

SB3 MDDCSAM Favorable

Uploaded by: Adams, Joe

Position: FAV

SB 3: Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation.
(Sen McCray). Budget and Taxation Committee January 29, 2020

SUPPORT

MDDCSAM is the Maryland state chapter of the American Society of Addiction Medicine whose members are physicians and other health providers who treat people with substance use disorders.

Each of the components of SB 3 will advance public health and prevent disease in a significant proportion of Marylanders.

Increased tobacco taxes lead to a predictable decrease in tobacco use. The price elasticity of tobacco demand in the U.S. has been measured at -0.37, according to the World Health Organization. It is possible to predict that, for an overall price increase of 20%, for example, tobacco use would decrease by $0.37 \times 20\%$, a 7.4% drop in consumption in this example.

Health care providers counsel and assist tobacco users in quitting. Even though short-term quit rates are low, this is still considered to be the most cost-effective intervention in medicine with the exception of vaccinations, because tobacco use is the leading cause of preventable death in the U.S. Tax increases will be even more effective at preventing the most common causes of death and disease in the U.S. including cerebrovascular disease, lung disease, cancer, and many others.

About 90% of cigarette users have tobacco use disorder; they would want to quit if there were an easy way to do so, sometimes with ambivalence, but feel they are unable.

E-cigarettes have been promoted as an aid to smoking cessation. It is possible that this has helped some individuals to quit tobacco.

However, it has become abundantly clear that these products have resulted in a rapidly growing epidemic of addiction among people who never used tobacco, particularly young people. Also, there are seven FDA-approved medications to treat nicotine addiction including nicotine replacement therapies (gum, patch, lozenge, inhaler and nasal spray), and two non-nicotine therapies.

Now that the harms of E-cigarettes have become obvious, the need to reduce the fast-moving epidemic of nicotine addiction through E-cigarettes has become urgent.

BaltimoreCounty_FAV_SB0003

Uploaded by: Byrne, Julia

Position: FAV



JOHN A. OLSZEWSKI, JR.
County Executive

CHARLES R. CONNER III, ESQ.
Chief Legislative Officer

KIMBERLY S. ROUTSON
Deputy Legislative Officer

JOEL N. BELLER
Assistant Legislative Officer

BILL NO.: SB 3

TITLE: Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation

SPONSOR: Senator McCray

COMMITTEE: Budget and Taxation

POSITION: **SUPPORT**

DATE: January 29, 2020

Baltimore County **SUPPORTS** Senate Bill 3 – Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation. The bill aims to reduce smoking and the use of electronic smoking devices by increasing the tax rate of tobacco products and electronic smoking devices, and provides additional funds for activities aimed at reducing tobacco use.

In Baltimore County, we place high value on the health and wellbeing of our youngest residents. The recent spate of vaping-related illnesses is deeply disturbing, and a reflection of the negative impact e-cigarettes have had on young people. In 2015, the U.S. Surgeon General reported that e-cigarette use among high school students had increased by 900%. This enabling legislation proposes appropriations for programs to reduce tobacco use, while also regulating e-cigarettes the same way traditional cigarettes are regulated.

Baltimore County is concerned about nicotine addiction in our communities. If there is resulting grant funding for support and development of activities centered on reduction of tobacco use, the Baltimore County Health Department plans to utilize it to limit the impact of tobacco use.

Accordingly, Baltimore County requests a **FAVORABLE** report on SB 3. For more information, please contact Chuck Conner, Chief Legislative Officer, at 443-900-6582.

SB3 American Lung Association Favorable

Uploaded by: Casper, Aleks

Position: FAV

American Lung Association Testimony SB 3
Budget and Taxation Committee
January 29, 2020

Chairman Guzzone and Members of the Committee:

Thank you for the opportunity to provide comments on Senate Bill 3, Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation sponsored by Senator McCray. The American Lung Association strongly supports this bill as a proven way to address the youth tobacco epidemic and encourage current smokers to make a quit attempt.

The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease, through research, education and advocacy. The work of the American Lung Association is focused on four strategic imperatives: to defeat lung cancer; to improve the air we breathe; to reduce the burden of lung disease on individuals and their families; and to eliminate tobacco use and tobacco-related diseases.

One of the most effective ways to reduce tobacco use is to significantly increase the tax on all tobacco products, including e-cigarettes. Multiple studies have shown that every 10 percent increase in the price of cigarettes reduces consumption by about four percent among adults and about seven percent among youth. As proposed in Senate Bill 3 the Lung Association supports the increased in cigarette taxes by \$2.00 per pack and equalizing the tax on other tobacco products including e-cigarettes. We encourage the legislature to remain firm with the figures proposed in the bill as the evidence shows that increases must be significant in nature to realize public health benefits. Insignificant or gradual increase in price of tobacco products can be easily counteracted with industry tactics such as coupons and price discounts.

As part of the effort to combat the youth e-cigarette epidemic taxing all tobacco products at a comparable rate to combustible cigarettes is imperative, as youth smokers are especially price conscious, therefore keeping the price of tobacco products high is one of the most effective steps we can take to prevent youth tobacco use. When the price of cigarettes goes up, youth smoking rates decline. The measure before you would equalize the tax on all tobacco products – including e-cigarettes. We have recently seen another dramatic and extremely troubling rise in high school e-cigarette use. In new data from the 2019 National Tobacco Youth Survey, e-cigarette use soared by another 32 percent among high school students from 2018-2019 showing that 27.5 percent of high school users have used e-cigarettes in the last month, compared to 11.7% in 2017 and 20.8% in 2018. This

equals more than 5 million middle and high school students who now use e-cigarettes. The tobacco industry has continued to target youth users with marketing of these products which have made them appealing for youth users to initiate tobacco use, with many youth not realizing that these products contain nicotine and then struggling with a lifetime of addiction. The Lung Association is encouraging states to look at evidence-based policy measures to address this epidemic, including increasing the price of these products. If there is not an equalized tax rate on all other tobacco products, current users may just switch to lower priced products versus taking the steps to quit.

The revenue generated from the proposed increased tax should be used to restore much needed funding of \$21 million to the Department of Health for tobacco control programs. Increased funding for tobacco control programs is critical to Maryland as current tobacco use, including vaping, among youth is 21.6%. An investment in prevention is integral especially given the skyrocketing number of youth who are vaping and using flavored tobacco products. Despite Maryland receiving \$513.4 million from tobacco settlement payments and tobacco taxes, the state funds tobacco control efforts at only 26.8% of the level recommended by the Centers for Disease Control and Prevention (CDC). The American Lung Association believe the funds should be used to support the health of our communities, and to prevent tobacco use and help smokers quit, not switch.

The Lung Association thanks the Maryland General Assembly for their commitment to the health and wellbeing of the residents of Maryland and the desire to protect Maryland youth from a lifelong tobacco and nicotine addiction. The Lung Association strongly supports Senate Bill 3 and encourages swift action to move the bill out of committee and passage by the General Assembly.

Sincerely,



Aleks Casper
Director of Advocacy, Maryland
202-719-2810
aleks.casper@lung.org

NCADD FAV sb 3

Uploaded by: CIEKOT, ANN

Position: FAV



**Senate Budget & Taxation Committee
January 29, 2020**

**Senate Bill 3
Electronic Smoking Devices, Other Tobacco Products, and Cigarettes -
Taxation and Regulation**

Support

NCADD-Maryland supports Senate Bill 3. Increasing tobacco taxes saves lives by reducing teen and adult smoking. It also reduces short- and long-term health care costs. These are facts proven by decades of experience, including here in Maryland. A report issued by the Abell Foundation in 2018 found:

“Following the \$1.00 per pack cigarette tax increase in 2008, smoking by Maryland adults decreased by 26 percent among current smokers between 2011 and 2016. Among Maryland high school students there was a 47 percent reduction in students who reported smoking a cigarette in the preceding 30 days, as well as a decline in frequent smoking between 2007 and 2015.”

Just like other drugs, nicotine is an addictive substance complete with cravings and withdrawal symptoms when a person tries to quit. It is smart public policy to increase the tobacco tax as the greatest impact of doing so is reducing smoking among young people. People who don't smoke are generally healthier, give birth to healthier babies, and live longer. Senate Bill 3 will also make sure that electronic smoking devices are subject to taxes.

We urge a favorable report on Senate Bill 3.

The Maryland Affiliate of the National Council on Alcoholism and Drug Dependence (NCADD-Maryland) is a statewide organization that works to influence public and private policies on addiction, treatment, and recovery, reduce the stigma associated with the disease, and improve the understanding of addictions and the recovery process. We advocate for and with individuals and families who are affected by alcoholism and drug addiction.

ACS CAN_FAV_SB3

Uploaded by: Collins, Jocelyn

Position: FAV



January 29, 2020

**TO: The Honorable Guy Guzzone, Chair
The Honorable Jim Rosapepe, Vice Chair
Members of the Senate Budget and Taxation Committee
3 West
Miller Senate Office Building
Annapolis, MD 21401**

**FROM: Jocelyn Collins, Maryland and DC Government Relations Director
American Cancer Society Cancer Action Network, Inc.
555 11th St. NW, Suite 300
Washington, DC 20004**

**SUBJECT: SB 3 Electronic Smoking Devices, Other Tobacco Products, and
Cigarettes—Taxation and Regulation**

Position: SUPPORT

The American Cancer Society Cancer Action Network (ACS CAN) is the nonprofit, nonpartisan advocacy affiliate of the American Cancer Society. We support evidence-based policy and legislative solutions designed to eliminate cancer as a major health problem. On behalf of our constituents, many of whom have been personally affected by cancer, we stand in strong support of SB 3. We urge you to vote “favorably” on this life-saving legislation to increase the tax on cigarettes by \$2.00 per pack and increase the tax on all other tobacco products, including electronic smoking devices to 86% of wholesale to prevent kids from starting to use tobacco and help adults quit.

In 2020, it is estimated that approximately 34,710 Maryland residents will be diagnosed with cancer while 10,790 will die from the disease.¹ 27.3% of cancer deaths in Maryland are attributable to smoking according to the American Cancer Society.²

Here in Maryland 18.2% of adults use any tobacco product, including 12.5% who use cigarettes.³ Tobacco product use among youth is much too high, 5.0% of Maryland high school students smoke cigarettes, 6.0% smoke cigars, 4.6% use smokeless tobacco, and 23% use electronic smoking devices.⁴

While the personal toll of tobacco is high, this deadly product also costs the U.S. economy billions of dollars in preventable health care expenditures and lost worker productivity. Total health care costs, public and private, spent on smoking-caused disease in our state each year now stands \$2.71 billion.⁵ As

¹ American Cancer Society. Maryland Cancer Facts and Figures 2020. Atlanta: American Cancer Society; 2020.

² Lortet-Tieulent J, Goding Sauer, A, Siegel, RL, Miller, KD, Islami, F, Fedewa, SA, Jacobs, EJ, Jemal A. State-Level Cancer Mortality Attributable to Cigarette Smoking in the United States. JAMA Internal Medicine. Published online October 24, 2016.

³ Maryland Department of Health. BRFSS 2018. Unpublished. Local Health Department Tobacco Control Meeting, November 21, 2019.

⁴ Maryland Department of Health. YRBS/YTS 2019. Unpublished. Local Health Department Tobacco Control Meeting, November 21, 2019.

⁵ Campaign for Tobacco-Free Kids. The Toll of Tobacco in Maryland. Updated January 15, 2020. https://www.tobaccofreekids.org/facts_issues/toll_us/maryland

a consequence of this, Maryland residents pay \$682 per household annually in additional state and federal taxes to cover smoking-caused government expenditures.⁶

SB 3 is supported by strong science and evidence. The 2014 U. S. Surgeon General Report, *The Health Consequences of Smoking – 50 years of Progress* concludes that increases in the price of tobacco products, including those resulting from excise tax increases, prevent initiation of tobacco use, promote cessation, and reduce the prevalence and intensity of tobacco use among youth and adults.⁷ This conclusion reaffirms findings from previous Surgeon General’s reports on tobacco use that raising the price of tobacco is one of the most effective tobacco prevention and control strategies, and that increasing the price of cigarettes and tobacco products decreases the prevalence of tobacco use, particularly among youth and young adults.⁸ [A bibliography that lists other peer-reviewed publications and reports that attest to the health benefits of tobacco tax increases is appended to this testimony.]

Additionally, the 2020 Surgeon General *Smoking Cessation: A Report of the Surgeon General* backs up previous findings. The Surgeon General states that, “population-based strategies are aimed at influencing tobacco cessation at a macro level by motivating smokers to quit and by providing an environment that supports or simplifies efforts to quit or lowers barriers to quitting that smokers might encounter.”⁹ He also notes that, “population-based strategies include increasing the price of and/or the tax on cigarettes and other tobacco products, restricting where tobacco can be used by implementing smoke-free and tobacco-free policies, and adequately funding tobacco control programs at the state level will decrease prevalence of tobacco use.”¹⁰

ACS CAN, in partnership with the Campaign for Tobacco-Free Kids and Dr. Frank Chaloupka and his Tobacconomics research team, has developed a projections model to estimate the public health and economic benefits produced by significant increases in state cigarette excise taxes. This predictive model is constantly being updated as new data comes in, and it incorporates data from the 48 U.S. states who have increased their cigarette taxes 144 times since 2000. In support of SB 3, our research projections estimate that increasing Maryland’s cigarette tax by \$2.00 per pack would generate \$97.43 million in new annual revenue for the state as well as:

- Reduce youth smoking by 20.8%.
- Prevent 17,500 kids under 18 from becoming adults who smoke.
- Help 37,200 adults who currently smoke quit.
- Prevent 14,500 premature smoking-caused deaths.
- Provide \$1.11 billion in long-term health care cost savings from adult and youth smoking declines.

Increasing the tax on all other tobacco products at the same time would produce additional health and economic benefits for Maryland.

It is important to keep in mind that the health and revenue impact of tobacco tax increases is largely dependent on the policy creating a significant and sustained change in the real *price* of tobacco products at the retail level, and also on the degree to which the price increase applies to *all* product categories.

Ensuring that the tax increase is applicable to all categories of tobacco products including electronic

⁶ Ibid

⁷ U.S Department of Health and Human Services (HHS). *The Health Consequences of Smoking – 50 Years of Progress: A Report of the Surgeon General*. Atlanta, GA. U. S. Department of Health and Human Services, Centers for Disease Control and Prevention and Health Promotion, Office of Smoking and Health; 2014. Available at <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/exec-summary.pdf>.

⁸ HHS, 2014.

⁹ U.S Department of Health and Human Services (HHS). *Smoking Cessation: A Report of the Surgeon General- Executive Summary*. Rockville, MD. U. S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General; 2020. Available at <https://www.hhs.gov/sites/default/files/2020-cessation-sgr-executive-summary.pdf>.

¹⁰ U.S Department of Health and Human Services (HHS). *Smoking Cessation: A Report of the Surgeon General- Executive Summary*. Rockville, MD. U. S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General; 2020. Available at <https://www.hhs.gov/sites/default/files/2020-cessation-sgr-executive-summary.pdf>.

smoking devices will greatly benefit tobacco prevention and cessation outcomes, in addition to the state's balance sheet, by discouraging consumers from switching to lower-taxed, lower-cost products. If not all products are priced equally, simply stated, Maryland can expect to see diminished positive outcomes as a result. Currently in Maryland, other tobacco products have an excised tax of 30% of wholesale for other tobacco products, 70% of wholesale for cigars, 15% of wholesale for premium cigars, and electronic smoking devices do not receive an excise tax at all. We should not allow such highly addictive products to avoid being taxed the same rate as cigarettes.

