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April 29, 2016

Food and Drug Administration (FDA)
Center for Tobacco Products (CTP)
FDA White Oak Conference Center
Building 31, Room 1503
10903 New Hampshire Avenue
Silver Spring, Maryland 20993-0002

Docket No. FDA-2016-N-1073

The American Lung Association has submitted comprehensive comments with our partner organizations in the above-designated docket regarding the scientific and regulatory issues concerning the proposed regulation of waterpipe or hookah tobacco. These comments are submitted as a supplement to those joint comments. These comments represent the views of the American Lung Association.

The American Lung Association is the nation's oldest voluntary health organization and is the leading organization working to save lives by improving lung health and preventing lung disease. Tobacco use is the leading cause of preventable death in the United States and a primary cause of lung disease. Tobacco kills 480,000 Americans each year and another 16 million Americans suffer from a tobacco-caused disease.¹ Tobacco use and exposure to secondhand smoke are the overwhelming causes of lung cancer and chronic obstructive pulmonary disease (COPD).

The American Lung Association wishes to underscore the following points which were also made in our joint comments:

1. FDA must require health warnings to consumers that are consistent and appropriate with how hookah is used.
2. FDA must prohibit inaccurate, misleading or unproven health claims on all products and marketing.
3. FDA must prohibit any characterizing flavors other than tobacco in any hookah through the use of the agency's enforcement discretion.

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4. FDA must move forward quickly with rules to protect the public health – especially under-aged youth – regarding internet sales of hookah, and until such rules are established, prohibit the internet sale of all hookah.

The American Lung Association has issued two previous reports on the growing trend of hookah/waterpipe use (hookah use) in the United States that we would like to submit to the docket for FDA's consideration.

The first report, "[An Emerging Deadly Trend: Waterpipe Tobacco Use](#)" was issued in February 2007, and was one of the first policy reports to explore what was then a somewhat new and growing trend of hookah use in the U.S. The report gave some background and history about hookah use, and summarized the state of the science about hookah use up to 2007. It also examined existing data about perceptions, awareness and prevalence of hookah use and looked at state and local policies around hookah use at the time.

Then in 2011, the American Lung Association issued a policy brief, "[Hookah Smoking: A Growing Threat to Public Health](#)," which provided updated information on many of the same areas as the 2007 report, but in a shorter format. It also discussed newer prevalence data in some states, and found that primarily youth and young adults were engaging in hookah use, and that the wide variety of flavors used in the tobacco mixture in the product were attractive to youth and young adults.

We hope these two reports will prove helpful as the FDA considers the scientific and regulatory issues around hookah use.

Sincerely,



Harold P. Wimmer

¹ U.S. Department Of Health And Human Services. The Health Consequences of Smoking – 50 Years of Progress: A Report of the Surgeon General. 2014.



 **AMERICAN LUNG ASSOCIATION®**
Tobacco Policy Trend Alert

AN EMERGING DEADLY TREND: WATERPIPE TOBACCO USE
February 2007



In the last few years, new popularity for an old form of tobacco use has been gaining ground within this already susceptible group. Waterpipes (also known as hookahs) are the first new tobacco trend of the 21st century.

This Trend Alert looks at the emerging waterpipe tobacco use trend and the widespread misperceptions that exist about its use.

Existing evidence on waterpipe smoking shows that it carries many of the same health risks and has been linked to many of the same diseases caused by cigarette smoking. Access to this “new” form of tobacco use continues to grow, especially in hookah cafes targeting 18-to-24-year olds.

The tobacco control community must educate the public about the potential dangers of the growing waterpipe trend.

Tobacco Policy Trend Alert

AN EMERGING DEADLY TREND: WATERPIPE TOBACCO USE

Tobacco use is the single most preventable cause of death in the United States, killing an estimated 438,000 people in this country¹ and almost 5 million worldwide every year.² While cigarette smoking is declining overall in the United States, tobacco use remains high among youth and young adults, especially college students. Young adults ages 18 to 24 are more than three times more likely to smoke than people 65 years and older.³

In the last few years, new popularity for an old form of tobacco use has been gaining ground within this already susceptible group. Waterpipes (also known as hookahs) are the first new tobacco trend of the 21st century. Originating in the Middle East and spreading throughout Europe and the United States. These small, inexpensive, and socially-used tobacco pipes have become as fashionable as cigars were in the later 1990s, especially among urban youth, young professionals, and college students. Small cafés and clubs that rent the use of hookahs and sell special hookah tobacco are making their mark on the young, hip, urban scene.

