree Youth surveys (conducted by YouGov)

## Local estimates of waterpipe use in young people<sup>2</sup>

### Young people

Three recent studies of secondary school students in specific localities have found similar patterns of use. In Brent (2012, sample 2399), 24% reported trying waterpipe smoking and that 7.6% were current users (defined as occasional or frequent use).[48] A survey in Stoke on Trent (2013, sample 1252), found 12% of students had tried waterpipe smoking and across three London Boroughs in South East London (2014, sample 2098) this reached 39.6%.[49, 50] Across all surveys regular use was more common in older students, males, Asians, Asian/British or other non-white ethnicities and with concurrent use of cigarettes.

### University students

Two studies have measured the prevalence of waterpipe smoking among university students in England. The first (University of Birmingham, 937 students, 2007), found that 37.9% had tried waterpipe smoking and that 8.0% were regular users, defined at least monthly use.[51] Older students, males, those of Arab ethnicity and current smokers were more likely to be waterpipe smokers.

In a similar study (Imperial College London, 489 students, 2011), 51.7% had tried and 11% were current waterpipe users, although in this sample no age, gender, ethnic or socioeconomic differences were observed.[52]

<sup>2</sup> The data reported in this section are collected using a variety of methods, including various sampling methods and survey questions, and are therefore not directly comparable with the national data reported above.

## **Summary and implications**

National level data indicate that current waterpipe smoking remains low in the British general population. Furthermore, while waterpipe use is higher in young adults than in older adults, it remains uncommon, and there does not appear to be an increasing trend in under 18s. However, national data may mask higher rates of use in certain local areas. Where possible, local authorities should use local data to identify the extent to which it is a problem in their area, particularly in sociodemographic groups where rates of waterpipe smoking tend to be higher, such as black and minority ethnic (BME) groups. Using a consistent set of questions in local surveys will make local estimates more comparable with national data. Appendix I lists the questions on waterpipe smoking used in both the ASH Smokefree GB and ASH Smokefree Youth surveys. See the Lancashire case study in Chapter 4 below for more information on local data collection.

## **4. Local authority perspectives on tackling shisha**

The following case studies have been prepared with the help of local authority representatives as examples of challenges and responses in relation to waterpipe smoking in local areas.

### **Case study I. Using local data to inform local action in Lancashire**

#### **Context**

Lancashire has a population of approximately 1,171,000. Lancashire County Council has responsibility for Public Health and Trading Standards functions, with Environmental Health Services provided by the 12 District Councils in Lancashire. The unitary authorities of Blackpool and Blackburn with Darwen complete the pan Lancashire picture.

#### **The Challenge**

National data on shisha smoking in adults and young people indicate that rates of waterpipe smoking in the general population are low. However, national-level data can mask higher rates of waterpipe use in particular local areas and communities. Local data may be needed to identify areas and subgroups of the population where waterpipe use is a more significant public health problem and where there may be increased regulatory challenges with regard to premises which sell waterpipe products, which are required to comply with the full range of both tobacco and health and safety regulations.

In Lancashire, the presence of shisha cafés in cities such as Preston indicate that the burden of waterpipe use is likely to be concentrated in urban areas, particularly those with large student populations and BME communities. Reliable data on waterpipe use in the local population are needed to help provide support for efforts to keep shisha use low, and to target activity to enforce health and safety regulations in waterpipe premises.

#### **Local Action**

In recent years, data on waterpipe use have been collected in Lancashire and the rest of North West England at regular intervals, with a view to ascertaining and monitoring the extent of the problem at regional and local level, particularly among young people.

Every two years, Trading Standards conduct a North West-wide survey of 14-17 year olds, administered through schools who have signed up to take part, on the subject of alcohol, drugs and tobacco use. The 2013 survey, which included questions on shisha use for the first time, included 3,471 respondents from Lancashire. In 2015, 2,185 14-17 year olds across Lancashire completed the survey.

The 2013 survey found that 22% of young people had 'tried or experimented with shisha smoking, even once'.<sup>[53]</sup> Of those who had tried shisha, 20% had never tried traditional cigarettes and a further 26% had tried smoking but didn't like it. 32% were daily smokers. In 2015, 17% of respondents reported having tried shisha.

In line with national data, findings from both 2013 and 2015 reflect that older respondents are more likely to say they have tried or used shisha. However, evidence from the 2015 survey shows that 56% of respondents who say they have used shisha were 14 or 15 when they started using it. The proportion of young people having tried shisha increased with age, from 16% of 14 year olds to 46% of 17 year olds.

Shisha use in young people has been found to vary across unitary authorities and Lancashire County Council areas, with 33% of those in Blackburn having tried shisha in 2013. There is also variation across

Lancashire districts, with 30% of young people in Pendle, 29% in Preston and 29% in Burnley having tried shisha compared to 12% in Chorley.

