



To: Dane County Board of Supervisors
From: Janel Heinrich, Director,
Public Health Madison Dane County
Date: September 21, 2015
Re: Prohibiting Electronic Smoking Devices in Dane County Public Workplaces

Since the smoke-free indoor law went into effect a little over five years ago, Wisconsin communities have come to expect clean indoor air. However, Electronic Smoking Devices (ESD) use threatens this standard and makes enforcement confusing. It is important to protect Dane County's clean indoor air by including ESD's in the current smoke-free air law.

What are Electronic Smoking Devices?

Electronic Smoking Devices are oral devices that can be used to simulate smoking and produce an aerosol of nicotine and/or other substances and chemicals. These devices are also known as e-cigarettes, e-hookahs, hookah pens, vape pens, vaporizers, e-cigars and e-pipes. ESD's are often available in flavors that may appeal to children and teens, including cotton candy, chocolate, strawberry and mint.

Why add ESD's to the current smoke-free air law?

ESD's are unregulated and haven't been proven safe

- ESD's aren't regulated by any federal agency, meaning there are no consistent manufacturing standards from brand to brand and users do not know what they are being exposed to.
- Studies have shown that use of ESD's can cause short-term lung changes and irritations

ESD's produce more than just water vapor

- Research published in the peer reviewed journal of Tobacco Control identifies at least 10 carcinogens or toxins emitted from ESD's that contain high levels of Nicotine, Formaldehyde, Acetaldehyde, Benzene, and heavy metals such as lead, tin, nickel, and chromium¹
- A September 2015 report by the Center for Environmental Health found that the majority of 97 ESD products tested produce high levels of Formaldehyde and Acetaldehyde²
- A study published by the International Journal of Indoor Environment and Health; Indoor Air found aerosol emitted by the user contains Nicotine, Acetone, Formaldehyde, Acetaldehyde, Propanol, Diacetyl, Triacetyl, Volatile Organic Compounds (VOC's), and ultrafine particles, thus resulting in passive vaping³
- A study published in the journal of Solar Energy shows that heating Propylene Glycol (an ingredient used in ESD's) changes its chemical composition producing small amounts of propylene oxide, a known carcinogen⁴

Major Health Organizations support including ESD's in workplace laws⁵

- World Health Organization
- American Public Health Association
- National Institute for Occupational Safety and Health
- American Industrial Hygiene Association
- American Association for Cancer Research
- American Society for Clinical Oncology
- American Cancer Society – Cancer Action Network (CAN)

Studies showing safe health effects have been funded by the e-cigarette industry

A recent study from Public Health England indicated ESD's are 95% less harmful than tobacco. However, a disclaimer at the end of the study recognizes a potential conflict of interest. This is because the researchers of this study were funded by the e-cigarette industry.

The State Legislature is attempting to preempt local authority to regulate ESD's:

This legislative session, Rep. Joel Kleefisch introduced a bill that would exempt ESD's from the WI smoke-free air law, allowing ESD's to be used in any workplace. Additionally, it would preempt local authorities to include ESD's in local ordinances.

PHMDC recommends ESD's be included in the Dane County smoke-free air law

Public Health Madison Dane County recommends that the Dane County Board include ESD's in Dane County's smoke-free air law. This will help protect the health of workers from potential adverse secondhand aerosol exposure and ensure our indoor air stays clean. This ordinance amendment demonstrates Dane County's continued commitment to policy that supports public health.

References

- ¹Goniewicz, M., Knysak, J., Gawron, M., Kosmider, L., Sobczak, A., Kurek, J., Prokopowicz, A., Jablonska-Czapla, M., Rosik-Dulewska, C., Havel, C., Jacob, P., & Benowitz, N. (2014). Levels of selected carcinogens and toxicants in vapour from electronic cigarettes. *Tobacco Control*, 23(2), 133-139. Retrieved from <http://tobaccocontrol.bmj.com/content/early/2013/03/05/tobaccocontrol-2012-050859.abstract>.
- ² Center for Environmental Health. (September 2015). A smoking gun: Cancer-causing chemicals in e-cigarettes [Report]. Retrieved from <http://www.ceh.org/campaigns/legal-action/current-work/e-cigs/>.
- ³ Schripp, T., Markewitz, D., Uhde, E., & Salthammer, T. (2013). Does e-cigarette consumption cause passive vaping? *Indoor Air*, 23(1): 25-31. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/22672560>.
- ⁴ Henderson, T., Clark, C., Marshall, T., Hanson, R., & Hobbs, C. (1981). Heat degradation studies of solar heat transfer fluids. *Solar Energy*, 27(2), 121-128. Retrieved from www.sciencedirect.com/science/article/pii/0038092X81900335.
- ⁵ Americans for Nonsmokers' Rights. (July 2015). Electronic smoking devices and secondhand aerosol [Fact Sheet]. Retrieved from <http://no-smoke.org/pdf/ecigarette-secondhand-aerosol.pdf>.