Like many tobacco products, use of these pipes is linked to lung cancer and other respiratory and heart diseases. Waterpipe tobacco smokers are exposed to cancer-causing chemicals and hazardous gases such as carbon monoxide. Waterpipe users are also exposed to nicotine, the substance in tobacco that causes addictive behavior. Despite knowing the dangers of waterpipe smoking, one study found that most (more than 90%) beginning waterpipe smokers believe cigarette smoking is more addictive than waterpipe smoking. The same study also found evidence that the use of waterpipes is increasing throughout the world.⁴

This *Trend Alert* looks at the emerging waterpipe tobacco use trend and the widespread misperceptions that exist about its use.

Background/History

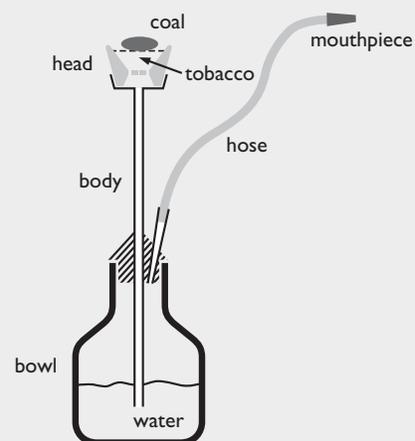
The waterpipe is used to smoke specially made tobacco by indirectly heating the tobacco, usually with burning embers or charcoal. The smoke is filtered through a bowl of water (sometimes mixed with other liquids such as wine) and then drawn through a rubber hose to a mouthpiece. Other common names for waterpipes include hookah, narghile or narghila, shisha or sheesha, and hubbly-bubbly.

Waterpipes generally consist of four main parts:

- The bowl where the tobacco is heated;
- The base filled with water or other liquids;
- The pipe, which connects the bowl to the base; and
- The hose and mouthpiece through which smoke is drawn.

Waterpipe smoking originated in ancient Persia and India. The original “hookah” is believed to have been carved from a coconut shell, with the milk used as a filtering agent.⁵ Early waterpipes may have been used to smoke opium or hashish, as evidence of these waterpipes predates the use of tobacco in the Middle East and Asia. After the advent of tobacco in the region, a special prod-

“According to one study, more than 90% of beginning hookah smokers think cigarette smoking is more addictive.”



uct was developed mixing shredded tobacco leaf and honey, molasses or dried fruit. This tobamel/tabamel (combined tobacco and a sweetener) is generally called shisha in the United States. Pre-packaged quantities of shisha are sold in a variety of flavors, including apple, banana, berry, cherry, chocolate, coconut, coffee, cola, grape, kiwi, lemon, licorice, mango, mint, orange, peach, pineapple, rose, strawberry, tutti fruity, vanilla and watermelon. Several Middle Eastern companies manufacture and import the specialized tobacco, including Al Fakher, Al Waha, Nakhla, Romman and Fumari. Most manufacturing companies use distributors based in the United States to sell in the U.S. In addition, several U.S. companies manufacture and distribute their own brands of the special waterpipe tobacco. Sahara Smoke Company's Hookah-Hookah brand is one of the largest and most popular U.S.-based brands.

The use of waterpipes spread through the Middle East and Asia, and were widely used in Turkey during the Ottoman Empire (15th century), Iran, Lebanon, Syria, Jordan, Greece, India, Pakistan, Palestine, Egypt and Saudi Arabia. By the late 19th century, Turkish women of high society used waterpipes as status symbols. Waterpipes can often be seen in art of the era. In the late 20th century, sweeter additives and more flavors were developed in Egypt in an effort to attract female consumers. As people immigrated to Europe from India, Pakistan, Northern Africa and the Middle East, hookahs and hookah cafes began appearing in European cities. Today, hookah bars and cafes are popular in many parts of Britain, France, Spain, Russia, India, Asia and throughout the Middle East and are growing in popularity in the United States.⁶

State of the Science

Although limited research has been done on the health risks of waterpipe use, the existing evidence indicates that waterpipe smoking carries the same or similar health risks as cigarette smoking. Links have been made to many of the same adverse health effects, including lung, oral and bladder cancer, as well as clogged arteries and heart disease.⁷

An analysis of mainstream smoke from waterpipes found that it contains significant amounts of nicotine, tar and heavy metals.⁸ A study of nicotine and cotinine (a chemical marker of nicotine exposure) levels in hookah smokers found high amounts of both chemicals after one session of hookah use. Nicotine and cotinine levels were measured in the participants' blood before and after smoking. The level of nicotine increased up to 250 percent and the cotinine level increased up to 120 percent after just one session of smoking, lasting 40 to 45 minutes.⁹

