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**Testimony in Support of Raised Senate Bill 415
An Act Concerning State Oversight over Hookah Lounges
March 2, 2011**

Senator Gerratana, Representative Ritter and members of the Committee:

My name is Dr. Pat Checko. I am Chairman of the statewide MATCH Coalition (Mobilize Against Tobacco for Connecticut's Health). I have also worked as a clinical microbiologist and have graduate degrees in both infectious and chronic disease epidemiology. The MATCH Coalition strongly supports expanding the current definition of "smoke" or "smoking" in Sec. 19a-342 to include hookah and waterpipes.

In 2003 when the CT Clean Indoor Act was passed, hookah parlors and smoking tobacco through waterpipes was almost unheard of in the United States. However, in recent years there has been an alarming increase of waterpipe smoking, especially among college students and other young adults. For those of you not familiar with hookah smoking, I have attached some pictures and facts on how this actually works. Basically, 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. There are several myths regarding hookah:

Myth 1: Water acts as a filter removing impurities.

Fact 1: Water cools and humidifies the smoke so it feels less harsh, and the humidified vapor is even more penetrating.

Myth 2: Smell, taste and smoothness of sweetened tobacco provide less irritation.

Fact 2: Persons smoke for longer periods (45 min-1 hr) and inhale more deeply.

Myth 3: Less tobacco = less impurities.

Fact 3: Hookah contains tobacco and other additives that are unregulated.

Commonly used heat sources (wood cinders or charcoal) also release high levels of potentially dangerous chemicals, including carbon monoxide and heavy metals.

Myth 4: Waterpipes are safe and can't make you sick.

Fact 4: Smoking waterpipes have been associated with tuberculosis and hepatitis.

Waterpipes and their accessories cannot be safely sanitized and are not sterile.

The process itself creates potential for exposure to germs, toxins and chemicals.

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It is to this final myth that I would like to address, what my colleagues refer to as the “ickies” associated with hookah. Others will talk about the issue that the products used in hookah are not regulated and do not meet any required standards and represent a hazard in themselves.

Waterpipes are intended to be reused (cleaned between use by multiple individuals) and to be shared (there are models that have multiple hoses, and people do share the same mouthpiece). The shared mouthpieces and the heated, moist smoke enhances the spread of diseases such as tuberculosis, hepatitis and herpes.

Waterpipe smoke, like cigarette smoke, contains significant amounts of cancer causing ingredients, such as arsenic, cobalt, chromium and lead. Smoke from a waterpipe also contains carbon monoxide (CO) in amounts up 10 or 11 times greater than cigarettes and have been associated with acute carbon monoxide poisoning. But unlike cigarettes, the waterpipe may also contain charcoal or wood cinder combustion products from the heat source used to burn the tobacco, increasing heavy metal vapors and other cancer-causing agents in the smoke.

The secret to hookah is slow heating of cold water vapor. Unfortunately, contrary to public belief, our water is not sterile, it is sanitized. There are many germs that grow very happily in water and I’m sure you’ve heard of or seen some yourself, growing in the flower water and turning it green (*Pseudomonas*), leaving pinky scum in your humidifier or bath tub (*Acinetobacter*). And you all remember the veterans who developed “Legionnaire’s Disease” back in 1976 at a veterans’ convention. That bacterium, *Legionella*, is one tough critter that grows to very high levels in cold water and is even hyperthermic (it loves hot water too). So the use of water and various additives creates a veritable soup of germs, carcinogens and toxins that cannot be filtered out.

And lastly there is the issue of sanitizing or sterilizing the equipment and accessories. It is current practice to rinse the bowls, mouthpieces and tubing before reuse. In preparing for this testimony I watched several videos showing how to clean waterpipes with lemon juice or vinegar and even rubbing alcohol and salt. There are also a number of commercial cleaning agents recommended. I’m sure that none of these are EPA approved for this purpose. And at least one person advised never to use soap and water to clean your hookah, as it can contaminate the taste of the smoke! Bottom line, these methods don’t cut it. Hepatitis, herpes and respiratory viruses and bacteria are not killed by a quick rinse or even 5 minutes of salt and rubbing alcohol. Years ago, we used cold sanitizing solutions in hospitals for tubing that went down peoples’ throats into their lungs. It didn’t work, people got sick from the germs that were resistant to the sanitizing agent. Short of autoclaving all the parts of the pipe every time they are used, there is no sanitizing process that can guarantee they are germ free.

The myth of hookah is that it is a safe alternative to cigarettes. But the reality is that it is not; whether you examine how the practice of heated tobacco increases the risk of toxins, nicotine and carcinogens or how it may increase the risk of exposure to communicable diseases.

Added to these issues is the fact that hookah is often associated with food and drink. Two of the four known hookah lounges are owned and operated by persons who also have licensed restaurants where use of tobacco products are clearly banned. Can you take your food next door? Do you close the restaurant at a certain hour and just serve hookah? The answer is simple. Hookah needs to be regulated the same way that cigarettes, pipes, and cigars are.