A smaller survey of older students at two further education colleges in Preston and Blackburn undertaken by the University of Durham in 2014 found that over half of respondents had tried shisha (51%, n=105), with 17% having had shisha within the last month. Respondents from BME groups were most likely to report shisha use: 41% of White respondents had tried shisha compared with 71% of Asian/Asian British and 67% of Black/African/Caribbean/Black British respondents. 47% of Asian/Asian British and 22% of Black/African/Caribbean/Black British students had used shisha within the last month, compared with 4% of White respondents.

To address higher rates of waterpipe use in young people in certain parts of Lancashire, Public Health and Trading Standards have developed and cascaded a programme of targeted training and information to raise levels of awareness of the risks of waterpipe use (as well as cigarette use) among young people, parents and carers, and to raise awareness of current tobacco and e-cigarette regulatory legislation with retailers and proprietors to increase rates of compliance.

Enforcement work in shisha premises in Lancashire includes inspections of retail premises to reduce the sale of illicit tobacco, and joint partnership visits to shisha cafés involving Trading Standards, Environmental Health, HMRC, the Fire Service and the Police, to maximise compliance with tobacco and health and safety regulations.

### **Outcomes and lessons learned**

Tackling the public health and regulatory challenges associated with waterpipe use requires collaborative approaches involving a variety of local stakeholders, and there is a need for credible local data to support local action. Several recent surveys have investigated waterpipe use in local areas and communities in Lancashire. Such studies have helped to identify areas where waterpipe smoking is a more significant public health issue, and where there may be a need for local enforcement work.

# Tackling the impact of shisha premises on local residents in the City of Westminster

## Context

The City of Westminster is a central London borough including most of the West End. It has a residential population of approximately 226,000, though its daytime population swells to over 1 million due to the influx of workers, visitors and tourists.

## The challenge

Westminster has experienced growth in the number of premises offering waterpipe smoking in recent years, with over 100 premises currently identified. As explained in Chapter 1, waterpipe smoking is subject to smokefree legislation under the Health Act 2006. All prosecutions for breaches of the smokefree regulations taken by the Council to date have involved waterpipe smoking. There have also been incidences of carbon monoxide poisoning arising from illegal indoor shisha smoking.

Many obstacles have been encountered in the council's work to regulate shisha smoking in the city. Difficulties have arisen in undertaking the inspection of premises, with council officers struggling to gain access and identify owners in order to issue enforcement notices. Several premises have continued to trade even after repeated enforcement action against them, indicating that existing penalties do not provide an adequate deterrent.

The movement of shisha smoking outdoors comes with its own challenges. It has had an impact on quality of life for many of Westminster's residents, with breaches across a wide range of legislation, including noise nuisance, smoke and odour complaints, unauthorised use of premises, unauthorised structures and alterations, unauthorised use of tables and chairs outside premises, highway obstruction and health and safety concerns. Despite concerted enforcement efforts, the council found that employing the range of powers available has been an insufficient deterrent to persistent offenders.

In 2011 the council took the unprecedented step of prosecuting under the Anti-Social Behaviour Act 2003. These closure orders provided immediate respite to people affected by the anti-social activity, and provided a period of time in which other enforcement and regulatory powers could be pursued. However, this extremely resource intensive use of powers provided only temporary closure of premises. Similarly, large scale targeted enforcement operations, such as one conducted in May 2016 in collaboration with local police and HMRC, have been able to achieve only brief respite from the problems, with shisha services back up and running at those premises very shortly afterwards.

## Local action

Westminster council recognised the need to tackle the nuisance caused by some waterpipe premises. It commissioned a report to review the health effects and prevalence of shisha smoking, knowledge and attitudes of smokers, and the responses taken by local authorities. [54] The report demonstrated growth in the prevalence of shisha smoking, particularly among young people, university students and those of ethnic backgrounds typically associated with shisha smoking. It highlighted the need to continue collecting local data and to raise awareness of the risks of waterpipe smoking in local communities. It identified a need for multi-agency work in tackling problems such as antisocial behaviour, illicit tobacco, inadequate health warning labelling and non-compliance with smokefree legislation.

A Shisha Working Group was established, which brought together councillors and officers from licensing,

planning enforcement, trading standards, health and safety, communications and public health to consider how the issue could be effectively addressed. This group developed a consultation document to seek views from wider stakeholders and partners on how to best address the health impacts, along with the nuisance and harm caused by unregulated shisha smoking.[55] The final document was published in February 2017.

The overall aim is not to prevent or ban this activity, but to manage the way in which shisha use takes place, to ensure that it causes as little harm and nuisance as possible. This approach also seeks to ensure that people who choose to smoke shisha are equipped with clear and reliable information about the risks.