Waterpipe use may increase exposure to carcinogens because smokers use a waterpipe over a much longer period of time, often 40 to 45 minutes, rather than the 5 to 10 minutes it takes to smoke a cigarette. Due to the longer, more sustained period of inhalation and exposure, a waterpipe smoker may inhale as much smoke as consuming 100 or more cigarettes during a single session.¹⁰ These studies provide compelling initial data which suggest that waterpipe smoke is at least as toxic as cigarette smoke. Existing research into the direct and singular effects of waterpipe smoking is complicated by the fact that many waterpipe users also smoke cigarettes.¹¹

Another potential problem is that commonly used heat sources that are applied to burn the tobacco, such as wood cinders or charcoal, are likely to increase the health risks from waterpipe use

“A study of hookah smokers found that nicotine and cotinine increased up to 250% and 120% respectively after a typical 40 to 45 minute smoking session.”

because when burned on their own these heat sources release high levels of potentially dangerous chemicals, including carbon monoxide and metals.¹²

Finally, the social aspect of waterpipe smoking may put many users at risk for other infectious diseases, such as tuberculosis and viruses such as hepatitis and herpes. Shared mouthpieces and the heated, moist smoke may enhance the opportunity for such diseases to spread.¹³ Also, although limited research has been done in this area, the secondhand smoke from a waterpipe is potentially dangerous because it contains smoke from the tobacco itself as well as the smoke from the heat source used to burn the tobacco.¹⁴

More investigation is certainly needed to determine the health effects of both long- and short-term waterpipe use, as well as the relative risk of waterpipe use compared to other forms of tobacco use. However, the available research strongly indicates that waterpipe smoking presents many of the same risks as cigarette smoking and is not a safe alternative to smoking cigarettes.

Perceptions/Awareness/Prevalence

Despite the evidence that waterpipe smoking has health risks at least similar to cigarette smoking, the general perception is exactly the opposite. Waterpipe tobacco smokers generally believe that it is less harmful than cigarette smoking. Most smokers also believe that the water-filtration and extended hose serve as filters for harmful agents.¹⁵

In addition, because the smell, taste and smoothness of the sweetened tobacco purportedly provide a much less-irritating smoking experience, hookahs are considered more pleasant by many smokers. As a result, they may smoke for longer durations and inhale more deeply. Seasoned smokers may add ice, fruit juice, milk or wine to the water in the pipe to change the taste, texture or effect of the smoke. Most websites and chat boards that cater to hookah users point out the cost savings of using waterpipes rather than smoking cigarettes—another incentive. Yet, many waterpipe users also regularly smoke cigarettes.

Unfortunately, there is little data on U.S. prevalence of waterpipe use available. A recent study of 1671 mostly Arab-American teens, ages 14 to 18, in Michigan found that 27 percent had ever used a waterpipe. This percentage increased from 23 percent of 14 year-olds to 40 percent of 18 year-olds. The same study showed that waterpipe use is also a strong predictor of cigarette smoking. The researchers found that the odds were two times greater that teens who used hookahs would also be cigarette smokers. Even more concerning, they found the odds of a teen experimenting with cigarettes were more than eight times greater if they had “ever smoked” a waterpipe.¹⁶ Most studies related to prevalence are from the Middle East and Asia. If the U.S. trend grows to resemble international patterns, however, the data are disturbing. A study of Israeli youth, ages 12 to 18, found that 41 percent had used a waterpipe and 22 percent smoked at least every weekend.¹⁷

The rise in waterpipe use in the United States may be a result of marketing for hookah cafés geared toward 18- to-24-year olds. These young adults appear to be the fastest-growing population of hookah users, especially in and around colleges and universities. As hookah popularity

“A study of mostly Arab-American teens in Michigan found the odds of a teen experimenting with cigarettes were more than 8 times greater if they had “ever smoked” a waterpipe.”

and prevalence increase, the fact that many young hookah users also currently smoke cigarettes¹⁸ should be a cause for concern to policymakers, university administrators, and the general public.