Hookah and Waterpipes Fact Sheet

Senate Bill #415



Hookah smoking, which started in the Middle East, involves burning flavored tobacco in a waterpipe and inhaling the smoke through a long hose.

- Waterpipes also go by the following names: shisha, boory, goza, narghile, nargile, arghile, and hubble bubble.
- The most common form of tobacco smoked in a waterpipe is called Maassel, which is sweetened with such flavors as apple, mint, or cappuccino.
- Most common in areas of Asia and the Eastern Mediterranean Region, hookah bars have become popular in the United States as well, particularly among college students and other young people.

Smoking waterpipes, as well as breathing secondhand smoke from waterpipes, poses a serious risk to the smoker and non-smokers.

- **Waterpipe smoke, like cigarette smoke, contains significant amounts of cancer causing ingredients, such as arsenic, cobalt, chromium and lead.** In addition, smoke from a waterpipe contains carbon monoxide (CO) in amounts equal to or greater than that from cigarettes.
- **Waterpipe smokers can be exposed to sufficient doses of nicotine to lead to addiction.** Waterpipe smoke produces similarly increased blood nicotine levels and increases in heart rate as cigarette use.
- **Unlike cigarettes, waterpipe smoke may also contain charcoal or wood cinder combustion products** from the heat source used to burn the tobacco, increasing the cancer-causing agents in the smoke
- **Smokers of waterpipes may be exposed to even more smoke than cigarette smokers** because an average hookah session lasts 40-45 minutes vs. 5-10 minutes for a cigarette. Because of the duration of the session, a hookah smoker may inhale the equivalent of 100 cigarettes during a single sitting. (That's 5 packs of cigarettes.)
- **Waterpipe smoke is associated with increased risk of disease** including cancer, heart disease, lung disease, and adverse effects during pregnancy. In addition, the sharing of a hookah mouthpiece increases the user's risk for communicable diseases, such as tuberculosis and hepatitis.

The World Health Organization (WHO) issued an advisory on waterpipe tobacco smoking in 2005 addressing the health effects of waterpipe smoking and recommended the following regulatory actions:

- Waterpipes and their tobacco should be regulated in the same way as cigarettes and other tobacco products.
- Waterpipes and waterpipe tobacco should include strong health warning labels and should be prohibited from making any harm reduction claims.
- Waterpipes should be prohibited in public places in the same manner as cigarette and other tobacco smoking.
- Waterpipes should be included in comprehensive tobacco control plans to address prevention and cessation.

Massachusetts, New Hampshire, New Jersey and Rhode Island have expanded their statewide smoke-free policies to include hookah smoking by defining “smoke” and “smoking” broadly. Connecticut should do the same.

Evidence suggests that smoking waterpipes and being exposed to secondhand smoke from waterpipes are associated with a high degree of health risk. The WHO has noted that smoking tobacco from a waterpipe is not a safe alternative to smoking cigarettes and states the importance of including waterpipes in all tobacco regulation. The MATCH Coalition, as well as our partners, the American Cancer Society, the American Lung Association and the American Heart Association, supports a bill to ban hookah smoking in the state of Connecticut through passage of strong smoke-free laws to protect people from the harms of secondhand smoke from all tobacco products.

References:

1. American Lung Association, *An Emerging Deadly Trend: Waterpipe Tobacco Use*, February 2007.
2. World Health Organization. Tobacco Regulation Advisory Note. *Water Pipe Tobacco Smoking: Health Effects, Research Needs and Recommended Actions by Regulators*. Geneva: World Health Organization, Tobacco Free Initiative, 2005.
3. Maziak, W, Ward, KD, Afifi Soweid, RA, Eissenberg, T. (2004). Tobacco smoking using a waterpipe: a re-emerging strain in a global epidemic. *Tobacco Control*, 13, 327-333.

Chemicals found in hookah vs. cigarette smoke

Chemical	Yield from 1 gm hookah tobacco	Yield from cigarette smoke, 1 gm tobacco	Multiple of average cigarette smoke value
"Tar," mg	802	Range: 1-27 Average: 11.2	100-fold
Nicotine, mg	2.95	Range: 0.1-2 Average: 0.77	4-fold
Carbon monoxide CO, mg	143	Range: 1-22 Average: 12.6	11-fold
PAH Phenanthrene, µg (co-carcinogen)	0.748	0.2-0.4	2.5-fold
Fluranthracene, µg (co-carcinogen)	0.221	0.009-0.099	4-fold
Chrysene, µg (tumor initiator)	0.112	0.004-0.041	5-fold

Shahadeh, A. and Saleh, R. (2005). Polycyclic aromatic hydrocarbons, carbon monoxide, "tar", and nicotine in the mainstream smoke aerosol of the narghile water pipe. *Food & Chemical Toxicology*, 43:655-661.

What Is Hookah?

Waterpipes generally consist of 4 main parts:

1. Head – where tobacco heated
2. Bowl – filled with liquid
3. Pipe – connects the bowl to the base
4. Hose / mouthpiece – through which smoke is inhaled.