The good news is that a cigarette tax increase of \$2.00 per pack with parity on all other tobacco products, including electronic smoking devices at 86% wholesale as contained in SB 3 will result in a significant price increase, providing a strong antidote to the aggressive marketing tactics being employed by tobacco companies. In Maryland, tobacco manufacturers are currently spending \$126.2 million each year to market their deadly and addictive products to our state's most vulnerable populations.¹¹ Tobacco advertising has evolved a lot over the years, much of it now being focused on pricing and retail promotions. Tobacco companies spent nearly \$7.95 billion in 2017, 92% of their cigarette marketing budgets, on coupons and promotions that reduced the prices consumers paid for cigarettes.¹²

Anything less than the tax increase proposed in SB 3 can be more easily offset by the tobacco companies using these same types of coupons, discounts and price manipulations that are designed to keep people addicted in spite of a tobacco tax increase. For that reason, it is critical to protect the state's interest in both health and revenue and not appease the tobacco industry with a tax increase of a lesser amount.

Among people who currently smoke in the U.S., 68% report that they want to quit tobacco use completely.¹³ In response to this proposed tobacco tax increase, we recognize that [many more thousands] of people will be interested in trying to quit. Some will successfully quit on their own as a result of the price increase, but others will need additional help. Many people in Maryland lack adequate tobacco cessation resources, and these problems can undermine the positive outcomes that would otherwise result from this tax. For this reason, SB 3 provides \$21 million dollars to the state's comprehensive tobacco control program to help support the cessation goals of this policy. Strengthening prevention and cessation resources in the state is particularly important so that all population segments can receive help in trying to successfully quit, or avoid starting tobacco use altogether, regardless of income or other social determinants.

In closing, from the cancer control perspective, we believe the status quo that perpetuates preventable tobacco-related death and disease is unacceptable. The relatively low price of tobacco products makes it too easy for youth to afford to start smoking and continue smoking, and current tobacco tax rates do little to defray the enormous societal cost smoking has on the state and federal economy. If we are serious about reducing the toll of preventable cancer and chronic disease in our state, a high-impact tobacco tax increase such as this will help us achieve that life-saving mission. We urge you to vote "favorably" on SB 3 to increase the cigarette tax by \$2.00 per pack and increase the tax on all other tobacco products to 86% of wholesale because your action is needed now to prevent the start of youth tobacco use—and to help put an end to the devastation that tobacco continues to inflict on Maryland children and families.

¹¹ Campaign for Tobacco-Free Kids. The Toll of Tobacco in Maryland. Updated January 15, 2020.. https://www.tobaccofreekids.org/facts_issues/toll_us/maryland

¹² Federal Trade Commission. *Cigarette Report for 2017*. Washington: Federal Trade Commission, 2019.

¹³ Centers for Disease Control and Prevention. *Quitting Smoking Among Adults—United States, 2000–2015*. Morbidity and Mortality Weekly Report 2017;65(52):1457-64 [accessed 2017 Jan 24].

Research Studies that Show Tobacco Tax Increases Work

Bibliographical References:

- U.S. National Cancer Institute and World Health Organization. *The Economics of Tobacco and Tobacco Control*. National Cancer Institute Tobacco Control Monograph 21. NIH Publication No. 16-CA-8029A. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; and Geneva, CH: World Health Organization; 2016. <http://cancercontrol.cancer.gov/brp/tcrb/monographs/21/index.html> [accessed May 11, 2017]
- U.S. Department of Health and Human Services. *The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/index.html>. [accessed May 11, 2017]
- U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012. <http://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/full-report.pdf>. [accessed May 11, 2017]
- Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs — 2014*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. https://www.cdc.gov/tobacco/stateandcommunity/best_practices/index.htm. [accessed May 11, 2017]
- Community Preventive Services Task Force, *Reducing Tobacco Use and Secondhand Smoke Exposure: Interventions to Increase the Unit Price for Tobacco Products, Task Force Finding and Rationale Statement*, 2014, <http://www.thecommunityguide.org/tobacco/RRincreasingunitprice.html>. [accessed May 11, 2017]
- Center on Budget and Policy Priorities. “Higher Tobacco Taxes Can Improve Health and Raise Revenue.” A report by the Center on Budget and Policy Priorities. Marr, C., and Huang, C. March 19, 2014. <http://www.cbpp.org/research/higher-tobacco-taxes-can-improve-health-and-raise-revenue>. [accessed May 11, 2017]
- International Agency for Research on Cancer. *IARC Handbooks of Cancer Prevention, Tobacco Control, Volume 14: Effectiveness of Tax and Price Policies in Tobacco Control*. Lyon, France: International Agency for Research on Cancer, 2011. Lyon, France. <http://publications.iarc.fr/Book-And-Report-Series/Iarc-Handbooks-Of-Cancer-Prevention/Effectiveness-Of-Tax-And-Price-Policies-For-Tobacco-Control-2011>. [accessed May 11, 2017]
- Institute of Medicine (IOM), *Ending the tobacco problem: A blueprint for the nation*, Washington, DC: The National Academies Press, 2007, <http://www.nationalacademies.org/HMD/Reports/2007/Ending-the-Tobacco-Problem-A-Blueprint-for-the-Nation.aspx>. [accessed May 11, 2017]
- President’s Cancer Panel. *Promoting Healthy Lifestyles: Policy, Program, and Personal Recommendations for Reducing Cancer Risk*, 2006-2007 Annual Report, August 2007, <https://deainfo.nci.nih.gov/advisory/pcp/annualReports/pcp07rpt/pcp07rpt.pdf>. [accessed May 11, 2017]

- U.S. Department of Health and Human Services. *Reducing Tobacco Use: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2000. http://profiles.nlm.nih.gov/NN/B/B/L/Q/_/nnbbllq.pdf. [accessed May 11, 2017]
- Centers for Disease Control and Prevention, "Responses to Cigarette Prices By Race/Ethnicity, Income, and Age Groups – United States 1976-1993," *Morbidity and Mortality Weekly Report* 47(29):605-609, July 31, 1998, <http://www.cdc.gov/mmwr/preview/mmwrhtml/00054047.htm>. [accessed May 11, 2017]
- Chaloupka, FJ, Tauras, J & Grossman, M. 1997. "Public Policy and Youth Smokeless Tobacco Use," *Southern Economic Journal* 64(2):503- 16. <http://www.nber.org/papers/w5524>. [accessed May 11, 2017]
- Chaloupka, FJ, Hu T-W, Warner, KE, et al. 2000. "The Taxation of Tobacco Products." In: Jha, P. and Chaloupka, F.J. eds. *Tobacco Control in Developing Countries*. Oxford: Oxford University Press. 237-72. <http://siteresources.worldbank.org/INTETC/Resources/375990-1089904539172/237TO272.PDF>. [accessed May 11, 2017]
- Chaloupka FJ, Pack RM, Tauras JA, et al. 2009. "Cigarette Excise Taxation: The Impact of Tax Structure on Prices, Revenues, and Cigarette Smoking." National Bureau of Economic Research Working Paper Number 16287. Cambridge MA: National Bureau of Economic Research. <http://www.nber.org/papers/w16287>. [accessed May 11, 2017]
- Chaloupka, FJ and Warner, KE. 2000. "The Economics of Smoking." In: *Handbook of Health Economics*, edited by A.J. Culyer and J.P. Newhouse. Amsterdam, 2000. The Netherlands: Elsevier Science, 1539-1627. <http://www.nber.org/papers/w7047>. [accessed May 11, 2017]
- Chaloupka FJ, Yurekli A, Fong GT. 2012. "Tobacco taxes as a tobacco control strategy." *Tobacco Control* 21:172-180. <http://tobaccocontrol.bmj.com/content/21/2/172>. [accessed May 11, 2017]
- Farrelly, MC, Bray, JW, Pechacek, T, Woollery, T. 2001. "The response by adults to increases in cigarette prices by sociodemographic characteristics." *Southern Economic Journal*, 68(1), 156–165. https://libres.uncg.edu/ir/uncg/f/J_Bray_Response_Adult_2001.pdf. [accessed June 15, 2017]
- Liang, L, and Chaloupka, FJ. 2002. "Differential effects of cigarette price on youth smoking intensity." *Nicotine and Tobacco Research* 4 (1): 109-114. <https://academic.oup.com/ntr/article-abstract/4/1/109/1058963/Differential-effects-of-cigarette-price-on-youth?redirectedFrom=fulltext>. [accessed May 11, 2017]
- Ringel J, Evans W. "Cigarette taxes and smoking during pregnancy." 2001. *American Journal of Public Health*, 91(11):1851-1856. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446890/>. [accessed May 11, 2017]
- Ringel, J, Wasserman, J, & Andreyeva, T. 2005. "Effects of public policy on adolescents' cigar use: evidence from the National Youth Tobacco Survey," *American Journal of Public Health* 95:995-998. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1449297/>. [accessed May 11, 2017]
- Wilson LM, Avila Tang E, Chander G, et al. 2012. Impact of tobacco control interventions on smoking initiation, cessation, and prevalence: a systematic review. *J Environ Public Health* 2012:1-36. <https://www.hindawi.com/journals/jep/2012/961724/>. [Accessed June 15, 2017]

Other Compilations of Evidence-Based Resources:

American Cancer Society Cancer Action Network:

Tackling Tobacco Use at the State and Federal Levels

<https://www.acscan.org/policy-resources/tackling-tobacco-use-state-and-federal-levels> [accessed June 28, 2017]

Increase Tobacco Excise Taxes: Save Lives, Reduce Health Care Costs, Generate Revenue

<https://www.acscan.org/policy-resources/increase-tobacco-excise-taxes-save-lives-reduce-health-care-costs-generate-revenue> [accessed June 28, 2017]

State Tobacco Tax Increases: Explanations and Sources for Projections of New Revenues & Benefits

<https://www.acscan.org/policy-resources/state-tobacco-tax-increases-explanations-and-sources-projections-new-revenues> [accessed June 28, 2017]

Campaign for Tobacco-Free Kids:

Raising Cigarette Taxes Reduces Smoking, Especially Among Kids (And the Cigarette Companies Know It)

<https://www.tobaccofreekids.org/research/factsheets/pdf/0146.pdf> [accessed June 28, 2017]

Excerpts from the 2012 Surgeon General's Report Supporting Tobacco Tax Increases

<https://www.tobaccofreekids.org/research/factsheets/pdf/0372.pdf> [accessed June 28, 2017]

Tobacco Tax Increases Benefit Lower-Income Smokers and Families

<https://www.tobaccofreekids.org/research/factsheets/pdf/0147.pdf> [accessed June 28, 2017]

Tobacconomics:

Research database providing evidence for the impact on consumer demand of tobacco control policies focused on taxes and prices

<https://tobacconomics.org/database/#119,p=1> [accessed June 28, 2017]

Tackling Tobacco Use in Maryland

Save Lives. Reduce Health Care Costs. Generate Revenue



Health Costs of Tobacco

The use of tobacco products remains the nation's number one cause of preventable death. Tobacco use is responsible for nearly 1 in 5 deaths nationwide. In Maryland:

- An estimated 7,500 deaths are caused by smoking each year.ⁱ
- 12.5% of adults and 5.0% of high school students smoke cigarettes.ⁱⁱ
- 1,600 kids under 18 become new daily smokers each year.ⁱ
- If nothing is done to curb the tobacco epidemic an estimated 92,000 Maryland kids under 18 today will ultimately die prematurely from smoking-related diseases.ⁱ
- Over 27% of cancer deaths are attributable to smoking.ⁱ
- In addition to cancer, tobacco increases the risk of heart attack, stroke, COPD, emphysema, chronic bronchitis, preterm delivery, stillbirth, low birth weight, SIDS, and other diseases.ⁱⁱⁱ

Economic Costs of Smoking

Tobacco-related illnesses are expensive and harmful for all of us. Each year in Maryland, smoking is estimated to cost \$2.71 billion in direct health care costs, including \$576.5 million in Medicaid costs.ⁱ Additionally, Maryland experiences \$2.22 billion in smoking-caused productivity losses annually.ⁱ

Raise it for kids. Raise it for health. Raise it to save lives.

The Solution: Effective Tobacco Control

Regular and significant tobacco tax increases, along with fully funding evidence-based tobacco prevention and cessation programs and comprehensive smoke-free laws can reduce tobacco use.

Increasing Maryland's cigarette tax by \$2.00 per pack would generate \$97.43 million in new annual revenue for the state as well as:^{iv}

- Reduce youth smoking by 20.8%.
- Prevent 17,500 kids under 18 from becoming adults who smoke.
- Help 37,200 adults who currently smoke quit.
- Prevent 14,500 premature smoking-caused deaths.
- Provide \$1.11 billion in long-term health care cost savings from adult and youth smoking declines.

Increasing the tax on all other tobacco products at the same time would produce additional health and economic benefits for Maryland. It is important that tax increases apply to all tobacco products at an equivalent rate to encourage people to quit rather than switch to a cheaper product as well as to prevent youth from starting to use any tobacco product. To parallel the new \$4.00 per pack cigarette tax the state's tax on all other tobacco products should be increased to 86% of the wholesale price.

Investing \$21 million from the tax increase revenue in Maryland's tobacco prevention and cessation programs is crucial to prevent kids from starting to use tobacco and help adults who already use tobacco to quit.

ⁱ Campaign for Tobacco Free Kids. The Toll of Tobacco in Maryland. Updated October 23, 2019. http://www.tobaccofreekids.org/facts_issues/toll_us/maryland

ⁱⁱ Maryland Department of Health. Adult BRFSS 2018. Unpublished. MD Department of Health. Local Health Department Tobacco Control Program Coordinator Meeting. Dawn Berkowitz. November 21, 2019.

ⁱⁱⁱ Centers for Disease Control and Prevention (CDC). Health Effects of Cigarette Smoking. Updated May 14, 2017. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/

^{iv} American Cancer Society Cancer Action Network, Campaign for Tobacco-Free Kids, and Tobaccocomics. New Revenues, Public Health Benefits & Cost Savings from a \$2.00 Cigarette Tax Increase in Maryland. Updated January 15, 2020.



**NEW REVENUES, PUBLIC HEALTH BENEFITS & COST SAVINGS
FROM A \$2.00 CIGARETTE TAX INCREASE IN MARYLAND**

- The current state cigarette tax is \$2.00 per pack (17th among all states and DC).
- Annual health care expenditures in Maryland directly caused by tobacco use are \$2.71 billion.

Projected New Annual Revenue from Increasing the Cigarette Tax by \$2.00 Per Pack: \$97.43 million

New Annual Revenue is the amount of additional new revenue the first full year the tax increase is in effect. The state will collect less new revenue if it fails to apply the rate increase to all cigarettes and other tobacco products held in wholesaler and retailer inventories on the effective date.

Projected Public Health Benefits for Maryland from the Cigarette Tax Rate Increase	
Percent decrease in youth (under age 18) smoking:	20.8%
Youth under age 18 kept from becoming adult smokers:	17,500
Reduction in young adult (18-24 years old) smokers:	3,400
Current adult smokers who would quit:	37,200
Premature smoking-caused deaths prevented:	14,500
5-Year reduction in the number of smoking-affected pregnancies and births:	5,400
5-Year health care cost savings from fewer smoking-caused lung cancer cases:	\$7.25 million
5-Year health care cost savings from fewer smoking-affected pregnancies and births:	\$14.34 million
5-Year health care cost savings from fewer smoking-caused heart attacks & strokes:	\$16.37 million
5-Year Medicaid program savings for the state:	\$9.88 million
Long-term health care cost savings from adult & youth smoking declines:	\$1.11 billion

1.06.20 ACS CAN / January 15, 2020

- Small tax increase amounts do not produce significant public health benefits or cost savings because the cigarette companies can easily offset the beneficial impact of such small increases with temporary price cuts, coupons, and other promotional discounting. Splitting a tax rate increase into separate, smaller increases in successive years will similarly diminish or eliminate the public health benefits and related cost savings (as well as reduce the amount of new revenue).
- Raising state tax rates on other tobacco products (OTPs), including e-cigarettes, to parallel the increased cigarette tax rate will bring the state additional revenue, public health benefits, and cost savings (and promote tax equity). With unequal rates, the state loses revenue each time a cigarette smoker switches to other tobacco products taxed at a lower rate. To parallel the new \$2.00 per pack cigarette tax, the state's new OTP tax rate should be 83% of the wholesale price with minimum tax rates for each major OTP category linked to the state cigarette tax rate on a per-package or per-dose basis.