Hookah Bars/Cafes

The discovery and popularity of hookahs and establishments that rent hookah pipes, have grown greatly in the United States in the past ten years.¹⁹ Most U.S.-based distributors of shisha were established within just the last five years.²⁰ As the Arab and Arab-American population in this country have grown, the availability and use of waterpipes has also become more commonplace.²¹ Hookah bars or cafés have sprung up in urban areas and cities and towns near large colleges or universities. Even a few of the states with strong smokefree air laws have been unable to slow the emergence of hookah bars and cafés. California, Illinois, New York, Texas and Virginia currently have the greatest number of these establishments, most of them located in major cities or near universities. However, hookah bars and cafés have appeared in more than two-thirds of the states. Based on U.S. business listings and categorized web-listings, an estimated 200 to 300 of them currently operate in the United States, with more appearing every day.²²

Trends/Marketing

Hookah smoking is commonly viewed as a social activity. Often done in groups of people who share one pipe and try different flavors throughout the evening, hookah smoking is seen as a relatively inexpensive way to “get together” and have fun. The expansion of the hookah bar and café industry, especially in inner cities and near universities and colleges where youth and young adults gather, illustrates the growth potential for hookah marketing and use.

Current marketing for hookah pipes and their specialized tobacco packs is fairly limited to specialized shops and online stores. The cafés and bars, on the other hand, are expanding rapidly to reach wider audiences. While online chats, blogs and other user sites are still a big part of the hookah culture in the United States, business owners are branching out. Advertisements in the nation’s 80 alternative, free weekly papers are very common, as are ads in college newspapers and magazines. Again, young urban adults and college students are the targets.

State Regulation/Legislation/Policies

Thirteen states and the District of Columbia currently prohibit smoking in almost all public places and workplaces, including restaurants and bars, and a number of states are expected to follow suit in the next several years. Unfortunately, smokefree air laws seem to have had the opposite effect on hookah establishments, bolstering them as they are often unaddressed or exempted from many laws. Fortunately, most state laws define smoking in a way that would include the use of hookahs, such as Delaware’s statute addressing “the burning of a lighted cigarette, cigar, pipe or any other matter or substance that contains tobacco.”²³ However, the language in some state laws could actually exempt hookah bars or cafés in one of three ways:

- As a “retail tobacco establishment”. This definition usually includes any business whose main purpose is the “sale of tobacco products, including, but not limited to, cigars, pipe tobacco and smoking accessories.”²⁴ Some states require these businesses to prove that no more than

“An estimated 200 to 300 hookah bars and cafes currently operate in the United States, in more than two-thirds of the states.”

25 percent of their “total annual revenues [are] generated by the sale of other products.”²⁵ However, many simply require that the sale of other products be only “incidental”.

- As a “tobacco bar/cigar lounge,” These are often defined as a business that “primarily is engaged in the retail sale of tobacco products for consumption by customers on the premises...”²⁶ While some states have requirements defining the percentage of tobacco sales revenues versus other product revenues, these statutes vary greatly. In the District of Columbia, Connecticut and New York, at least 10 percent of revenue must be gained through tobacco sales (tobacco/cigar bar); in New Jersey at least 15 percent (cigar bar); and in Rhode Island at least 50 percent (smoking bar).²⁷ In addition, some states require these businesses to prohibit persons under the age of 18 from entering.
- A few states have a waiver process if compliance would cause undue financial hardship on the business. These are usually highly restricted, must be proven through specific processes and often must be renewed regularly. However, as some hookah bars/cafés sell only minimal, and in some cases no, food or alcohol, they might be able to use this type of exemption to their advantage.

A chart of the states with the strongest smokefree air laws, and whether they have the exemptions listed above is included in this report on p.7.

Exemptions for hookah bars or cafés from state smokefree air laws have been raised during legislative hearings. During a hearing and vote on a bill to prohibit smoking in most public places and workplaces in the District of Columbia, the city council added an amendment exempting “tobacco bars” to the measure. The councilmember supporting the amendment argued that hookah bars/cafés should be exempt because tobacco use is the central focus of their business.²⁸

Attempts also have been made in various states to specifically regulate and control the spread of hookah bars/cafés. In California, some hookah lounges have been able to bypass the state smoke-free air law by making employees co-owners, thereby qualifying for exemption as an “establishment with no employees.”²⁹ While California state law prohibits smoking in most workplaces, it is allowed in retail or wholesale tobacco shops and private smoking lounges. Local communities have begun to pass ordinances to address and eliminate these loopholes.³⁰

As the public health community moves forward to protect workers, patrons and citizens from secondhand smoke in public places and workplaces, it will be important to address the hookah bar issue in new laws and regulations and, where possible, amend current laws to address and close loopholes.

