

**Public Health Committee**  
**Public Hearing – March 4, 2019**  
**House Bill 7200 An Act Prohibiting the Sale of Cigarettes, Tobacco Products, Electronic Nicotine Delivery Systems and Vapor Products to Persons Under Age Twenty-One**

**Patricia J. Checko, Dr.PH., M.P.H.**

Thank you for the opportunity to testify in favor of HB 7200 which would ban sale of all tobacco products, including Electronic Nicotine Delivery Systems ( ENDS) and vaping products to age 21. This is a well-written and complete bill that addresses all the right points. It is critical to pass the bill that benefits the public and our children rather than one that benefits the industry. I strongly support passage of the proposed legislation.

I would like to address the elephant in the room regarding electronic cigarettes as effective smoking cessation alternatives, particularly in light of the recently published British study by Peter Hajek et.al.in the NEJM (January 31, 2019) that concluded that ENDS were more effective at stopping cigarette smoking than nicotine-replacement therapy, when both products were accompanied by behavioral support. While there are differing opinions about the study design and conclusions, there is one outstanding notable outcome – among participants with **sustained abstinence from cigarettes at 1 year**, 63 of 79 (80%) in the e-cigarette group were still using e-cigarettes, whereas only 4 of 44 (9%) in the nicotine-replacement group were still using nicotine replacement. So, in the e-cig group, 80% of those who stopped smoking continued abstinence from cigarettes but NOT from nicotine. So if we redefine successful sustained abstinence as including both cigarettes and nicotine, then, in fact, the rate in the NRT group is twice as successful in sustained abstinence from cigarettes as e-cigarettes. Clearly they did not end the addiction to nicotine, and may just be changing the delivery system to supply it.

Nicotine replacement therapy works by helping with withdrawal symptoms and the cravings, and also deals with the ritual of smoking a cigarette, or using electronic cigarettes or vaping devices. For those of you who are former or current users of either, think about the ritual associated with them; whether socializing, having coffee or drinks with friends, or using it as a stress reduction mechanism. That nicotine and however it is delivered is part of our persona. Nicotine replacement therapy, when successful, ends the nicotine dependence and the rituals!

We all know that cigarette purchases and use have decreased, and the industry needs to prepare to move society to a new nicotine delivery system to addict new generations of youth. It's still too early to determine the long term effects of that nicotine and the other products associated with vaporizing it. There is growing evidence that e-cigarette use can be harmful to the lungs, promoting conditions such as chronic bronchitis, and that teens might be particularly susceptible.

There are concerns about what vapor — and the particles it releases in the body — will do to the lungs and cardiovascular system over time, as well as whether they'll put users at a higher risk of cancer. These concerns are especially acute for youth who weren't smoking but are now vaping and whose developing bodies and brains are more susceptible to the effects of nicotine.

Some other information about the health effects of e-cigarettes:

- A study from the University of North Carolina found that the two primary ingredients found in e-cigarettes—propylene glycol and vegetable glycerin—are toxic to cells and that the more ingredients in an e-liquid, the greater the toxicity.
- E-cigarettes produce a number of dangerous chemicals including acetaldehyde, acrolein, and formaldehyde. These aldehydes can cause lung disease, as well as cardiovascular (heart) disease.
- E-cigarettes also contain acrolein, a herbicide primarily used to kill weeds. It can cause acute lung injury and COPD and may cause asthma and lung cancer.
- Both the U.S. Surgeon General and the National Academies of Science, Engineering and Medicine have warned about the risks of inhaling secondhand e-cigarette emissions, which are created when an e-cigarette user exhales the chemical cocktail created by e-cigarettes.

I would also recommend one amendment that I believe would make this bill better – the elimination of all flavorings. While the industry would like to retain menthol, mint and wintergreen, there is strong evidence that these flavors when added to cigarettes were used to target smokers and was particularly successful among minority populations. There is no benefit accrued from this addition, other than to mask or reduce the irritation and burning of unadulterated tobacco and nicotine.