Explanations & Notes

Health care costs listed at the top of the page are from the U.S. Centers for Disease Control and Prevention (CDC). Annual health care expenditures in Maryland directly caused by tobacco use are in 2009 dollars and are from the CDC's 2014 *Best Practices for Comprehensive Tobacco Control Programs*.

Projections are based on research findings that nationally, each 10% increase in the retail price of cigarettes reduces youth smoking by 6.5%, young adult prevalence by 3.25%, adult prevalence by 2%, and total cigarette consumption by about 4% (adjusted down to account for tax evasion effects). However, the impact of the tax increase varies from state-to-state, based on the starting pack price. Significant tax increases generate new revenues because the higher tax rate per pack brings in more new revenue than is lost from the tax-related drop in total pack sales.

The projections also incorporate the effect of ongoing background smoking declines, population distribution, and the continued impact of any recent state cigarette tax increases or other changes in cigarette tax policies on prices, smoking levels, and pack sales.

These projections are fiscally conservative because they include a generous adjustment for lost state pack sales (and lower net new revenues) from possible new smuggling and tax evasion after the rate increase and from fewer sales to smokers or smugglers from other states, including sales on tribal lands. For ways that the state can protect and increase its tobacco tax revenues and prevent and reduce contraband trafficking and other tobacco tax evasion, see the Campaign for Tobacco-Free Kids (CTFK) factsheet, *State Options to Prevent and Reduce Cigarette Smuggling and to Block Other Illegal State Tobacco Tax Evasion*, <https://www.tobaccofreekids.org/assets/factsheets/0274.pdf>.

Projected numbers of youth prevented from smoking and dying are based on all youth ages 17 and under alive today. Projected reduction in young adult smokers refers to young adults ages 18-24 who would not start smoking or would quit as a result of the tax increase. Savings to state Medicaid programs include estimated changes in enrollment resulting from federal laws in effect as of January 1, 2020 and state decisions regarding Medicaid expansion. Long-term cost savings accrue over the lifetimes of persons who stop smoking or never start because of the tax rate increase. All cost savings are in 2020 dollars.

Projections for cigarette tax increases much higher than \$1.50 per pack are limited, especially for states with relatively low current tax rates, because of the lack of research on the effects of larger cigarette tax increase amounts on consumption and prevalence. While cigarette tax rate increases of more than \$1.50 will bring in more revenue and provide greater public health benefits than smaller projections, due to limitations of the model and available research, the projections included on this sheet may be less precise than for projections for lesser amounts. Projections for cigarette tax increases much lower than \$1.00 per pack are also limited because small tax increases are unlikely to produce significant public health benefits.

Ongoing reductions in state smoking rates will, over time, gradually erode state cigarette tax revenues, in the absence of any new rate increases. However, those declines are more predictable and less volatile than many other state revenue sources, such as state income tax or corporate tax revenues, which can drop sharply during recessions. In addition, the smoking declines that reduce tobacco tax revenues will simultaneously produce much larger reductions in government and private sector smoking-caused health care and other costs over time. See the CTFK factsheet, *Tobacco Tax Increases are a Reliable Source of Substantial New State Revenue*, <https://www.tobaccofreekids.org/assets/factsheets/0303.pdf>.

The projections in the table on this fact sheet were generated using an economic model developed jointly by the Campaign for Tobacco-Free Kids and the American Cancer Society Cancer Action Network and are updated annually. The projections are based on economic modeling by researchers with Tobacconomics: Frank Chaloupka, Ph.D., and John Tauras, Ph.D., at the Institute for Health Research and Policy at the University of Illinois at Chicago, and Jidong Huang, Ph.D., and Michael Pesko, Ph.D., at Georgia State University. The state Medicaid cost savings projections, when available, are based on enrollment and cost estimates by Matt Broaddus at the Center on Budget and Policy Priorities using data from the Centers for Medicare and Medicaid Services.

For other ways states can increase revenues (and promote public health) beyond just raising cigarette tax rates, see the CTFK factsheet, *The Many Ways States Can Raise Revenue While Also Reducing Tobacco Use and Its Many Harms & Costs*, <https://www.tobaccofreekids.org/assets/factsheets/0357.pdf>.

Additional information and resources to support tobacco tax increases are available at:

<https://www.tobaccofreekids.org/what-we-do/us/state-tobacco-taxes/fact-sheets>

<http://acscan.org/tobacco/taxes/>

<http://tobacconomics.org/>

For more on sources and calculations, see <https://www.tobaccofreekids.org/assets/factsheets/0281.pdf> or <https://www.fightcancer.org/policy-resources/state-tobacco-tax-increases-explanations-and-sources-projections-new-revenues>.

Ann Boonn, Campaign for Tobacco-Free Kids

Frank J. Chaloupka, Tobacconomics

Katie McMahon, American Cancer Society Cancer Action Network

Increase Tobacco Excise Taxes

Save Lives. Reduce Health Care Costs. Generate Revenue.



The American Cancer Society Cancer Action Network (ACS CAN) supports a comprehensive approach to tobacco control that includes significantly increasing excise taxes on all forms of tobacco.

Health Costs of Tobacco Use

Tobacco is an addictive and deadly product and tobacco use remains the nation's number one cause of preventable death. Cigarette smoking and exposure to secondhand smoke cause approximately one out of every five deaths in the U.S., more than 480,000 premature deaths each year.^{i,ii} This includes at least 28 percent of all cancer deathsⁱⁱⁱ and 80 percent of lung cancer deaths.^{iv}

The Surgeon General projects that without further action, 5.6 million youth age 0-17 alive today will die prematurely from tobacco use.^v Despite the proven health risks, current rates of cigarette smoking and tobacco use remain high. 13.9 percent of U.S. adults smoke cigarettes^{vi} and 20.1 percent use some form of tobacco.^{vii} 7.6 percent of high school students smoke cigarettes and 19.6 percent use some form of tobacco.^{viii}

Economic Costs of Tobacco Use

While the personal toll of tobacco is high, this deadly product also costs the U.S. economy billions of dollars in health care costs and lost worker productivity. Total health care spending, public and private, is approximately \$170 billion annually and productivity losses total more than \$150 billion a year.^{ix} In fact, smoking-related health care costs and productivity losses in the U.S. amount to \$19.16 per pack of cigarettes sold.^{xi} In contrast, the average retail price of a pack of cigarettes in the U.S. remains at \$6.43.^{xii} The low price of tobacco products makes it easy for youth to afford to start and continue smoking, and does little to defray the societal cost smoking has on the U.S. economy.

Reducing Tobacco Use by Increasing Tobacco Excise Taxes

ACS CAN supports a comprehensive approach to tobacco control that includes significantly increasing excise taxes on all forms of tobacco. The average state cigarette tax is \$1.78 per pack, but state cigarette excise taxes vary significantly, from a low of 17 cents per pack in Missouri to a high of \$4.50 in the District of Columbia. Additionally, while not taken into account for the national average, Puerto Rico taxes cigarettes at \$5.10 per pack.

- **Save Lives:** Regular, significant tax increases of \$1.00 or more per pack of cigarettes reduce the number of people who begin smoking and increase the number of smokers who quit. Low-income adults, youth, and pregnant women are especially likely to quit or reduce their smoking when the price increases.^{xiii} In the year after the 2013 cigarette tax increase of \$1.60 in Minnesota, cigarette sales dropped by almost a quarter or 54.6 million packs. Furthermore, among smokers who quit, about two-thirds reported that the increase in price helped them make a quit attempt or stay quit.^{xiv}
- **Reduce Health Care Costs:** Lower smoking rates translate into fewer smoking-related cancers and premature deaths, reduced spending on smoking-related health problems, and more productive workers.
- **Generate Revenue:** Substantial increases in cigarette tax rates generate new revenue.^{xv}

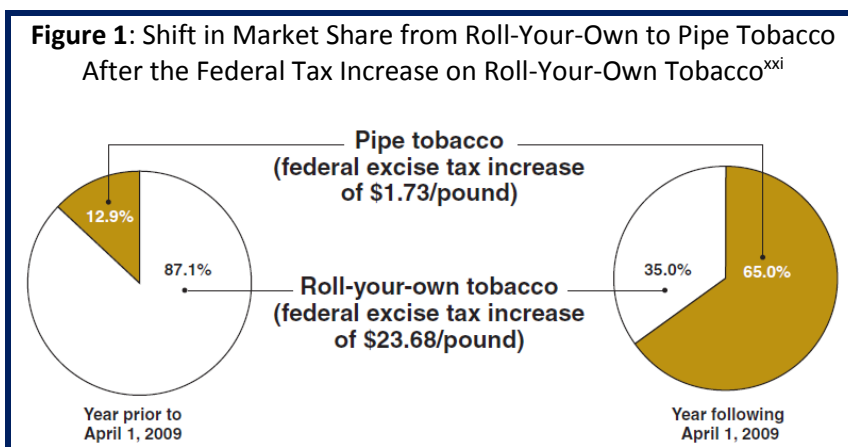
Maximizing the Health and Economic Benefits of a Tobacco Tax Increase

Tax increases must be significant, at least a \$1.00 per pack of cigarettes to produce a meaningful public health impact. Research shows that nationally, a 10 percent cigarette price increase, if maintained against inflation, reduces youth smoking rates by 6.5 percent or more, young adult (18-24 years old) smoking rates by about 3.25 percent, adult smoking rates by 2 percent, and total consumption by 4 percent.^{xvi,xvii,xviii,xix} When tax increases are small, tobacco companies can adjust prices or offer coupons or discounts to reduce the impact. Tobacco companies spent nearly \$7.3 billion in 2015, 88 percent of their cigarette marketing budgets, on coupons and promotions that reduced the prices consumers paid for cigarettes.^{xx}

Tax Increases Should Apply to All Tobacco Products

When different types of tobacco products are taxed at different rates, lower-taxed products are cheaper than they would be if all tobacco products were taxed at an equivalent rate. By increasing the tax on all tobacco products to an equivalent rate, states can help reduce tax evasion, generate more new revenue, prevent initiation of these products, and ensure that more tobacco users quit instead of switching to a cheaper product. What happens when the taxes go up for some, but not all, tobacco products?

- After the 2009 federal tax increase, roll-your-own tobacco was taxed at a much higher rate than pipe tobacco, even though the two products can be used interchangeably. Manufacturers started marketing roll-your-own tobacco as pipe tobacco, and consumers bought the lower-taxed pipe tobacco instead of the higher-taxed roll-your-own tobacco (Figure 1).^{xxii}
- This tax loophole is a lose-lose for the government, because people who switch tobacco products pay lower taxes but continue to have costly health problems.
- Federal revenue from the 2009 tax over the first 2.5 years was as much as \$1.1 billion lower than it could have been if there had been similar tax increases on all tobacco products.



ACS CAN's Position

ACS CAN advocates for regular and significant increases in federal, state, and local excise taxes that will increase the price of all tobacco products.

- Tax increases should be a minimum increase of \$1.00 per pack of cigarettes and an equivalent tax on OTPs to produce a meaningful reduction in tobacco consumption and tobacco-related disease and death.
- There should be tax parity for all tobacco products, including pipe tobacco, small and large cigars, snus, and all other smokeless tobacco products.
- Tax increases should be just one part of a comprehensive approach to tobacco control, including creating 100% smoke-free environments and fully funding effective tobacco prevention and cessation programs.

ⁱ U.S. Department of Health and Human Services (HHS). *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

ⁱⁱ CDC. QuickStats: Number of Deaths from 10 Leading Causes — National Vital Statistics System, United States, 2010. *MMWR* 2013; 62(8): 155.

ⁱⁱⁱ Lortet-Tieulent J, Goding Sauer A, Siegel RL, Miller KD, Islami F, Fedewa SA, Jacobs EJ, Jemal A. State-Level Cancer Mortality Attributable to Cigarette Smoking in the United States. *JAMA Intern Med*. 2016;176(12):1792-1798. doi:10.1001/jamainternmed.2016.6530

^{iv} American Cancer Society. *Cancer Facts & Figures, 2017*. Atlanta, GA: American Cancer Society, 2017.

^v HHS, 2014.

^{vi} CDC. "Early Release of Selected Estimates Based on Data from the 2017 National Health Interview Survey," June 19, 2018, <https://www.cdc.gov/nchs/nhis/releases/released201806.htm#8>.

^{vii} CDC. "Tobacco Product Use Among Adults — United States, 2015," *Morbidity & Mortality Weekly Report*, 66 (44): 1209-1215, November 10, 2017.

^{viii} CDC. "Tobacco Product Use Among Middle and High School Students — United States 2011 — 2017," *Morbidity & Mortality Weekly Report*, 67(22): 629-633. June 8, 2018.

^{ix} HHS, 2014

^x Xu, X., Bishop, E., Kennedy, S., Simpson, S., and Pechacek, T, "Annual Healthcare Spending Attributable to Cigarette Smoking: An Update," *American Journal of Preventative Medicine*. 48:3 March 2015.

^{xi} Campaign for Tobacco-Free Kids. Toll of Tobacco in the United States. <http://www.tobaccofreekids.org/research/factsheets/pdf/0072.pdf>. Accessed July 21, 2017.

^{xii} The Tax Burden on Tobacco. Historical Compilation, Volume 51, 2016.

^{xiii} HHS, 2014

^{xiv} https://tobacconomics.org/wp-content/uploads/2015/02/Minnesota-2013-Tobacco-Tax-White-Paper_10Feb15.pdf

^{xv} Campaign for Tobacco-Free Kids. Raising State Cigarette Taxes Always Increases State Revenues (And Always Reduces Smoking) Fact Sheet. Updated June 7, 2017 Available at: <http://www.tobaccofreekids.org/research/factsheets/pdf/0098.pdf>.

^{xvi} Chaloupka, FJ, "Macro-Social Influences: The Effects of Prices and Tobacco Control Policies on the Demand for Tobacco Products," *Nicotine & Tobacco Research*, 1999, and other price studies at <http://www.ihrp.uic.edu/researcher/frank-j-chaloupka-phd> and <https://tobacconomics.org/>.

^{xvii} Tauras, J, et al., "Effects of Price and Access Laws on Teenage Smoking Initiation: A National Longitudinal Analysis," Bridging the Gap Research, ImpacTeen, April 24, 2001.

^{xviii} Chaloupka, FJ & Pacula, R, "The Impact of Price on Youth Tobacco Use," Chapter 12 in National Cancer Institute, Smoking and Tobacco Control Monograph 14, *Changing Adolescent Smoking Prevalence*, November 2001; International Agency for Research on Cancer (IARC), *Effectiveness of Tax and Price Policies for Tobacco Control*, IARC Handbooks of Cancer Prevention in Tobacco Control, Volume 14, 2011.

^{xix} Community Preventive Services Task Force, "Tobacco Use and Secondhand Smoke Exposure: Interventions to Increase the Unit Price for Tobacco Products," November 2012, <https://www.thecommunityguide.org/findings/tobacco-use-and-secondhand-smoke-exposure-interventions-increase-unit-price-tobacco#tab-wttff>

^{xx} Federal Trade Commission. *Cigarette Report for 2015*. Washington: Federal Trade Commission, 2017.

^{xxi} U.S. Government Accountability Office. *Illicit Tobacco: Various Schemes are Used to Evade Taxes and Fees*. GAO-11-1313, March 2011. <http://www.gao.gov/new.items/d11313.pdf>

^{xxii} U.S. Government Accountability Office. *Large Disparities in Rates for Smoking Products Trigger Significant Market Shifts to Avoid Higher Taxes*, GAO-12-475, April 18, 2012, <http://www.gao.gov/products/GAO-12-475>.