Conclusions

Existing evidence on waterpipe smoking shows that it carries many of the same health risks and has been linked to many of the same diseases caused by cigarette smoking. Access to this “new” form of tobacco use continues to grow, especially in hookah cafes targeting 18-to-24-year olds. Waterpipes can become yet another inducement to smoking that appeal particularly to a younger audience attracted by the reportedly sweeter, smoother smoke. They may have an appeal similar to the sweeter, candy-flavored cigarettes and tobacco products that the tobacco industry has begun to market to young adults and youth who appear to be more attracted to these flavors than adults.³¹

More research is needed into the health effects of waterpipe use, and the patterns and process of beginning to use waterpipes amongst various populations. Since little data exist on prevalence of hookah use in the United States, national surveys on youth and adult tobacco use should consider adding a question on this topic. There also is virtually no research on the risks of secondhand smoke from waterpipe use.

To protect the public from the potential dangers of the growing waterpipe trend, the tobacco control community must work to correct the current misperceptions about the health risks of waterpipe smoking. Advocates also must ensure that new smokefree air laws include hookahs and the places where hookahs are smoked and remove loopholes from existing laws that make hookahs popular and accessible. Health care providers, quitlines and university administrators should also consider offering culturally appropriate cessation products and services to help waterpipe smokers attempt to quit.

STATE	Smokefree Workplaces (other than restaurants or bars)	Smokefree Restaurants (all areas of restaurants)	Smokefree Bars (all areas of bars)	Exceptions for Retail Tobacco Establishments	Exceptions for Tobacco/ Cigar Bar or Lounge	Waivers for Financial Hardship
Arizona	✓ effective 2007	✓ effective 2007	✓ effective 2007	✓		
Arkansas		✓		✓	N/A	
California		✓	✓	✓		
Colorado		✓	✓	✓	✓	
Connecticut		✓	✓		✓	
Delaware	✓	✓	✓			
Florida	✓	✓		✓	N/A	
Hawaii	✓	✓	✓	✓		
Idaho		✓		✓	N/A	
Louisiana	✓	✓		✓	N/A	
Maine		✓	✓	✓		
Massachusetts	✓	✓	✓	✓	✓	
Montana	✓	✓	✓ effective 2009			
Nevada	✓	✓		✓	N/A	
New Jersey	✓	✓	✓	✓	✓	
New York	✓	✓	✓	✓	✓	✓
Ohio	✓	✓	✓	✓		
Rhode Island	✓	✓	✓	✓	✓	
Utah	✓	✓	✓ effective 2009			
Vermont		✓	✓			
Washington	✓	✓	✓			
Washington DC	✓	✓	✓	✓	✓	✓

Chart based on information from <http://slati.lungusa.org> and text from the individual states' laws.

Notes

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- 7 Maziak W, Ward KS, Afifi Soweir, RA, Eissenberg T. "Tobacco smoking using a waterpipe: a re-emerging strain in a global epidemic," *Tob Control* 2004; 13: 327-333.
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- 14 World Health Organization. WHO Advisory Note: "Waterpipe Tobacco Smoking: Health Effects, Research Needs and Recommended Actions by Regulators," WHO 2005.
- 15 Knishkowsky B and Amitai Y. "Water-Pipe (Narghile) Smoking: An Emerging Health Risk Behavior," *Pediatrics* 2005 Jul; 116(1): e113-119.
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- 20 Information obtained by a telephone poll of several U.S.-and Canadian-based distributors as to start of business conducted in July 2006.
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- 23 Delaware Statutes, Title 16, Ch. 29 §2901 (11). (2002).
- 24 California State Labor Code §6404.5 9 (d)(4)(b) (1994).
- 25 Rhode Island General Laws, Title 23, Chapter 20.10-2 (11) (2004).
- 26 Massachusetts General Laws Chapter 270, §22. (2004).
- 27 Language taken directly from each state's law.
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- 29 Koch, Wendy, *Hookah trend is puffing along*. USA Today, December 28, 2005.
- 30 American Lung Association of California. "Dublin City Council Bans Hookah Bars," *Breath Matters*, 12/30/05 No. 130. <http://www.californialung.org/ALAC/enews0511.html>
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Beginning its second century, the American Lung Association works to prevent lung disease and promote lung health. Lung diseases and breathing problems are the leading causes of infant deaths in the United States today, and asthma is the leading serious chronic childhood illness. Smoking remains the nation's leading preventable cause of death. Lung disease death rates continue to increase while other leading causes of death have declined.

The American Lung Association has long funded vital research on the causes of and treatments for lung disease. It is the foremost defender of the Clean Air Act and laws that protect citizens from secondhand smoke. The Lung Association teaches children the dangers of tobacco use and helps teenage and adult smokers overcome addiction. It educates children and adults living with lung diseases on managing their condition. With the generous support of the public, the American Lung Association is "Improving life, one breath at a time."

For more information about the American Lung Association or to support the work it does, call 1-800-LUNG-USA (1-800-586-4872) or log on to www.lungusa.org.