The approach set out in the consultation document, involves three main strands:

- To educate and engage – engaging with both shisha smokers and businesses to raise awareness of the health and social effects of shisha smoking in order to help change behaviour
- To regulate the activity - ensuring best use of the powers that are available to the different services and agencies in a coordinated and cost-effective way
- Advocacy and partnership – advocating for changes to legislation to enable premises to be better regulated and managed and working with a range of partners to achieve this

To support and complement the launch of the strategy document, Westminster hosted a multi-stakeholder symposium event on 22<sup>nd</sup> February 2017, to share ideas and learning relating to shisha smoking, and gain insights from the perspectives of those that provide these services and those that are trying to manage their effects.

### **Outcomes and lessons learned**

Despite considerable concerted efforts in collaboration with key partners which can deliver some short-term localised benefits, attempts to effectively regulate waterpipe smoking in the City of Westminster in the long term have been frustrated by repeated non-compliance and limitations in the relevant legislation. The council has focused its strategy on educating shisha smokers and businesses and maintaining robust enforcement approaches using existing powers, but at the same time exploring opportunities and furthering the debate about possible alternative ways to manage shisha smoking (perhaps by making it a licensable activity in its own right).

Reducing the harm caused by waterpipe smoking – in respect to health, public realm management and business compliance – is a shared concern across a range of service teams, agencies and partners, and local stakeholders must work as a team to achieve the greatest impact possible. Effective engagement with the community has also emerged as a key priority. The Council has become increasingly conscious of the need to raise awareness of the issues relating to waterpipe smoking and challenging misconceptions about its safety, while also educating business to understand the complex legislative backdrop of their obligations.

## 5. Conclusions and actions

### Conclusions

While high quality studies are still needed, the available evidence indicates that there are significant health risks associated with waterpipe smoking, including cancer, respiratory disease and heart disease. Regular waterpipe tobacco smokers may report or display signs of dependence, and misperceptions about the potential health risks are widespread. The existing evidence base underlines the need to minimise waterpipe use, particularly regular use.

Population level prevalence in Britain is currently low in both adults and young people, and most users smoke waterpipes infrequently. In many areas, therefore, the public health problem posed by waterpipe smoking is negligible; however, waterpipe use is higher in some local areas and certain subgroups, such as BME populations. There is therefore a need to monitor waterpipe smoking and to take action to prevent its use where it risks emerging as a significant threat to public health.

Many of the challenges faced by LAs are in relation to the enforcement of tobacco and health and safety regulations in waterpipe premises. A collaborative approach involving all relevant agencies, which enables the education of businesses while maintaining robust enforcement approaches, can be an effective way to identify and act on local problems.

Research and data on waterpipe smoking continue to emerge, and ongoing monitoring of trends and evidence will be necessary to ensure information and advice reflects current knowledge and the local context. Stakeholders should seek to explore opportunities and further the debate about ways to manage waterpipe use in local communities.

### Suggested actions

- Monitoring waterpipe use in their local areas will help local authorities identify where and in whom waterpipe use is a threat to public health.
- Surveys conducted in local areas should use standardised questions (see Appendix I) to allow comparison with national and other local data.
- Local information should be analysed carefully to understand where intervention by public health, environmental health, trading standards and other stakeholders is required.
- LAs could lead a coordinated approach to enforcement and prevention work.
- LAs could consider interventions to raise awareness of the health risks of waterpipe use, especially among current waterpipe smokers and young people.
- Where local action in relation to waterpipe smoking is taken, LAs should seek to identify its impact and share best practice with relevant stakeholders and seek to publish findings in peer-reviewed journals.

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## **APPENDIX I: Waterpipe survey questions**

### **ASH Smokefree GB survey (2016 questions)**

How often, if at all, have you smoked using a “shisha” pipe? (Please note that shisha pipes are also known as waterpipes or hookah pipes)

- More than 3 to 4 times a month
- Once or twice a month
- Once or twice every 2 to 3 months
- Once every 6 to 12 months
- Less often
- Never
- Don't know/ can't remember
- Not applicable – do not know what a shisha pipe is

### **ASH Smokefree Youth survey (2016 questions)**

*All respondents*

1) Shisha pipes are large pipes that draw the smoke through water. They are sometimes called hookah or waterpipes. Have you ever heard of shisha smoking?

Yes, I have

No, I haven't

Don't know

*All those aware of shisha*

2) Compared to cigarettes, do you think shisha smoking is more or less harmful to the person using it, or is there no difference?

- More harmful
- About the same
- Less harmful
- Don't know

3) Which ONE of the following is closest to describing your experience of shisha smoking?

- I have never used shisha
- I have used shisha once or twice
- I use shisha sometimes (more than once a month)
- I use shisha often (more than once a week)
- Don't want to say

*All who have not tried shisha*

4) Do you think that you will try shisha soon?

- Yes, I do
- No, I don't
- Don't know
- Don't want to say