Tackling Tobacco with the Three-Legged Stool



Despite significant progress since the first Surgeon General's report on tobacco, issued more than 50 years ago, smoking remains the single largest cause of preventable disease and death in the United States. Nearly half a million Americans die prematurely from smoking each year. The estimated economic costs attributable to smoking and exposure to tobacco smoke total more than \$300 billion annually, with direct medical costs of approximately \$170 billion and productivity losses of more than \$150 billion a year.^{i ii}

The good news is that state and local governments can reduce tobacco use, save lives, and save money by implementing three proven solutions to the problem: 1) Regular and significant increases in tobacco taxes 2) Fully funding evidence-based tobacco prevention and cessation programs and 3) Implementing 100 percent smoke-free laws. Like a three-legged stool, each component works in conjunction with the others, and all three are necessary to overcome the tobacco epidemic. A 2013 study published in the *American Journal of Public Health* found that between 2002 and 2008, each of these measures separately contributed to declines in youth smoking and together they reduced the number of youth smokers by about 220,000. The study also found that states could achieve far greater gains if they more fully implemented these proven strategies.ⁱⁱⁱ These policies are also effective in helping tobacco users to quit.^{iv}

Significant and Regular Increases in Tobacco Taxes on All Tobacco Products

Regular tax increases of \$1.00 or more per pack of cigarettes and equivalent increases in the tax on other tobacco products (OTPs) are a win-win-win for states: a health win that reduces tobacco use and saves lives; a fiscal win as it raises much-needed revenue; and a political win that is popular with the public.

- **Save Lives:** Regular and significant tobacco tax increases are one of the most effective ways to reduce tobacco use and, therefore, suffering and death from tobacco-related diseases like cancer. Studies have shown that, nationwide, every real 10 percent increase in the price of cigarettes reduces youth smoking by about 6.5 percent and overall consumption by about 4 percent.^{v vi}
- **Save Money:** Significant increases to cigarette and tobacco taxes result in substantial revenue increases for states as well as health care cost savings. Every state that has significantly increased its cigarette tax in recent years has seen increases in revenue.
- **Voters Approve:** National and state polls consistently have found overwhelming public support for tobacco tax increases. In fact, many polls have shown voters are more likely to support a candidate that supports increasing the tax on tobacco.

Fully Funded State Tobacco Control Programs

Evidence-based, statewide tobacco control programs that are comprehensive, sustained, and accountable have been shown to reduce tobacco use rates, as well as tobacco-related diseases and deaths. Research shows that the more states spend on comprehensive tobacco control programs, the greater the reductions in tobacco use. The longer states invest in such programs, the greater and quicker the impact.

- **Reduce Tobacco Use:** From 2009 to 2015, smoking among North Dakota's high school students fell by 48 percent, from 22.4 percent to 11.7 percent.^{vii} In Florida, the high school smoking rate fell to just 6.9 percent in 2015, far below the national rate.^{viii} Both of these states have made significant, long-term investments in their state's tobacco control programs.
- **Save Lives:** California, with the nation's longest-running prevention and cessation programs, has reduced lung and bronchus cancer rates four times faster than the rest of the U.S. Lung cancer rates declined by a third between 1988 and 2011 in California.^{ix} Washington state estimates that its smoking reductions have prevented 13,000 premature deaths.^x
- **Save Money:** A 2011 study found that Washington state saved more than \$5.00 in tobacco-related hospitalization costs for every \$1.00 spent during the first 10 years of its program.^{xi}

Comprehensive Smoke-free Laws

According to the U.S. Surgeon General, there is no safe level of exposure to secondhand smoke, which contains approximately 70 known or possible carcinogens.^{xii xiii xiv} Each year in the United States, secondhand smoke causes nearly 42,000 deaths among nonsmokers, including up to 7,300 lung cancer deaths.^{xv xvi} Throughout the country, elected officials at the state and local levels are recognizing the health and economic benefits of comprehensive smoke-free laws. The only way to fully eliminate exposure to secondhand smoke is to prohibit smoking in all public places, making them 100 percent smoke-free.

- **Reduce Exposure to Secondhand Smoke:** Smoke-free laws reduce exposure to secondhand smoke, encourage and increase quitting among current smokers, and reduce health care, cleaning, and lost productivity costs.^{xvii xviii xix}
- **Improve Health:** Smoke-free laws have been proven to improve the health of workers in those establishments, as well as the general public. Comprehensive smoke-free laws have been shown to reduce hospital admissions and deaths from respiratory disease, coronary events and other heart disease, and cerebrovascular accidents in hospitality workers.^{xx xxi}
- **Good for Business:** Smoke-free laws protect health without impacting business. The U.S. Surgeon General's Report concluded, "Evidence from peer-reviewed studies shows that smoke-free policies and regulations do not have an adverse economic impact on the hospitality industry."^{xxii}

ⁱ U.S. Department of Health and Human Services (HHS). *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

ⁱⁱ Xu, X., Bishop, E., Kennedy, S., Simpson, S., and Pechacek, T, "Annual Healthcare Spending Attributable to Cigarette Smoking: An Update," *American Journal of Preventative Medicine*. 48:3 March 2015.

ⁱⁱⁱ Matthew C. Farrelly, Brett R. Loomis, Beth Han, Joe Gfroerer, Nicole Kuiper, G. Lance Couzens, Shanta Dube, and Ralph S. Caraballo. A Comprehensive Examination of the Influence of State Tobacco Control Programs and Policies on Youth Smoking. *American Journal of Public Health*: March 2013, Vol. 103, No. 3, pp. 549-555. doi: 10.2105/AJPH.2012.300948

^{iv} HHS, 2014

^v Chaloupka FJ. "How Effective are Taxes in Reducing Tobacco Consumption?" Available at http://tigger.uic.edu/~fjc/Presentations/Papers/taxes_consump_rev.pdf.

^{vi} Chaloupka FJ. "The Impact of Proposed Cigarette Price Increases." Policy Analysis No. 9, Health Science Analysis Project, Advocacy Institute, 1998. Available at http://tigger.uic.edu/~fjc/Presentations/Papers/hsap_policy9.pdf.

^{vii} North Dakota Department of Health, "Youth Risk Behavior Survey Results Detailed Summary Tables," 2015, <https://www.nd.gov/dpi/uploads/1298/2015NDHighSchoolSummaryTables.pdf>

^{viii} Florida Department of Health. Florida Youth Tobacco Survey. Available at <http://www.floridahealth.gov/statistics-and-data/survey-data/fl-youthtobaccosurvey/index.html>. Accessed March 28, 2017.

^{ix} Lightwood, J and Glantz SA, "The Effect of the California Tobacco Control Program on Smoking Prevalence, Cigarette Consumption, and Healthcare Costs: 1989-2008," *PLOS ONE* 8(2), February 2013.

^x Dilley, Julia A., et al., "Program, Policy and Price Interventions for Tobacco Control: Quantifying the Return on Investment of a State Tobacco Control Program," *American Journal of Public Health*, Published online ahead of print December 15, 2011. See also, Washington State Department of Health, Tobacco Prevention and Control Program, Progress Report, March 2011. Washington State Department of Health, Tobacco Prevention and Control Program, News Release, "Thousands of lives saved due to tobacco prevention and control program," November 17, 2010, http://www.doh.wa.gov/Publicat/2010_news/10-183.htm.

^{xi} Dilley, et al.

^{xii} U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.

^{xiii} U.S. Department of Health and Human Services. *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease – A Report of the Surgeon General*. 2010. Atlanta, GA: HHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, OSH.

^{xiv} HHS 2014

^{xv} Max W., Sung H-Y, and Shi Y. (2012). Deaths from Secondhand Smoke Exposure in the United States: Economic Implications. *American Journal of Public Health*. 2012; 102:2173-2180.

^{xvi} HHS 2014

^{xvii} HHS 2006

^{xviii} Task Force on Community Prevention Services. "Recommendations Regarding Interventions to Reduce Tobacco Use and Exposure to Environmental Tobacco Smoke." *American Journal of Preventive Medicine* 2001;20(2S):10-5.

^{xix} Ericksen M. and Chaloupka F. "The Economic Impact of Clean Indoor Air Laws." *CA: A Cancer Journal for Clinicians* 57(6):367-378, November 2007.

^{xx} U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.

^{xxi} Tan CE, Glantz SA. Association Between Smoke-Free Legislation and Hospitalizations for Cardiac, Cerebrovascular, and Respiratory Diseases: A Meta-Analysis. *Circulation* 2012;126:2177-83.

^{xxii} HHS 2006

The Importance of Tax Parity for All Tobacco Products



Increasing tobacco taxes is one of the best ways to reduce tobacco use. It is important that tax increases apply to all tobacco products at an equivalent rate to encourage people to quit rather than switch to a cheaper product as well as to prevent youth from starting to use any tobacco product. In many states other tobacco products are taxed at a lower rate than cigarettes, making them an appealing alternative for price-sensitive consumers including youth. Other tobacco products include, but are not limited to, moist snuff, nasal snuff, loose-leaf and plug chewing tobacco, snus, dissolvable tobacco products, cigars, pipe tobacco, roll-your-own tobacco, and hookah.

The Health Effects of Tobacco

- Cigarettes: Cigarette smoking and exposure to secondhand smoke cause approximately one out of every five deaths in the U.S., more than 480,000 premature deaths each year.^{i,ii} Smokeless Tobacco: can cause oral, esophageal, and pancreatic cancers as well as precancerous lesions of the mouth, gum recession, bone loss around the teeth, tooth staining, and nicotine addictionⁱⁱⁱ and contains at least 28 cancer causing chemicals.^{iv}
- Smokeless Tobacco: can cause oral, esophageal, and pancreatic cancers as well as precancerous lesions of the mouth, gum recession, bone loss around the teeth, tooth staining, and nicotine addiction^v and contains at least 28 cancer causing chemicals.^{vi}
- Hookah: people who smoke hookah may be at risk for some of the same diseases as people who smoke cigarettes including cancer of the oral cavity, lung, stomach, and esophagus.^{vii}
- Cigars: people who smoke cigars are four to 10 times more likely to die from lung, laryngeal, oral or esophageal cancers than non-smokers.^{viii}

The Importance of Tax Parity for All Tobacco Products

As states increase taxes on cigarettes and smoking rates decline, increasing taxes on all other tobacco products to achieve tax parity takes on greater importance. All other tobacco products (OTP) should be taxed at the same rate as cigarettes to encourage smokers to quit rather than switching to lower-priced alternatives.

Cigarettes



Cigarettes are often taxed at a much higher rate than OTP. ACS CAN urges states to raise taxes on all tobacco products regularly and significantly, as research shows this is the best way to curb tobacco use.

Flavored Cigars

In 2014, among middle and high school students who used cigars in the past 30 days, 63.5% reported using a flavored cigar during that time.^x



Smokeless Tobacco

Smokeless tobacco, consumed orally or nasally, increases the risk of cancer and leads to nicotine addiction.



Little Cigars

Lower tax rates make little cigars appealing to young smokers.



Hookah

Secondhand hookah smoke poses equal or greater danger than secondhand cigarette smoke.^{ix}

Large Cigars

Manufacturers can manipulate weight to evade higher taxes.



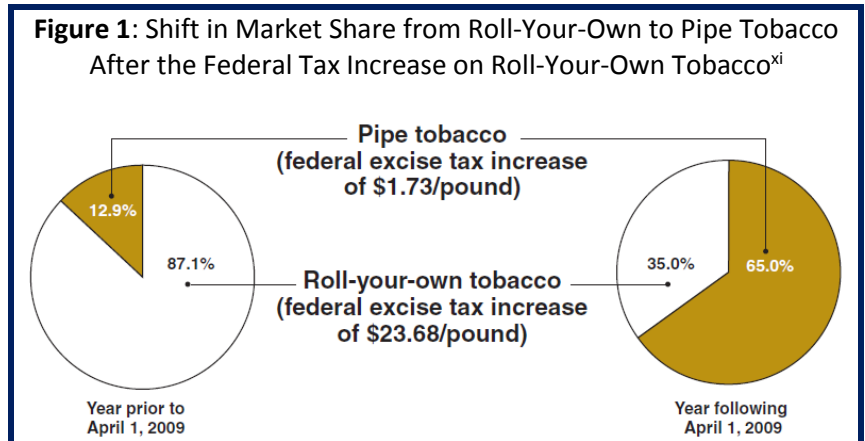
By increasing taxes on all tobacco products, states can save lives, reduce health care costs, and generate much needed revenue.

Tax Increases Should Apply to All Tobacco Products

When different types of tobacco products are taxed at different rates, lower-taxed products are cheaper than they would be if all tobacco products were taxed at an equivalent rate. By increasing the tax on all tobacco products to an equivalent rate, states can help reduce tax evasion, generate more new revenue, prevent initiation of these products, and ensure that more tobacco users quit instead of switching to a cheaper product. What happens when the taxes go up for some, but not all, tobacco products?

- After the 2009 federal tax increase, roll-your-own tobacco was taxed at a much higher rate than pipe tobacco, even though the two products can be used interchangeably. Manufacturers started marketing roll-your-own tobacco as pipe tobacco, and consumers bought the lower-taxed pipe tobacco instead of the higher-taxed roll-your-own tobacco (Figure 1).^{xii}
- This tax loophole is a lose-lose for the government, because people who switch tobacco products pay lower taxes but continue to have costly health problems.

Federal revenue from the 2009 tax over the first 2.5 years was as much as \$1.1 billion lower than it could have been if there had been similar tax increases on all tobacco products



Recent research shows cigarette taxes must increase by a minimum of \$1.00 per pack to have a meaningful public health impact. To maximize revenue, states should establish tax parity between cigarettes and OTP to ensure that states do not lose revenues from people switching from cigarettes to lower-taxed tobacco products, a type of switching which has been common in recent years.

ⁱ U.S. Department of Health and Human Services (HHS). *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

ⁱⁱ CDC. QuickStats: Number of Deaths from 10 Leading Causes — National Vital Statistics System, United States, 2010. *MMWR* 2013; 62(8): 155.

ⁱⁱⁱ American Cancer Society. *Cancer Facts & Figures 2018*. Atlanta, GA: American Cancer Society, 2018.

^{iv} Centers for Disease Control and Prevention. *Smokeless Tobacco Use in the United States*. Updated July 25, 2016. Available at https://www.cdc.gov/tobacco/data_statistics/fact_sheets/smokeless/use_us/index.htm

^v American Cancer Society. *Cancer Facts & Figures 2018*. Atlanta, GA: American Cancer Society, 2018.

^{vi} Centers for Disease Control and Prevention. *Smokeless Tobacco Use in the United States*. Updated July 25, 2016. Available at https://www.cdc.gov/tobacco/data_statistics/fact_sheets/smokeless/use_us/index.htm

^{vii} Centers for Disease Control and Prevention. *Smoking & Tobacco Use: Hookahs*. Updated December 1, 2016.

https://www.cdc.gov/tobacco/data_statistics/fact_sheets/tobacco_industry/hookahs/index.htm

^{viii} American Cancer Society, 2014.

^{ix} Barnett TE, Curbow BA, Soule EK, et al. "Carbon Monoxide Levels Among Patrons of Hookah Cafes." *American Journal of Preventative Medicine* 2011; 40(3): 324-328.

^x Corey CG, Abrose BK, Apelberg BJ, and King BA. Flavored Tobacco Product Use Among Middle and High School Students – United States, 2014, *MMWR* 2015; 64: 1066-1070.

^{xi} U.S. Government Accountability Office. *Illicit Tobacco: Various Schemes are Used to Evade Taxes and Fees*. GAO-11-1313, March 2011. <http://www.gao.gov/new.items/d11313.pdf>

^{xii} U.S. Government Accountability Office. *Large Disparities in Rates for Smoking Products Trigger Significant Market Shifts to Avoid Higher Taxes*, GAO-12-475, April 18, 2012, <http://www.gao.gov/products/GAO-12-475>.