Improving Life, One Breath at a Time

HOOKAH SMOKING

A Growing Threat to Public Health

Hookah (or waterpipe) smoking is gaining popularity nationwide, especially among urban youth, college students, and young professionals.^{1, 2} Despite the growing popularity and increased adoption of state and local smokefree workplace laws, hookah bars remain largely unregulated. In addition, many hookah smokers consider the practice less harmful than smoking cigarettes.³ This is troubling from a public health perspective since evidence shows that hookah smoking carries many of the same health risks and has been linked to many of the same diseases caused by cigarette smoking.² As the American Lung Association and its public health partners continue to move forward to protect workers and patrons from the harmful effects of secondhand smoke, it is vital that we address the health risks hookah use poses to youth and young adults, and close the loopholes in smokefree workplace laws that often exempt hookah bars.

Originating in ancient Persia and India, hookah smoking is a highly social activity during which users smoke tobacco filtered through a waterpipe

that is often shared by the group.⁴ Hookah tobacco often contains flavors, including candy and fruit flavors such as orange, white grape or chocolate mint, which help mask the harshness of smoking.⁵ Hookah smoking is most common in the United States among young adults ages 18 to 24; however, some studies suggest significant use among middle and high school students.⁶ Hookah smoking may serve as a bridge to other forms of tobacco use and is falsely perceived as less harmful than cigarette smoking.⁷

Hookah smoking has increased with the growth of retail establishments that rent waterpipes and sell the flavored tobacco mixtures. Laws and regulations governing the use of hookahs in public places vary from state to state and sometimes from community to community. In many communities, hookah bars and cafes are exempt from smokefree air laws. Given the well-documented dangers of tobacco smoke, stringent policies to limit hookah smoking—especially among youth—are needed to halt this emerging public health threat.



WHAT IS A HOOKAH AND HOW IS IT USED?

A hookah is a waterpipe used to pass charcoal heated air through a tobacco mixture and ultimately through a water-filled chamber. The charcoal or burning embers are placed on top of a perforated aluminum foil and the tobacco mixture is placed below. The user inhales the water filtered smoke through a tube and mouthpiece. The water lowers the temperature of the smoke. Hookahs are often shared by several users in a smoking session. The tobacco mixtures used in the hookahs are called shisha, boory, narghile, goza, arghileh, or hubble bubble. They vary in composition, with some having flavorings and additives that can reduce the nicotine content.

PREVALENCE AND RISK FACTORS

What We Know

Most national and state surveys of tobacco use do not track hookah smoking. As a result, the public health community must rely primarily on research conducted with college students and a limited number of state-based surveys to ascertain the extent of hookah use in the U.S. Despite these limitations, a troubling picture of this trend is emerging. Estimates of hookah use among college students over the past month and lifetime range from 9.5 percent to 20.4 percent and 41 percent to 48 percent, respectively.^{5, 8} In a sample of users from Memphis, Tennessee and Richmond, Virginia, researchers reported most users were younger than 26 years of age, male, and college graduates or students. Greater frequency of use was found among people who owned a waterpipe, shared hookahs with more than one other person, and were younger when they first used a hookah.²

In a recent national survey of 12th graders, 17 percent reported smoking a hookah within the past year.⁹ A survey of Arizona high school and middle school students found 10.3 percent and 2.1 percent reported having smoked a hookah, respectively.¹⁰ Data from the Florida Youth Tobacco survey indicate that 11 percent of high school students and four percent of middle school students reported using hookahs.⁶ Cigarette use and hookah use were found to be associated with each other, but it is unclear whether cigarette smoking leads to hookah smoking, vice versa, or an unknown third factor affects both.⁶ Middle school and high school students who viewed cigarettes as helpful in relieving stress and in social situations were more likely to report hookah use.⁶ Evidence also suggests 18 to 24 year olds who smoke cigarettes and marijuana, consume alcohol, or use other illicit drugs have higher rates of hookah use.⁸

FAR FROM SAFE

Why Hookah Use Needs Greater Attention

Hookah use carries many of the same health risks as cigarette smoking.

Hookah smoking appears to be associated with lung cancer, respiratory disease, and low birth weight in babies.¹¹ Changes measured in the amount of air moved in and out of the lungs when smokers breathe suggest that cigarette smoking and hookah smoking have similar effects on a person's breathing.^{12, 13} The combination of charcoal and tobacco is unique to hookah smoking and the charcoal has its own set of health effects in addition to the health effects associated with tobacco use.^{14, 12} Additionally, the use of shared mouthpieces during smoking sessions can spread infectious diseases such as tuberculosis, herpes, influenza, and hepatitis.¹⁴

Hookah smokers may be exposed to more nicotine than cigarette smokers.

Many users think hookah smoking is less addictive and exposes them to less nicotine than cigarette smoking.^{2, 15} As research on the health effects of waterpipe smoking increases, studies suggest hookah smokers may inhale larger amounts of smoke than cigarette smokers during a single smoking session.^{7, 11} Hookah smoking sessions are generally longer (1/2 hour or more) which results in considerably greater nicotine exposure.^{16, 5} In one study that pooled results from other similar studies looking at cotinine (a by-product of nicotine in urine and blood), researchers estimated daily waterpipe use to be equivalent to smoking 10 cigarettes a day.¹⁶ When smoking a hookah, very little nicotine is filtered out when the smoke passes through the water in the pipe, with less than a five percent decrease observed.¹⁶

Increased availability and flavored tobacco make hookah use attractive, especially to youth and young adults.

A recent review of the global waterpipe smoking trend suggests hookah use may "represent the second global tobacco epidemic since the cigarette."⁷ Hookahs are often smoked in private homes. Becoming increasingly common is patrons renting hookahs and purchasing flavored tobacco in public places such as bars, cafes, and lounges.^{5, 2, 6} Two-thirds of states have hookah bars and cafes.¹² Many of these establishments are located near college campuses and students can purchase pipes and accessories online.^{5, 2, 6} Additionally, some hookah establishments can cater to youth under the age of 21 as long as alcohol is not served.

continued on next page ➡

FAR FROM SAFE

Why Hookah Use Needs Greater Attention *(continued)*

Youth and young adults perceive hookah use as less dangerous than smoking cigarettes.

The increasing popularity of hookah smoking is in part driven by the social context in which use occurs (e.g., among friends in popular social settings), the attractive flavors used in the tobacco mixtures and the perception that it is safer and less irritating than cigarette smoking.^{2, 12, 14} *The American Journal of Public Health* recently published findings from the California Tobacco Study that showed a 40 percent increase in hookah smoking among California adults between 2005 and 2008, much of this use in young, college educated adults.¹⁷ Surveys of youth and young adults reveal that this population believes they will experience fewer health effects from hookah smoking than from cigarette smoking.^{2, 12} In a survey of attitudes among hookah smokers in Richmond and Memphis the majority of smokers believed that their risk of addiction is less, and reported that they could quit at any time.² Most reported that if they switched from cigarettes to hookahs it would reduce their health risks from tobacco.² Researchers also report that hookah smoke may be less irritating to smokers, presumably because the smoke is filtered through water before inhalation occurs.⁷

Regulatory environment is murky and varies from state to state.

Despite widespread adoption of smokefree workplace legislation in many states and localities, tobacco stores and hookah bars continue to operate. They are often exempted from the requirements that prohibit smoking in public places because they sell tobacco and are classified primarily as tobacco retail establishments. The retail exemption has sometimes been interpreted to mean that patrons can sample the tobacco products they purchase on site.¹⁸ Some establishments qualify for exemptions because they do not serve alcohol on the premises.¹⁸ The definition of smoking can also be an impediment to effective regulation and enforcement, because water pipe smoking is not consistently defined as smoking across jurisdictions.^{18, 20}

With the exception of menthol cigarettes, the U.S. Food and Drug Administration (FDA) prohibits the sale of cigarettes with “characterizing flavors” but does not regulate other flavored tobacco products such as those used in waterpipes. The FDA is currently examining options for regulating these products, which, according to a fact sheet posted on FDA’s website, the agency considers unsafe and harmful.¹⁹

REGULATING HOOKAH USE

What Some States and Local Governments Are Doing

In some states, bars and lounges that derive a portion of their income from the sale of non-cigarette tobacco products are exempt from smokefree workplace legislation that prohibits smoking in indoor public places.²⁰ New Jersey exempts bars and restaurants from their smokefree air ordinance if more than 15 percent of income is from sale of these products and in New York, a similar exemption applies if more than 10 percent of the income is derived from such sales.¹⁸ Michigan's 2010 'Smoke Free Air Law' prohibits hookah smoking unless an exemption as a tobacco specialty store is obtained, and as a tobacco specialty store they can't have any type of liquor, food or restaurant license. North Carolina limits hookah smoking to establishments that do not serve food or alcohol.²¹ Boston and Maine have ended their indoor-smoking exemptions that previously allowed customers at hookah bars to smoke indoors.¹