Significant Cigarette Tax Increases Generate New Revenue



Substantial increases in cigarette tax rates generate new revenue. In fact, every state that has significantly increased its state cigarette tax has also boosted its state revenue, despite the beneficial declines in consumption resulting from the tax increase, and regardless of any related tax avoidance, tax evasion, or illicit activity.ⁱ

State Revenue Gains from Ten Years of Significant Cigarette Tax Increases

In the past ten years, the below states have increased their cigarette tax by at least \$1.00 per pack. All states that have done so have experienced substantial revenue gains. The following chart shows the revenue increase in the first twelve months following the tax increase, as compared to the 12 months prior to the tax increase.ⁱⁱ

State	Effective Date	Tax Increase (per pack)	New State Tax Rate (per pack)	Revenue Increase	Gross New Revenues (millions)
District of Columbia	10/1/08	\$1.00	\$2.00	+48.2%	\$11.1
Florida	7/1/09	\$1.00	\$1.339	+193.2%	\$828.8
Illinois	6/24/12	\$1.00	\$1.98	+39.0%	\$229.2
Maryland	1/1/08	\$1.00	\$2.00	+45.8%	\$126.9
Massachusetts	7/1/08	\$1.00	\$2.51	+32.2%	\$137.2
Massachusetts	7/31/13	\$1.00	\$3.51	+16.0%	\$86.2
Minnesota	7/1/13	\$1.60	\$2.83	+56.0%	\$204.1
Nevada	7/1/15	\$1.00	\$1.80	+51.6%	\$54.6
New York	6/3/08	\$1.25	\$2.75	+39.7%	\$375.4
New York	7/1/10	\$1.60	\$4.35	+18.8%	\$244.6
Rhode Island	4/10/09	\$1.00	\$3.46	+15.1%	\$17.8
Utah	7/1/10	\$1.005	\$1.70	+85.0%	\$47.0
Washington	5/1/10	\$1.00	\$3.025	+17.0%	\$62.0
Wisconsin	1/1/08	\$1.00	\$1.77	+93.9%	\$286.0

Additionally, Pennsylvania raised their state cigarette tax by \$1.00 per pack effective 8/1/16 and California raised their state cigarette tax by \$2.00 per pack effective 4/1/17. Revenue data from these tax increases is not yet available

Significant Tobacco Tax Increases Work

- In Minnesota, in the year immediately following the state's \$1.60 per pack cigarette tax increase in 2013, revenues increased by more than \$204 million, pack sales declined by 54.6 million packs, and adult and youth smoking rates were showing sharp reductions in the state.ⁱⁱⁱ At the time, this cigarette tax increase of \$1.60 per pack was tied for the highest single cigarette tax rate increase ever implemented by a state in the U.S., and when it went into effect in 2013, Minnesota shared a border with two states whose cigarette tax was in excess of \$1.00 per pack less (Iowa and South Dakota) and one state whose cigarette tax rate was more than \$2.00 less (North Dakota).

ⁱ Campaign for Tobacco-Free Kids. Raising State Cigarette Taxes Always Increases State Revenues (And Always Reduces Smoking) Fact Sheet. Updated January 12, 2018 Available at: <http://www.tobaccofreekids.org/research/factsheets/pdf/0098.pdf>

ⁱⁱ *Ibid*

ⁱⁱⁱ A February 12, 2015 op-ed by Boyle R, Chaloupka F, and Mattson L. appearing in *MinnPost*. Available at: <https://www.minnpost.com/community-voices/2015/02/facts-are-minnesotas-2013-tobacco-tax-increase-improving-health> Accessed December 14, 2017. See also: Mattson, L, Chaloupka, F., and Boyle, R. Get the Facts: Minnesota's 2013 Tobacco Tax Increase is Improving Health. February 10, 2015. https://tobacconomics.org/wp-content/uploads/2015/02/Minnesota-2013-Tobacco-Tax-White-Paper_10Feb15.pdf

Effective Taxation of Cigarettes and Other Tobacco Products



The American Cancer Society Cancer Action Network (ACS CAN) supports a comprehensive approach to tobacco control that includes regular, significant excise tax increases of \$1.00 or more per pack of cigarettes to effectively reduce the number of people who begin smoking and increase the number of people who quit. Taxing other tobacco products at rates equivalent to the tax on cigarettes also helps prevent tobacco initiation among youth and promotes tobacco cessation among adults. Tax increases work best when tax revenues provide sustained funding for tobacco control programs that include hard-hitting earned and paid media campaigns, and evidence-based cessation services.

Taxing Cigarettes: By the Pack

All states currently have an excise tax on cigarettes at a rate per cigarette or per pack. In tax administration terms, this tax basis is known as a specific tax. In fact, since 2000, 48 states and the District of Columbia have increased their cigarette tax rates more than 140 times, always as a specific tax.ⁱ

According to the U.S. National Cancer Institute and World Health Organization, a specific tax on cigarettes better achieves public health objectives than an ad valorem excise tax because it increases retail prices of all products subject to the tax and does not perpetuate or increase price gaps between brands. Narrowing price gaps reduces consumers' incentives to change from higher-priced to lower-priced brands or to other tobacco products.ⁱⁱ

Furthermore, specific taxes on cigarettes are easy to administer because cigarettes are uniform in their structure and packaging. Also important, specific taxes provide a more predictable revenue stream.

States that are interested in having cigarette taxes keep pace with inflation in real dollar terms can institute an inflation-based annual adjustment if they so choose, but these minor tax adjustments should not be in lieu of regular and significant cigarette tax increases of \$1.00 or more per pack. Tax revenue from ad valorem-based inflation increases would be (at best) pennies on the dollar which do not deter youth tobacco use, and they don't encourage those who currently smoke to quit.

States should retain their current per-pack structural approach to taxing cigarettes. Switching the cigarette tax to a percent-of-price tax would produce the unintended consequence of creating larger price gaps between brands, resulting in a category of very low-cost cigarettes that appeal to youth, and furthermore encourage people who smoke cigarettes to simply switch to cheaper products rather than quit.

Additionally, changing the taxation on cigarettes to a price-based tax could add administrative complexity to efficient and effective enforcement of the Master Settlement Agreement as payments are based in part on tracking the quantity of cigarette sales and shipments which is easily tracked with a per-pack tax.

Taxing Other Tobacco Products: By Price

To maximize health and revenue gains, simplify tax collections, and make many dangerous and addictive products that are attractive to kids cost prohibitive, ad valorem excise taxes should be assessed on other tobacco products. Taxing other tobacco products at a percent of the retail, manufacturer or wholesale price, with an accompanying minimum tax equal to the state's per-pack cigarette tax rate is the optimal way to tax these products. Instituting a minimum tax rate will reduce price gaps between tobacco products.ⁱⁱⁱ

Other tobacco products, including chewing tobacco, cigars, hookah and e-cigarettes, vary widely in their structure and packaging unlike cigarette packs. This lack of uniformity makes an effective per-pack tax difficult to assess and collect on these types of products.

Excise Taxes are either "specific" or "ad valorem"

- A **specific excise tax** is a fixed monetary amount per quantity, volume, or weight of tobacco (or a combination of these).
- An **ad valorem excise tax** is a percentage of some measure of the value of tobacco products; retail, manufacturer, or wholesale prices are often used as the base value.

Tobacco companies favor weight-based or volume-based taxes on tobacco products to keep the price of their products cheaper for consumers. A weight-based or volume-based tax will not keep up with inflation or product price increases. As a result, a weight-based or volume-based tax will erode over time, bringing states lower revenue than percentage-of-price taxes.^{iv} Taxing tobacco products by weight or volume is administratively complex, requiring independent verification of the quantity of taxable contents. Also, weight-based or volume-based taxes incentivize tax avoidance by tobacco manufacturers which could simply reduce the weight or change the composition of the product to keep the overall price low.

The Bottom Line

Establishing a specific tax on cigarettes and a percent-of-price tax on other tobacco products will optimize the health, revenue collection, and enforcement aspects of the policy. ACS CAN supports regular and significant excise tax increases on all tobacco products. Ensuring that tobacco tax increases are equally applied across all product categories will maximize the health and revenue benefits of the tax increase. ACS CAN opposes tobacco industry attempts to complicate tax collection efforts by taxing cigarettes at a percent-of-price or by taxing other tobacco products by weight or volume. To further amplify health the benefits of the tax, ACS CAN also recommends that new tobacco tax revenues be directed to evidence-based tobacco prevention and cessation programs in accordance with CDC best practices.^v

ⁱ Campaign for Tobacco-Free Kids. Cigarette Tax Increases by State per Year 2000-2018 Factsheet available at: <https://www.tobaccofreekids.org/assets/factsheets/0275.pdf>. Accessed May 2, 2019.

ⁱⁱ U.S. National Cancer Institute and World Health Organization. The Economics of Tobacco and Tobacco Control. National Cancer Institute Tobacco Control Monograph 21. NIH Publication No. 16-CA-8029A. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; and Geneva, CH: World Health Organization; 2016. Section 3: Price Determinants of Demand: Chapter 5: Design and Administration of Taxes on Tobacco Products. https://cancercontrol.cancer.gov/brp/tcrb/monographs/21/docs/m21_5.pdf. Accessed March 15, 2019.

ⁱⁱⁱ Tobacco Control Legal Consortium. State Taxation of Non-Cigarette Tobacco Products. Last updated February 2012. Factsheet available at: <https://www.publichealthlawcenter.org/sites/default/files/resources/tclc-guide-state-tax-OTP-2012.pdf>. Accessed March 15, 2019.

^{iv} Campaign for Tobacco-Free Kids. The Best Way to Tax Smokeless Tobacco: A Simple Weight-Based Tax Hurts State Revenues and Increases Youth Use. Washington, DC: Campaign for Tobacco-Free Kids; 2008.

^v Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Control Programs—2014. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

The Impact of Tobacco Tax Increases on Low-Income Populations



Significantly increasing the price of tobacco is an important component of a comprehensive approach to reducing tobacco use.ⁱ Tobacco tax increases are endorsed by the U.S. Surgeon General as a highly effective strategy for reducing tobacco use through higher tobacco prices.ⁱⁱ

Current low tobacco prices continue to incentivize smoking for low-income and other vulnerable populations, causing these groups to shoulder a disproportionate share of the real cost of tobacco use. **In response to tobacco tax increases, low-income populations quit smoking at higher rates than higher income populations.**ⁱⁱⁱ The tobacco industry likes to negatively characterize the impact of higher tobacco taxes on low-income populations.

The real cost of smoking and other tobacco use to low socio-economic populations includes:

- **Medical and social costs** borne by individuals and families for treating higher rates of tobacco-related disease, including significantly increased risk for deadly and debilitating chronic diseases including cancer, heart disease, and lung disease such as emphysema and COPD; and
- **Lost productivity** for both employees and their employers who are faced with an individual's quality years of life lost and employee time spent not working due to tobacco-related illness.

This type of tobacco industry "spin" misses the real point of tobacco tax increases: reducing smoking, saving lives and preventing tobacco-related disease. In fact, the tobacco industry has a long and well-documented history of targeting racially diverse and low-income populations with discounts and promotions of its deadly and addictive products.^{iv,v,vi}

The truth is that low-income populations are more likely to quit in response to regular and significant tobacco tax increases.^{vii} Similarly, low-income populations also disproportionately reap the health and financial benefits of reduced smoking. Research has determined that 46% of the lives saved due to smoking reductions attributable to the 2009 federal tobacco tax increase were enjoyed among those below the poverty line, even though this group paid just 12% of the tax increase.^{viii}

Tobacco tax increases can reduce health-related disparities when more low-income smokers quit.^{ix,x,xi} Health disparities stemming from tobacco use further contribute to other economic and social disparities when the high cost of cancer, heart disease, lung disease, and other chronic illness is considered. In *The Economic and Health Benefits of Tobacco Taxation*, the World Health Organization stated, "all the evidence shows that poorer tobacco consumers are far more responsive to increases in price than higher income consumers, and therefore benefit the most in terms of avoiding death and disease associated with tobacco use."^{xii}

Tobacco tax increases produce reliable sources of new, recurring revenue that can fund state tobacco control programs and other health programs that directly benefit low-income populations. The health impact of tobacco tax increases can be magnified by utilizing the revenue from tax increases to help fund state tobacco prevention and cessation programs that provide resources to further support those trying to quit.

Tobacco tax increases are a public health intervention that works to reduce the real cost of smoking for both current and future populations. Tobacco tax increases reduce current tobacco use among adult smokers and prevent future youth use. Young people are 2 to 3 times more likely than adults to reduce tobacco consumption as a result of a tobacco price increase.^{xiii} And the prevention benefits extend to future generations who grow up in tobacco-free households.

Tobacco tax increases give current and future tobacco users essentially a “tax cut” when they help people quit.

Reducing tobacco use saves a lot of money beyond the retail cost of cigarettes, with additional savings occurring in terms of preventing the health and social damages that figure prominently in the real cost of tobacco use.

ⁱ Centers for Disease Control and Prevention (CDC). Best Practices for Comprehensive Tobacco Control Programs—2014. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

ⁱⁱ U.S. Department of Health and Human Services. The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.

ⁱⁱⁱ U.S. National Cancer Institute (NCI) & World Health Organization (WHO), *The Economics of Tobacco and Tobacco Control*, National Cancer Institute Tobacco Control Monograph 21, NIH Publication No. 16-CA-8029A, Bethesda, MD: HHS, National Institutes of Health, National Cancer Institute; and Geneva, CH: World Health Organization; 2016, https://cancercontrol.cancer.gov/brp/tcrb/monographs/21/docs/m21_complete.pdf.

^{iv} U.S. Department of Health and Human Services. Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012.

^v Brown-Johnson, CG, England, LJ, Glantz, SA, and Ling, PM. Tobacco industry marketing to low socio-economic status women in the U.S. *Tob Control*, 23(0): e139–e146, 2014.

^{vi} Siahpush, M, Farazi, P, Kim, J, Michaud, T, Yoder, A, Soliman, G, Tibbits, Nguyen, M, Shaikh, R. Social disparities in exposure to point-of-sale cigarette marketing. *Int J of Environ Res Public Health*, 13(12): 1263, 2016.

^{vii} International Agency for Research on Cancer, “Tax, price and tobacco use among the poor,” Effectiveness of Tax and Price Policies for Tobacco Control, IARC Handbook of Cancer Prevention Volume 14, 2011.

^{viii} Chaloupka FJ. The science behind tobacco taxation, presented Aug. 16, 2012 at the National Conference on Tobacco or Health, Kansas City, MO. See also Center for Budget and Policy Priorities, Higher tobacco taxes can improve health and raise revenue: <http://www.cbpp.org/research/higher-tobacco-taxes-can-improve-health-and-raise-revenue>.

^{ix} U.S. National Cancer Institute and World Health Organization. *The Economics of Tobacco and Tobacco Control*. National Cancer Institute Tobacco Control Monograph 21. NIH Publication No. 16-CA-8029A. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; and Geneva, CH: World Health Organization, 2016.

^x CDC, 2014

^{xi} Center for Public Health Systems Science. Pricing Policy: A Tobacco Control Guide. St. Louis, MO: The Center for Public Health Systems Science at the Brown School at Washington University in St. Louis and the Tobacco Control Legal Consortium; 2014.

^{xii} WHO, The Economic and Health Benefits of Tobacco Taxation, 2015, http://apps.who.int/iris/bitstream/10665/179423/1/WHO_NMH_PND_15.6_eng.pdf?ua=1&ua=1.

^{xiii} U.S. Centers for Disease Control and Prevention. A factsheet entitled “Economic trends in tobacco” https://www.cdc.gov/tobacco/data_statistics/fact_sheets/economics/econ_facts/. Accessed Jan 10 2017.

Lower Tobacco Taxes: Dangerous for Public Health



Tobacco is an addictive and deadly product and tobacco use remains the nation's number one cause of preventable death. Cigarette smoking and exposure to secondhand smoke cause approximately one out of every five deaths in the U.S., more than 480,000 premature deaths each year.^{i,ii} This includes at least 28 percent of all cancer deathsⁱⁱⁱ and 80 percent of lung cancer deaths.^{iv} The Surgeon General projects that without further action, 5.6 million youth age 0-17 alive today will die prematurely from smoking.^v

Despite the health risks, current rates of tobacco use remain high. After years of decline, in 2018 we saw an increase in tobacco use among youth. Largely due to the youth e-cigarette epidemic, the overall rate of tobacco use among high school students increased to 27.1 percent.^{vi}

Increasing tobacco taxes is one of the most effective ways to reduce tobacco use, especially among kids, and tobacco companies know it. Lowering the tax, and therefore the price of tobacco products is one major way for the tobacco industry to protect their bottom line, addict people with cheap products, and keep them addicted. Tobacco companies have violated civil racketeering laws and defrauded the American people by lying for decades about the health effects of smoking, manipulating their products to make them more addicting, marketing to children, and more. Letting tobacco companies draft the solution to reduce tobacco use is shortsighted.