San Francisco recently applied California's state law prohibiting smoking inside enclosed workplaces to hookah establishments, prohibiting the serving of food or alcohol in those establishments and requiring that they be owner-occupied and located in commercial buildings.²² This local interpretation was necessary because the California state law does not explicitly reference hookah bars and lounges.²¹ Some communities in California seem to be interpreting state law differently, however, with Sacramento permitting indoor hookah smoking in family-owned establishments.²¹

POLICY RECOMMENDATIONS

A broad range of strategies are needed to reverse the accelerating trend of hookah use in the United States. To accomplish this objective, the American Lung Association recommends the following:

- 1 Close loopholes in state and local laws that exempt hookah bars.** States with smokefree workplace laws often include specific exemptions that enable hookah establishments to continue to allow smoking. In some states and local jurisdictions, hookah bars can qualify as tobacco retail stores, tobacco/cigar bars, private clubs, or owner-operated businesses. Exemptions for hookah bars should be closed in existing laws when possible and not included in new smokefree workplace laws.
- 2 Close loopholes in laws/regulations by clearly defining smoking to include waterpipes.** State laws should clearly include waterpipes in their definitions of smoking. This loophole has been used to exempt hookah bars from laws prohibiting smoking in public places and workplaces in some states.
- 3 FDA should assert authority over tobacco used in hookahs.** The U.S. Food and Drug Administration should assert authority over the manufacturing and marketing of tobacco used in waterpipes, and apply regulations to these products as needed to protect public health.
- 4 Prohibit flavorings in hookah tobacco.** Federal, state or local laws/regulations should be used to eliminate flavorings in hookah tobacco. Flavorings are one of the factors associated with increasing use in youth and young adults. Prohibiting flavors is likely to lessen the appeal of hookah smoking.
- 5 Include questions in national surveys to provide data on hookah use to the public health community.** National surveys such as the Behavioral Risk Factor Surveillance Survey (BRFSS) and the Youth Risk Behavior Survey (YRBS) should include questions about hookah smoking so that better estimates of national incidence and prevalence will be available for policymakers and public health professionals.
- 6 Implement and enforce laws prohibiting the sale of hookah tobacco and its smoking paraphernalia to minors.** The varying definitions of smoking in some jurisdictions allow minors to be admitted to establishments where hookahs are used and/or where paraphernalia is sold. Closing these loopholes will help prevent minors from purchasing hookah tobacco or its paraphernalia.
- 7 Use licensure requirements or zoning rules to regulate hookah establishments.** License and zoning requirements for the sale of tobacco, alcohol or food, hours of operation, age of patrons, and live music or belly dancing can be tools to restrict hookah bars and lounges. Some jurisdictions prohibit tobacco use and the sale of food and alcohol on the premises. Zoning regulations could prohibit hookah bars and lounges near college campuses.

In addition to the policy recommendations outlined above, alternate measures to discourage hookah use should also be considered. Prohibiting advertising in college newspapers or websites can help to discourage college students from frequenting hookah establishments. Additionally, public awareness campaigns that highlight the health effects of hookahs and counter the myths about reduced harm (compared to cigarette smoking) could help build public support for more effective regulations.

Conclusions A comprehensive approach to limiting access to hookah use is critical to averting a potentially deadly trend. Hookah smoking is a growing public health threat that may lead to a resurgence in tobacco use among vulnerable populations. Both the American Lung Association and the World Health Organization recommend that laws or regulations prohibiting cigarette or other tobacco use in public places apply to hookah smoking.¹⁸ Efforts should be made to restrict hookah use, especially among teens and young adults.

RESOURCES

**American Academy of Pediatrics
Julius P. Richmond Center of Excellence**
[www.aap.org/richmondcenter/
RCEwebinars.html#webinar2](http://www.aap.org/richmondcenter/RCEwebinars.html#webinar2)

American Cancer Society
[www.njgasp.org/ACS_Hookah_
Factsheet.pdf](http://www.njgasp.org/ACS_Hookah_Factsheet.pdf)

Americans for Nonsmokers' Rights
[www.no-smoke.org/goingsmokefree.
php?id=581](http://www.no-smoke.org/goingsmokefree.php?id=581)

**American Lung Association State
Legislated Actions on Tobacco Issues**
<http://slati.lung.org>

**Tobacco Free U.org
(The Bacchus Network)**
[www.tobaccofreeu.org/pdf/
HookahWhitePaper.pdf](http://www.tobaccofreeu.org/pdf/HookahWhitePaper.pdf)

Tobacco Control Network
[www.ttac.org/tcn/peers/other/
08.12.10.html](http://www.ttac.org/tcn/peers/other/08.12.10.html)

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