What is a Modified Risk Tobacco Product?

The Tobacco Control Act, granting the Food and Drug Administration (FDA) authority over tobacco products, includes a provision that requires a tobacco product manufacturer to receive a marketing order before they can make a modified risk claim about that tobacco product. The reason for this provision is because the industry has lied for decades about the harm of their products. Now, a tobacco product manufacturer must prove that their product, when actually used by consumers, will benefit the health of the population, both users and nonusers, before they can make any such modified risk claim.

- The U.S. Food and Drug Administration (FDA) can authorize marketing of a modified risk tobacco product if the application demonstrates that the product will benefit the health of the population.
- Any action at the state or local level to regulate so-called modified risk tobacco products differently from cigarettes and other tobacco products (OTPs) is premature.
- Modified risk does not mean "safe." All tobacco products have health harms.
- Lowering taxes on any tobacco product reduces state tax revenue.
- States should not change state tobacco control laws to accommodate any new product marketing claims.

ACS CAN's Position

The American Cancer Society Cancer Action Network (ACS CAN) calls on lawmakers to reject any attempts to reduce or eliminate taxes on any tobacco products. ACS CAN supports a comprehensive approach to tobacco control that includes regular and significant increases in the excise taxes on **all** forms of tobacco, fully funding effective tobacco prevention and cessation programs, and creating 100% smoke-free environments. Significant tobacco tax increases:

- **Save Lives:** Regular, significant tax increases of \$1.00 or more per pack of cigarettes reduce the number of people who begin smoking and increase the number of smokers who quit. It is important to increase the taxes on other tobacco products (OTPs) to an equivalent rate to produce a meaningful reduction in tobacco consumption and tobacco-related disease and death. All OTPs should be taxed at the same rate as cigarettes to encourage people who smoke to quit.
- **Reduce Health Care Costs:** Lower tobacco use rates translate into fewer tobacco-related cancers and premature deaths, reduced spending on tobacco-related health problems, and more productive workers.
- **Generate Revenue:** Substantial increases in cigarette tax rates generate new revenue.^{vii}

ACS CAN urges lawmakers to protect kids, not Big Tobacco's profits and oppose efforts to reduce or eliminate taxes on any tobacco products, including on so-called "modified risk products." Instead, look to proven solutions that support public health and the health of state budgets.

ⁱ U.S. Department of Health and Human Services (HHS). *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

ⁱⁱ CDC. QuickStats: Number of Deaths from 10 Leading Causes — National Vital Statistics System, United States, 2010. *MMWR* 2013; 62(8): 155.

ⁱⁱⁱ Islami F, Goding Sauer A, Miller KD, Siegel RL, Fedewa SA, Jacobs EJ, McCullough ML, Patel AV, Ma J, Soerjomataram I, Flanders WD. Proportion and Number of Cancer Cases and Deaths Attributable to Potentially Modifiable Risk Factors in the United States. *CA: A Cancer Journal for Clinicians*. 2018 Jan 1;68(1):31-54.

^{iv} American Cancer Society. *Cancer Facts & Figures, 2017*. Atlanta, GA: American Cancer Society, 2017.

^v HHS, 2014.

^{vi} *Vital Signs: Tobacco Product Use Among Middle and High School Students — United States, 2011–2018*. *Morbidity and Mortality Weekly Report* 2019;68:157–164.

^{vii} Campaign for Tobacco-Free Kids. Raising State Cigarette Taxes Always Increases State Revenues (And Always Reduces Smoking) Fact Sheet. Updated June 7, 2017 Available at: <http://www.tobaccofreekids.org/research/factsheets/pdf/0098.pdf>.



STATE CIGARETTE TAX RATES & RANK, DATE OF LAST INCREASE, ANNUAL PACK SALES & REVENUES, AND RELATED DATA

48 states and the District of Columbia have implemented or passed 138 cigarette tax rate increases since January 1, 2002, with 35 of those states and DC passing more than one increase during that time period. The states in red last increased their tax in 2009 or earlier. As time passes, inflation erodes the real value of state tobacco tax rates and revenues, as they account for increasingly small portions of the total retail price of a pack of cigarettes. Cigarette tax increases can quickly restore state tobacco tax revenues to historical levels or higher – while also reducing state smoking levels and related costs and saving lives.

Average State Cigarette Tax: \$1.81 per pack

State	Cigarette Tax Per Pack	National Rank (1 = high)	Date of Last State Tax Increase	FY 2018 Cigarette Pack Sales (millions)	FY 2018 Cigarette Tax Revenue (millions)	Retail Price Per Pack With All Taxes	State Smoking Costs Per Pack Sold	Youth Smoking Rate	Adult Smoking Rate	Adult Smoking Rank (1=low)
<i>All State Avg/Total</i>	\$1.81	///	///	11.6 billion	\$17.2 billion	\$6.64	\$19.16	5.8%	13.7%	///
Alabama	\$0.675	41st	10/1/2015	266.7	\$172.1	\$5.44	\$10.87	14.0%	19.2%	41st
Alaska	\$2.00	17th	7/1/2007	23	\$45.7	\$9.09	\$9.56	10.9%	19.1%	39th
Arizona	\$2.00	17th	12/8/2006	153.2	\$272.4	\$7.63	\$14.17	7.1%	14.0%	12th
Arkansas	\$1.15	35th	3/1/2009	150.9	\$164.3	\$6.13	\$11.69	13.7%	22.7%	49th
California	\$2.87	11th	4/1/2017	657.7	\$1,882.0	\$8.31	\$18.29	2.0%	11.2%	2nd
Colorado	\$0.84	39th	1/1/2005	180.2	\$149.9	\$5.82	\$10.11	7.0%	14.5%	14th
Connecticut	\$4.35	2nd	12/1/2017	85.5	\$354.6	\$10.00	\$17.32	3.5%	12.2%	4th
Delaware	\$2.10	15th	9/1/2017	61.8	\$117.1	\$6.68	\$4.94	6.2%	16.5%	28th
Washington, DC	\$4.50	1st	10/1/2018	9	\$26.2	\$9.87	\$26.70	12.5%	13.8%	11th
Florida	\$1.339	31st	7/1/2009	805.9	\$1,058.0	\$6.21	\$12.28	3.6%	14.5%	14th
Georgia	\$0.37	49th	7/1/2003	476.4	\$171.1	\$5.30	\$10.93	7.7%	16.1%	26th
Hawaii	\$3.20	6th	7/1/2011	34.6	\$110.8	\$9.52	\$13.09	8.1%	13.4%	8th
Idaho	\$0.57	45th	6/1/2003	64.8	\$35.7	\$5.61	\$9.51	9.1%	14.7%	17th
Illinois	\$2.98	10th	7/1/2019	362.4	\$705.6	\$8.79	\$13.40	7.6%	15.5%	21st
Indiana	\$0.995	38th	7/1/2007	388.6	\$375.9	\$5.75	\$9.16	8.7%	21.1%	48th
Iowa	\$1.36	30th	3/15/2007	135.3	\$180.7	\$6.35	\$9.74	5.6%	16.6%	29th
Kansas	\$1.29	33rd	7/1/2015	97	\$124.3	\$6.44	\$14.12	7.2%	17.3%	31st
Kentucky	\$1.10	36th	7/1/2018	363.5	\$217.1	\$5.60	\$6.14	14.3%	23.4%	50th
Louisiana	\$1.08	37th	4/1/2016	250.9	\$257.6	\$5.83	\$10.68	12.3%	20.5%	44th
Maine	\$2.00	17th	9/19/2005	60.7	\$119.1	\$7.13	\$14.05	8.7%	17.8%	33rd
Maryland	\$2.00	17th	1/1/2008	167.3	\$331.6	\$6.95	\$16.85	8.2%	12.6%	5th
Massachusetts	\$3.51	5th	7/31/2013	157.8	\$552.4	\$9.98	\$23.61	6.4%	13.4%	8th
Michigan	\$2.00	17th	7/1/2004	423.6	\$834.5	\$6.78	\$12.65	10.5%	18.9%	37th
Minnesota	\$3.04	8th	1/1/2017	145.8	\$525.5	\$9.41	\$10.72	9.6%	15.1%	19th
Mississippi	\$0.68	40th	5/15/2009	168.0	\$108.9	\$5.47	\$10.14	6.9%	20.5%	44th
Missouri	\$0.17	51st	10/1/1993	460.5	\$75.9	\$4.91	\$9.22	9.2%	19.4%	42nd
Montana	\$1.70	25th	1/1/2005	39.1	\$67.4	\$6.46	\$11.11	7.7%	18.0%	34th
Nebraska	\$0.64	42nd	10/1/2002	83.2	\$52.3	\$5.48	\$11.68	7.4%	16.0%	25th
Nevada	\$1.80	23rd	7/1/2015	94.8	\$170.2	\$7.02	\$10.80	6.7%	15.7%	24th
New Hampshire	\$1.78	24th	8/1/2013	112.0	\$200.2	\$6.39	\$6.14	7.8%	15.6%	22nd

State	Cigarette Tax Per Pack	National Rank (1 = high)	Date of Last State Tax Increase	FY 2018 Cigarette Pack Sales (millions)	FY 2018 Cigarette Tax Revenue (millions)	Retail Price Per Pack With All Taxes	State Smoking Costs Per Pack Sold	Youth Smoking Rate	Adult Smoking Rate	Adult Smoking Rank (1=low)
New Jersey	\$2.70	12th	7/1/2009	232.6	\$627.1	\$7.85	\$18.93	4.7%	13.1%	7th
New Mexico	\$2.00	17th	7/1/2019	49.2	\$81.5	\$7.07	\$16.95	10.6%	15.2%	20th
New York	\$4.35	2nd	7/1/2010	247.7	\$1,073.6	\$10.47	\$26.54	4.8%	12.8%	6th
North Carolina	\$0.45	47th	9/1/2009	546.5	\$245.8	\$5.32	\$8.68	12.1%	17.4%	32nd
North Dakota	\$0.44	48th	7/1/1993	47.5	\$20.9	\$5.36	\$12.69	12.6%	19.1%	39th
Ohio	\$1.60	27th	7/1/2015	554.6	\$871.5	\$6.55	\$11.13	8.5%	20.5%	44th
Oklahoma	\$2.03	16th	7/1/2018	228.2	\$232.6	\$6.96	\$9.23	12.5%	19.7%	43rd
Oregon	\$1.33	32nd	1/1/2018	154.0	\$203.3	\$6.14	\$13.52	7.7%	15.6%	22nd
Pennsylvania	\$2.60	13th	8/1/2016	484.3	\$1,260.8	\$8.51	\$13.97	8.7%	17.0%	30th
Rhode Island	\$4.25	4th	8/16/2017	33.3	\$136.4	\$10.15	\$16.04	6.1%	14.6%	16th
South Carolina	\$0.57	45th	7/1/2010	266.6	\$146.8	\$5.42	\$9.28	10.0%	18.0%	34th
South Dakota	\$1.53	28th	1/1/2007	35.0	\$53.5	\$6.50	\$11.47	10.1%	19.0%	38th
Tennessee	\$0.62	43rd	7/1/2007	375.8	\$228.4	\$5.39	\$10.54	9.4%	20.7%	47th
Texas	\$1.41	29th	1/1/2007	824.5	\$1,172.0	\$6.37	\$12.04	11.3%	14.4%	13th
Utah	\$1.70	25th	7/1/2010	53.1	\$89.4	\$6.75	\$9.33	3.8%	9.0%	1st
Vermont	\$3.08	7th	7/1/2015	20.5	\$61.6	\$8.85	\$12.16	9.3%	13.7%	10th
Virginia	\$0.30	50th	7/1/2005	471.8	\$139.0	\$5.54	\$7.59	6.5%	15.0%	18th
Washington	\$3.025	9th	5/1/2010	119.4	\$356.7	\$8.58	\$19.39	5.0%	12.0%	3rd
West Virginia	\$1.20	34th	7/1/2016	137.5	\$158.4	\$6.14	\$10.82	14.4%	25.2%	51st
Wisconsin	\$2.52	14th	7/1/2009	215.5	\$538.9	\$7.72	\$11.54	4.7%	16.4%	27th
Wyoming	\$0.60	44th	7/1/2003	29.2	\$16.5	\$5.40	\$14.80	15.7%	18.8%	36th
USA/U.S. Gov't	\$1.01	///	4/1/2009	12.0 billion	\$12.1 billion	\$6.17	\$19.16	5.8%	13.7%	///

Sources: Orzechowski & Walker, *Tax Burden on Tobacco*, 2018. U.S. Alcohol and Tobacco Tax and Trade Bureau (TTB), *Tobacco Statistics*. From the start of 1998 through 2002, the major cigarette companies increased their prices by more than \$1.25 per pack. State averages do not include U.S. territories. Taxed Pack Sales include all cigarette sales on which cigarette taxes were collected. Total USA pack sales include sales of cigarettes on which federal but not state taxes are collected (e.g., sales to Indian Tribes and military bases) and includes sales in Puerto Rico and other U.S. territories not listed above. State cigarette tax revenues are net values. The retail price per pack includes all federal and statewide excise and sales taxes but not any purely local taxes (except that NY City's \$1.50 per pack tax is factored into the overall NY State price per pack), and is based on data from *The Tax Burden on Tobacco*, 2017, reports of state cigarette tax increases, reports on tobacco company price changes, and USDA Economic Research Service. The price per pack data have been adjusted for retailer-based discounts, promotions, coupons, as well as local policies that affect pack prices and tobacco company price increases since prices were last reported. AK, DE, MT, NH & OR have no state sales tax; OK has a state sales tax, but does not apply it to cigarettes; MN & DC apply a per-pack sales tax at the wholesale level; and AL, GA & MO do not apply their sales tax to the portion of retail cigarette prices that is the state's cigarette excise tax. State smoking costs per pack sold = Estimates of state smoking-caused health costs and lost productivity per taxed packs sold in each state in 2001, as reported in U.S. Centers for Disease Control and Prevention's (CDC) *State Highlights 2006*, adjusted to 2009 dollars with the same methodology used by CDC. See also, U.S. General Accounting Office (GAO), "CDC's April 2002 Report on Smoking: Estimates of Selected Health Consequences of Cigarette Smoking Were Reasonable," letter to U.S. Rep. Richard Burr, July 16, 2003, <http://www.gao.gov/new.items/d03942r.pdf>. National per-pack smoking costs in 2010 dollars, using cost data from Xu, X et al., "Annual Healthcare Spending Attributable to Cigarette Smoking: An Update," *Am J Prev Med*, 2014 and pack sales data from TTB's *Tobacco Statistics*. Youth Smoking. Youth smoking rates most recent available; national youth rate from the 2019 National Youth Tobacco Survey; state rates in bold type from the Youth Risk Behavior Survey; in italics from state-specific surveys; and in regular type from Youth Tobacco Surveillance. OR data are for 11th grade only. WA data are for 10th grade only. Because of different surveys and years, youth-smoking rankings cannot be calculated. *Adult Smoking*. State rates from CDC, 2018 Behavioral Risk Factor Surveillance System (BRFSS); National rate from CDC, "Tobacco Product Use and Cessation Indicators Among Adults — United States, 2018," *MMWR* 68(45):1013-1019, November 15, 2019, <https://www.cdc.gov/mmwr/volumes/68/wr/pdfs/mm6845a2-H.pdf>.

For the Record: Pushing Cigarettes is (Still) Big Business for Big Tobacco



Nothing New: The Tobacco Industry's False Claims of Corporate Responsibility

Tobacco companies haven't changed. Despite decades of false and misleading claims of caring about people's health, the industry's product manufacturing, marketing, and lobbying efforts continue to provide evidence to the contrary.

- The cigarettes being sold today are deadlier than ever: the U.S. Surgeon General concluded in 2014 that people who smoke now have a much higher risk of lung cancer and chronic obstructive pulmonary disease (COPD) than they did 50 years ago, despite smoking fewer cigarettes.ⁱ
- Of the 12-plus billion cigarette packs sold in 2017 in the U.S., four companies—Philip Morris USA, Reynolds American Inc., ITG Brands, and Liggett—accounted for about 92% of U.S. sales.ⁱⁱ
- Big Tobacco continues to oppose established best practices that are proven to reduce smoking and other tobacco use, including efforts to block or derail federal regulatory efforts, significant tobacco tax increases on all tobacco products, comprehensive smoke-free and tobacco-free laws, and funding and implementation of evidence-based tobacco prevention and cessation programs.
- In the 2018 election cycle, major tobacco companies and their allies spent nearly \$24 million dollars to oppose cigarette tax increases that appeared on the ballot in Montana and South Dakota in an effort to reduce smoking and save lives.^{iii iv}

Cigarettes are Still the Leading Cause of Preventable Death in the U.S.

While legitimate tobacco control efforts by the public health community have made significant gains in recent decades, despite tobacco industry interference, cigarette sales in the U.S. continue in staggering and unacceptable numbers

- Cigarette smoking remains the number one cause of preventable disease and death in the U.S, killing more than 480,000 people each year.^v
- For every 1 person who dies from smoking, 30 live with a serious smoking-related illness.^{vi}
- Smoking causes about 9 out of 10 lung cancer deaths and is known to cause at least 12 different major types of cancer.^{vii} Overall, smoking is responsible for nearly one-third of all cancer deaths in the U.S.^{viii}



Big Tobacco Continues to Invest Heavily in Cigarette Promotions

Any myths that tobacco companies are suddenly now interested in public health are clearly dispelled by government records that track the industry's product marketing and promotional expenditures. Following the money, we find:

- Domestic cigarette advertising and promotional expenses for the largest cigarette manufacturers in the U.S. totaled approximately \$8.637 billion in 2017. ^x
- Spending by the largest tobacco companies on price discounts paid to retailers and wholesalers increased to \$6.189 and \$1.195 billion respectively in 2017 from \$5.806 and \$1.441 billion in 2016.^{xi}

Big Tobacco Continues to Attract Kids at Alarming Numbers

Major tobacco companies market cigarettes that are the leading favorites among kids. This cycle of youth-oriented marketing has perpetuated the tobacco epidemic in the U.S. for decades, addicting new generations of young people.

- The three most heavily advertised cigarette brands—Marlboro, Newport, and Camel—continue to be the preferred brands of cigarettes smoked by young people.^{xii}
- Major tobacco companies are devising innovative ways of attracting new, young customers to cigarettes, with companies like Altria touting new Marlboro products, brand promotions, social media engagement platforms, and points/rewards programs with the stated goal of “increasing its digital leadership, brand engagement and Marlboro's already strong brand equity and loyalty.”^{xiii}
- Each day, among kids 17 years of age and younger, more than 2,000 smoke their first cigarette, and 300 become daily cigarette smokers.^{xiv}
- If smoking continues at the current rate among youth in this country, 5.6 million of today's Americans younger than 18 will die early from a smoking-related illness. That's about 1 of every 13 Americans aged 17 years or younger alive today.^{xv}

The Solution

The good news is that state and local governments can reduce tobacco use, save lives, and save money by implementing three proven solutions to the problem: 1) Fully funding evidence-based tobacco prevention and cessation programs 2) Regular and significant increases in tobacco taxes and 3) Implementing 100 percent smoke-free laws. Like a three-legged stool, each component works in conjunction with the others, and all three are necessary to overcome the tobacco epidemic. A 2013 study published in the *American Journal of Public Health* found that between 2002 and 2008, each of these measures separately contributed to declines in youth smoking and together they reduced the number of youth smokers by about 220,000. The study also found that states could achieve far greater gains if they more fully implemented these proven strategies. These policies are also effective in helping tobacco users to quit.

ⁱ U.S. Department of Health and Human Services. [The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General](#). Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Accessed October 31, 2018.

ⁱⁱ Maxwell JC. The Maxwell Report: Year End & Fourth Quarter 2017 Cigarette Industry. Richmond, VA: John C. Maxwell, Jr., 2018. As cited in: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/economics/econ_facts/index.htm. Accessed October 31, 2018.

ⁱⁱⁱ Ballotpedia. Montana I-185, Extend Medicaid Expansion and Increase Tobacco Taxes Initiative (2018).

^{iv} Ballotpedia. South Dakota Initiated Measure 25, Tobacco Tax Increase Initiative (2018).

^v U.S. Department of Health and Human Services. [The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General](#). Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Accessed October 31, 2018.

^{vi} Centers for Disease Control and Prevention. Web page entitled “Smoking and Tobacco Use / Health Effects” available at: https://www.cdc.gov/tobacco/basic_information/health_effects/index.htm. Accessed February 21, 2019.

^{vii} Centers for Disease Control and Prevention. Web page entitled “Smoking and Tobacco Use / Health Effects of Cigarette Smoking” available at: https://www.cdc.gov/tobacco/basic_information/health_effects/index.htm. Accessed February 21, 2019.

^{viii} Lortet-Tieulent J, Goding Sauer, A, Siegel, RL, Miller, KD, Islami, F, Fedewa, SA, Jacobs, EJ, Jemal A. State-Level Cancer Mortality Attributable to Cigarette Smoking in the United States. *JAMA Internal Medicine*. Published online October 24, 2016.

^{ix} Campaign for Tobacco-Free Kids. State Cigarette Tax Rates & Rank, Date of Last Increase, Annual Pack Sales & Revenues, and Related Data <https://www.tobaccofreekids.org/assets/factsheets/0099.pdf> [accessed Feb 20, 2019]

^x U.S. Federal Trade Commission (FTC), Cigarette Report for 2017, 2019, https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-cigarette-report-2017-federal-trade-commission-smokeless-tobacco-report/ftc_cigarette_report_2017.pdf

^{xi} Ibid

^{xii} Centers for Disease Control and Prevention. Perks SN, Armour B, Agaku IT. Cigarette Brand Preference and Pro-Tobacco Advertising Among Middle and High School Students — United States, 2012–2016. *MMWR* 2018;67:119–124. Available at: <https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6704a3-H.pdf>

^{xiii} As quoted in Altria Q3 2018 investor earnings call: <https://seekingalpha.com/article/4214461-altria-group-q3-2018-results-earnings-call-transcript> [accessed 2018 Oct 31].

^{xiv} Centers for Disease Control and Prevention. Web page entitled “Smoking & Tobacco Use / Fast Facts” available at: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/index.htm. Updated February 6, 2019.

^{xv} Centers for Disease Control and Prevention. Web page entitled “Smoking & Tobacco Use / Youth and Tobacco Use” available at: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/index.htm Accessed February 22, 2019.

Significant Tobacco Tax Increases Reduce Tobacco Use & Generate New Revenue, Despite Tobacco Industry Claims



According to the Institute of Medicine, the U.S. Surgeon General, and the World Health Organization, tobacco tax increases are a highly effective means of reducing tobacco use.^{i, ii, iii} Increasing the price of tobacco products through state excise tax increases improves health outcomes by preventing smoking initiation, promoting smoking cessation, and reducing the prevalence and intensity of tobacco use by teens and adults.^{iv, v, vi, vii, viii} In fact, tobacco companies have repeatedly admitted in their own corporate documents that tobacco taxes are a significant deterrent to youth consumption and an incentive to adult quitting and therefore pose a serious external threat to tobacco industry sales volumes and profits.^{ix, x, xi, xii}

When faced with mounting evidence that tobacco tax increases effectively reduce tobacco use, tobacco manufacturers will try to distract policymakers from the material facts by invoking dire warnings of reduced revenue due to increased illicit activity including widespread smuggling and other organized crime that they claim will result from increased taxes on cigarettes and other tobacco products.

The tobacco industry and its allies are being intellectually dishonest when they say tobacco tax increases will lead to reduced state revenues because of widespread cigarette smuggling or other black market activity. Consider the real facts: every state that has significantly increased its state cigarette tax has also boosted its state revenue, despite the beneficial declines in consumption resulting from the tax increase, and regardless of any related tax avoidance, tax evasion, or illicit activity.^{xiii}

The Tobacco Industry & Cigarette Smuggling

The tobacco industry has shown a historical interest in increased cigarette smuggling. Major multinational tobacco corporations including Philip Morris International, Japan Tobacco International, British American Tobacco, and RJ Reynolds have been implicated in various smuggling allegations in both Europe and North America. Some of these companies have plead guilty and been convicted of criminal violations, while others have chosen to settle lawsuits.^{xiv, xv} The tobacco industry's interest in cigarette smuggling is self-serving, particularly in light of the fact that the industry benefits from smuggling in the following ways:^{xvi}

- Tobacco companies get paid for products that enter the illegal distribution chain just the same as they do with their products sold through legal markets.
- Tobacco companies enjoy lower tobacco prices and increased demand as a result of smuggling.
- Tobacco companies know that low-income people are more likely to start smoking and less likely to quit as prices remain low.
- Tobacco companies often use the threat of increased smuggling to argue against increased excise taxes, leading to higher consumer demand in legal markets.

Who Benefits the Most from Cigarette Smuggling?

"Tobacco companies are among the main stakeholders benefiting from illicit cigarette trade. Smuggling helps these companies generate higher profits by enabling them to pay tobacco taxes in jurisdictions with lower levies, or to not pay taxes at all. It has been well documented that the tobacco industry's various business strategies to expand tobacco sales facilitated the illicit cigarette trade. Worldwide, transnational tobacco companies have been found guilty of organizing illicit tobacco trade, and have paid billions of dollars in fines and penalties in compensation."

Excerpted from *The Tobacco Atlas*, a publication of the American Cancer Society and the World Lung Foundation.

Tobacco companies typically overstate the illicit trade problem when it benefits them. Recent peer-reviewed research independent of tobacco industry influence estimates that a relatively small proportion (11.6%) of the global cigarette market is the result of some form of illicit trade.^{xvii} Estimates of the scope of the problem in the United States have similarly concluded that only a fraction of the 264 billion cigarettes consumed in the U.S. each year avoid taxes or evade taxes, using a variety of legal and illicit means.^{xviii} Apart from smuggling and tax avoidance, the tobacco industry and its allies often seek to generate concerns about cigarette counterfeiting operations. A 2016 analysis of recent data suggests that counterfeit and pirated goods of different types comprise 2.5% of the global imports market.^{xix} For Philip Morris International, the problem is comparatively smaller: the company reported to its own investors that only 0.22% -- less than one percent -- of the total global cigarette market was manufactured by illegal counterfeiters.^{xx} Because of the known health risks at stake, significant tobacco tax increases are urgently needed to help curb the strong consumer demand that drives the market for illicit trade, despite tobacco companies' opposition at various levels of government.^{xxi}

Less Demand, Less Illicit Trade

"The most effective way to reduce illicit trade is to reduce the demand for all tobacco products, legal or illicit."

Excerpted from *The Tobacco Atlas*, a publication of the American Cancer Society and the World Lung Foundation.

Common-sense measures are available to states to further minimize black market sales. Many options exist for state officials to crack down on cigarette smuggling and counterfeiting.^{xxii,xxiii} These recommended measures intended to minimize illicit activity are additionally advantageous because such actions may also help reinforce the positive health outcomes and decreased associated health care costs that are realized through reduced tobacco consumption.^{xxiv} States should be wary of tobacco industry efforts to block tobacco tax increases rather than the industry supporting stronger enforcement of new or existing tobacco tax policies that it knows will decrease tobacco consumption and save lives while maximizing state revenues.^{xxv}

Even large-scale tobacco tax increases are effective in reducing tobacco consumption while also generating new revenue, despite being surrounded by lower-tax states. In Minnesota, in the year immediately following the state's \$1.60 per pack cigarette tax increase in 2013, revenues increased by more than \$204 million, pack sales declined by 54.6 million packs, and adult and youth smoking rates were showing sharp reductions in the state.^{xxvi} At the time, this cigarette tax increase of \$1.60 per pack was tied for the highest single cigarette tax rate increase ever implemented by a state in the U.S., and when it went into effect in 2013, Minnesota shared a border with two states whose cigarette tax was in excess of \$1.00 per pack less (Iowa and South Dakota) and one state whose cigarette tax rate was more than \$2.00 less (North Dakota). While it is true that any tax evasion and smuggling that does occur will tend to reduce the ultimate extent of revenue gains, these types of illicit activities do not come close to eliminating all the new revenues or seriously impacting the health gains that are achieved when states increase tobacco taxes by significant amounts.^{xxvii}

A Call to Action

*"Governments should not heed tobacco industry threats of rising illicit trade as an excuse to postpone or avoid implementing strong tobacco control measures ... the **existence of illicit trade should never distract us from the critical job of implementing strong tobacco control policies and saving lives.**"*

Excerpted from *The Tobacco Atlas*, a publication of the American Cancer Society and the World Lung Foundation.

The truth is that we know tobacco tax increases work. Robust evidence now exists that tobacco tax increases produce major benefits from the health and revenue perspective.^{xxviii} Since the beginning of 2000, 48 U.S. states and the District of Columbia have passed more than 142 state cigarette tax increases.^{xxix} Additionally, tobacco users consistently seek increased help from state tobacco cessation quitlines in the weeks and months following significant cigarette tax increases.^{xxx,xxxi,xxxii,xxxiii} The tobacco industry cannot erase the historical truth and hard evidence that tobacco taxes save lives, save taxpayers money, and generate millions of dollars in predictable new revenue for states that consider the facts and are not swayed by tobacco industry deception.

- ⁱ Centers for Disease Control and Prevention. The health consequences of smoking — 50 years of progress: a report of the Surgeon General. Atlanta (GA): US Department of Health and Human Services; 2014.
- ⁱⁱ Institute of Medicine. Ending the tobacco problem: a blueprint for the nation. Washington (DC): The National Academies Press; 2007.
- ⁱⁱⁱ World Health Organization. WHO report on the global tobacco epidemic, 2008 — the MPOWER package. Geneva (CH): World Health Organization; 2008.
- ^{iv} Centers for Disease Control and Prevention. The health consequences of smoking — 50 years of progress: a report of the Surgeon General. Atlanta (GA): US Department of Health and Human Services; 2014.
- ^v Centers for Disease Control and Prevention. Preventing tobacco use among youth and young adults: a report of the Surgeon General. Atlanta (GA): US Department of Health and Human Services; 2012.
- ^{vi} Chaloupka FJ, Straif K, Leon ME; Working Group, International Agency for Research on Cancer. Effectiveness of tax and price policies in tobacco control. *Tobacco Control* 2011;20(3):235–8.
- ^{vii} International Agency for Research on Cancer. Effectiveness of tax and price policies for tobacco control. IARC handbooks of cancer prevention, Volume 14. Geneva (CH): International Agency for Research on Cancer; 2011
- ^{viii} Holmes CB, King BA, Babb SD. Stuck in neutral: stalled progress in statewide comprehensive smoke-free laws and cigarette excise taxes, United States, 2000–2014. *Preventing Chronic Disease* 2016;13:150409. DOI: <http://dx.doi.org/10.5888/pcd13.150409>. Accessed December 12, 2016.
- ^{ix} Philip Morris document. General Comments on Smoking and Health. Appendix I in The Perspective of PM International on Smoking and Health Initiatives, March 29, 1985, Bates No. 2023268329/8348.
- ^x Ellen Merlo, Senior Vice President of Corporate Affairs, Philip Morris, 1994 draft speech to the Philip Morris USA Trade Council, January 11, 1994, Bates No. 2022811708/1755.
- ^{xi} R.J. Reynolds Executive D. S. Burrows. Estimated Change in Industry Trend Following Federal Excise Tax Increase. September 20, 1982, Bates No. 501988846/8849.
- ^{xii} Philip Morris Executive Claude Schwab. Cigarette Attributes and Quitting. March 4, 1993, Bates No. 2045447810.
- ^{xiii} Campaign for Tobacco-Free Kids. Raising state cigarette taxes always increases state revenues (and always reduces smoking). Data source: Orzechowski & Walker 2014. Tax burden on tobacco, monthly data of gross tax revenues. Document available at: <http://www.tobaccofreekids.org/research/factsheets/pdf/0098.pdf>. Accessed November 22, 2016.
- ^{xiv} Joossens L, Gilmore A, Stoklosa M, Ross H. Assessment of the European Union's illicit trade agreements with the four major transnational tobacco companies. *Tobacco Control* 2016;25:25460. doi:10.1136/tobaccocontrol-2014-052218.
- ^{xv} Los Angeles Times. Tobacco Company Affiliate Pleads Guilty in Smuggling. <http://articles.latimes.com/1998/dec/23/news/mn-56927>. Accessed December 12, 2016.
- ^{xvi} Trust us - we're the tobacco industry, undated. Action on Smoking and Health and Campaign for Tobacco-Free Kids: <http://ftcalliance.com/wp-content/uploads/2014/03/Trust-Us-Were-The-Tobacco-Industry-Booklet.pdf>. Accessed November 21, 2016.
- ^{xvii} Joossens L et al. How eliminating the global illicit cigarette trade would increase tax revenue and save lives. Paris: The Union against tuberculosis and lung disease. 2009. As appearing in: WHO Technical Manual on Tobacco Tax Administration, Chapter 4: The political economy of tobacco taxation. World Health Organization. 2010.
- ^{xviii} Maxwell, JC Jr. Maxwell Report: Year end & fourth quarter 2014 Cigarette Industry. Richmond, VA, as reported in Preventing and Reducing Illicit Tobacco Trade in the United States, a publication of the U.S. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health. December 2015. Available at: <https://www.cdc.gov/tobacco/stateandcommunity/pdfs/illicit-trade-report-121815-508tagged.pdf>. Accessed November 27, 2016.
- ^{xix} Trade in counterfeit and pirated goods: Mapping the economic impact. A report of the Office of Economic Co-operation and Development. April 2016. Report summary available at: <http://www.oecd.org/governance/trade-in-counterfeit-and-pirated-goods-9789264252653-en.htm>. Accessed November 22, 2016.
- ^{xx} Shafey O, Ross H, Schluger N, Islami F, Drope J. *The Tobacco Atlas*, a publication of the American Cancer Society and the World Lung Foundation. 5th edition. <http://www.tobaccoatlas.org/topic/illicit-cigarette-trade/>. Accessed November 22, 2016.
- ^{xxi} WHO Report on the Global Tobacco Epidemic 2015. Report available at: http://apps.who.int/iris/bitstream/10665/178574/1/9789240694606_eng.pdf?ua=1&ua=1. Accessed November 22, 2016.
- ^{xxii} Chaloupka F, Matthes Edwards S, Ross H, Diaz M, Kurti M, Xu X, Pesko M, Merriman D, Delong H. Preventing and Reducing Illicit Tobacco Trade in the United States, a publication of the U.S. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health. December 2015. Available at: <https://www.cdc.gov/tobacco/stateandcommunity/pdfs/illicit-trade-report-121815-508tagged.pdf>. Accessed November 27, 2016.
- ^{xxiii} Campaign for Tobacco-Free Kids. State options to prevent and reduce cigarette smuggling and block other illegal state tobacco tax evasion. Document available at: <http://www.tobaccofreekids.org/research/factsheets/pdf/0274.pdf>. Accessed November 27, 2016.
- ^{xxiv} Chaloupka F, Matthes Edwards S, Ross H, Diaz M, Kurti M, Xu X, Pesko M, Merriman D, Delong H. Preventing and Reducing Illicit Tobacco Trade in the United States, a publication of the U.S. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health. December 2015. Available at: <https://www.cdc.gov/tobacco/stateandcommunity/pdfs/illicit-trade-report-121815-508tagged.pdf>. Accessed November 27, 2016.
- ^{xxv} Ibid.
- ^{xxvi} A February 12, 2015 op-ed by Boyle R, Chaloupka F, and Mattson L. appearing in *MinnPost*. Available at: <https://www.minnpost.com/community-voices/2015/02/facts-are-minnesotas-2013-tobacco-tax-increase-improving-health>. Accessed November 27, 2016.

- ^{xxvii} Campaign for Tobacco-Free Kids. Raising state cigarette taxes always increases state revenues (and always reduces smoking). Data source: Orzechowski & Walker 2014. Tax burden on tobacco, monthly data of gross tax revenues. Document available at: <http://www.tobaccofreekids.org/research/factsheets/pdf/0098.pdf>. Accessed November 22, 2016.
- ^{xxviii} Frank J. Chaloupka, Ayda Yurekli, and Geoffrey T. Fong, "Tobacco Taxes as a Tobacco Control Strategy," *Tobacco Control*. 2012, 21 pp. 172-180.
- ^{xxix} Campaign for Tobacco-Free Kids. Cigarette tax increases by state per year 2000-2018. Document available at: <http://www.tobaccofreekids.org/research/factsheets/pdf/0275.pdf>.
- ^{xxx} Sheffer MA, Redmond LA, Kobinsky KH, Keller PA, McAfee T, Fiore MC. Creating a perfect storm to increase consumer demand for Wisconsin's Tobacco Quitline. *American Journal of Preventive Medicine*. 2010;38(3 Suppl):S 343-6.
- ^{xxxi} Harwell TS, Lee L, Haugland C, Wilson SM, Campbell SL, Holzman GS, et al. Utilization of a tobacco quit line prior to and after a tobacco tax increase. *Journal of Public Health Management and Practice*. 2007;13(6):637-41.
- ^{xxxii} Woods SS, Haskins AE. Increasing reach of quitline services in a U.S. state with comprehensive tobacco treatment. *Tobacco Control*. 2007;16 Suppl 1: i 33-6.
- ^{xxxiii} Keller PA, Greenseid LO, Christenson, M, Boyle RG, and Schillo BA. Seizing an opportunity: increasing use of cessation services following a tobacco tax increase. *BMC Public Health* 2015; 15:354

More Funding for Tobacco Prevention & Cessation Programs is Still Needed



Tobacco is an addictive and deadly product and tobacco use remains the nation's number one cause of preventable death. Cigarette smoking and exposure to secondhand smoke cause approximately one out of every five deaths in the U.S., more than 480,000 premature deaths each year.^{i,ii} This includes at least 28% of all cancer deathsⁱⁱⁱ and 80% of lung cancer deaths.^{iv} The Surgeon General projects that without further action, 5.6 million youth age 0-17 alive today will die prematurely from smoking.^v

Despite the health risks, current rates of tobacco use remain high. After years of decline, in 2018 we saw an increase in tobacco use among youth. Largely due to the youth e-cigarette epidemic, the overall rate of tobacco use among high school students increased to 27.1% nationwide.^{vi} At the same time, progress on previously declining youth use of other tobacco products, including cigarettes and cigars, has stalled.

Unfortunately, many young people who use tobacco do not identify the type they use as a tobacco product or do not identify the tobacco product as harmful.^{vii}

It's imperative that steps are taken to ensure programs are in place to protect the next generation from a lifetime of addiction.

The good news is we know what works to prevent kids from starting to use tobacco and help people already addicted to quit. Fully funding evidence-based tobacco prevention and cessation programs, along with regular and significant tobacco tax increases and comprehensive smoke-free laws are proven to reduce tobacco use.

Research shows that the more states spend on comprehensive tobacco control programs, the greater the reductions in smoking.^{xii} The longer states invest in such programs, the greater and quicker the impact.^{xiii} Following the Centers for Disease Control and Prevention (CDC) funding recommendations for a comprehensive tobacco control program provides states with the needed framework to educate people on the dangers of tobacco use as well as connect people who are already addicted to tobacco to resources to help them quit.

State Tobacco Control Programs are Necessary to Combat Tobacco Industry Marketing

Tobacco industry advertising and promotions cause initiation and progression of tobacco use among youth and young adults.^{xiv} Tobacco industry marketing increases the awareness of smoking, recognition of specific brands, positive attitudes about smoking, intention to smoke, and actual smoking behavior. In 2017 the tobacco industry spent \$9.4 billion marketing cigarettes and smokeless tobacco alone, not including its other deadly and addictive products.^{xv}

"Because youth and adults continue to be heavily exposed to pro-tobacco media, advertising, and promotion, public education campaigns are needed to prevent tobacco use initiation and to promote cessation." – Centers for Disease Control & Prevention

Youth are increasingly exposed to tobacco advertising including e-cigarette advertising. In 2016, almost 78.2% of middle and high school students – 20.5 million youth - reported seeing e-cigarette advertising and promotions.^{xvi} Another survey found even higher levels of exposure to e-cigarette advertising, with 82% of 13-17 years and 88% of 18-21 years reporting seeing e-cigarette advertising and promotions.^{xvii} Youth are particularly vulnerable to tobacco marketing. In fact, when nonsmoking adolescents are exposed to tobacco advertising they are significantly more likely to become smokers as young adults.^{xviii}

It is crucial that states invest in comprehensive tobacco control programs to counteract the influence of the ever-changing tobacco industry. Right now, for every \$14 the tobacco industry spends to market cigarettes and smokeless tobacco alone, not including its other deadly products, states are spending only \$1 on tobacco prevention and cessation programs.^{xix} More funding is needed to negate the influence Big Tobacco's marketing has on youth.

SPOTLIGHT: E-cigarette Epidemic

Nationwide, e-cigarette use has increased rapidly among youth. E-cigarettes are the most commonly used tobacco product by middle and high school students, surpassing cigarette use, according to the most recent data available.^{ix} The U.S. Secretary of Health and Human Services, U.S. Surgeon General, and Commissioner of the Food and Drug Administration have all declared youth e-cigarette use to be an epidemic.^x E-cigarette use among high school students has risen by 78% in the last year and 48% among middle school students.^{xi} Furthermore, e-cigarette use is most common among younger adults - not older adults.^{xii} Action is needed to reverse these trends.

ACS CAN's Position: Fully Funded State Tobacco Control Programs Save Lives

The American Cancer Society Cancer Action Network (ACS CAN) calls on states to reduce tobacco use rates, and ultimately combat tobacco-related illness and death by funding and implementing comprehensive tobacco control programs according to CDC recommendations. Evidence-based, statewide tobacco control programs that are comprehensive, sustained, and accountable have been shown to reduce tobacco use rates, as well as tobacco-related diseases and deaths. All tobacco products, including e-cigarettes, should be included in evidence-based state tobacco control programs. By investing in comprehensive tobacco control programs, states can prevent kids from starting to use tobacco and help people already addicted to quit.

- ⁱ U.S. Department of Health and Human Services (HHS). *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.
- ⁱⁱ CDC. QuickStats: Number of Deaths from 10 Leading Causes — National Vital Statistics System, United States, 2010. *MMWR* 2013; 62(8): 155.
- ⁱⁱⁱ Islami F, Goding Sauer A, Miller KD, Siegel RL, Fedewa SA, Jacobs EJ, McCullough ML, Patel AV, Ma J, Soerjomataram I, Flanders WD. Proportion and Number of Cancer Cases and Deaths Attributable to Potentially Modifiable Risk Factors in the United States. *CA: A Cancer Journal for Clinicians*. 2018 Jan 1;68(1):31-54. Lortet-Tieulent J, Goding Sauer A, Siegel RL, Miller KD, Islami F, Fedewa SA, Jacobs EJ, Jemal A. State-Level Cancer Mortality Attributable to Cigarette Smoking in the United States. *JAMA Intern Med*. 2016;176(12):1792-1798. doi:10.1001/jamainternmed.2016.6530
- ^{iv} American Cancer Society. *Cancer Facts & Figures, 2017*. Atlanta, GA: American Cancer Society, 2017.
- ^v HHS, 2014.
- ^{vi} *Vital Signs: Tobacco Product Use Among Middle and High School Students — United States, 2011–2018*. *Morbidity and Mortality Weekly Report* 2019;68:157–164.
- ^{vii} Agaku I, Odani S, Vardavas C, Neff L. Self-Identified Tobacco Use and Harm Perceptions Among US Youth. *Pediatrics*. 2018 Apr, 141 (4).
- ^{viii} Centers for Disease Control and Prevention. [Vital Signs: Tobacco Use Among Middle and High School Students—United States, 2011–2018](#). *Morbidity and Mortality Weekly Report*, 2019;68(6):157-164.
- ^{ix} Office of the Surgeon General, “Surgeon General’s Advisory on E-Cigarette Use Among Youth,” December 18, 2018. <https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf> Statement from FDA Commissioner Scott Gottlieb, M.D., on new steps to address epidemic of youth e-cigarette use. September 12, 2018. <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm620185.htm> Azar, Alex M, and Gottlieb, Scott. “We cannot let e-cigarettes become an on-ramp for teenage addiction.” *The Washington Post*, October 11, 2018. Op-ed. <https://www.washingtonpost.com/news/health/wp/2018/10/11/we-cannot-let-e-cigarettes-become-an-on-ramp-for-teenage-addiction/>
- ^x Centers for Disease Control and Prevention. [Notes from the Field: Use of Electronic Cigarettes and Any Tobacco Product Among Middle and High School Students – United States, 2011-2018](#). *Morbidity and Mortality Weekly Report*, 2018; 67(45): 1276-7.
- ^{xi} Centers for Disease Control and Prevention. [Tobacco Product Use Among Adults – United States, 2017](#). *Morbidity and Mortality Weekly Report*, 2018; 67(44): 1225-1232.
- Centers for Disease Control and Prevention. [Vital Signs: Tobacco Use Among Middle and High School Students—United States, 2011–2018](#). *Morbidity and Mortality Weekly Report*, 2019;68(6):157-164.
- ^{xii} from FDA Commissioner Scott Gottlieb, M.D., on new steps to address epidemic of youth e-cigarette use. September 12, 2018. <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm620185.htm> Azar, Alex M, and Gottlieb, Scott. “We cannot let e-cigarettes become an on-ramp for teenage addiction.” *The Washington Post*, October 11, 2018. Op-ed. <https://www.washingtonpost.com/news/health/wp/2018/10/11/we-cannot-let-e-cigarettes-become-an-on-ramp-for-teenage-addiction/>
- ^{xv} Centers for Disease Control and Prevention. [Notes from the Field: Use of Electronic Cigarettes and Any Tobacco Product Among Middle and High School Students – United States, 2011-2018](#). *Morbidity and Mortality Weekly Report*, 2018; 67(45): 1276-7.
- ^{xv} Centers for Disease Control and Prevention. [Tobacco Product Use Among Adults – United States, 2017](#). *Morbidity and Mortality Weekly Report*, 2018; 67(44): 1225-1232.
- ^{xvi} Centers for Disease Control and Prevention. [Vital Signs: Tobacco Use Among Middle and High School Students—United States, 2011–2018](#). *Morbidity and Mortality Weekly Report*, 2019;68(6):157-164.
- ^{xvii} Truth Initiative. Vaporized: youth and young adult exposure to e-cigarette marketing, 2015.
- ^{xviii} Centers for Disease Control & Prevention. *Best Practices for Comprehensive Tobacco Control Programs*, 2014. Atlanta, GA: HHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.
- ^{xix} The Truth Initiative, Campaign for Tobacco-Free Kids, American Heart Association and American Stroke Association, American Cancer Society Cancer Action Network, American Lung Association, Americans for Nonsmokers’ Rights, and Robert Wood Johnson Foundation. A report entitled *Broken Promises to Our Children: A State-By-State Look at the 1998 State Tobacco Settlement 20 Years Later*. December, 2018.

SB3 Maryland Public Health Association Favorable

Uploaded by: Eck, Raimee

Position: FAV



**Maryland
Public Health
Association**

Mission: *To improve public health in Maryland through education and advocacy*

Vision: *Healthy Marylanders living in Healthy Communities*

SB 3 – Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation

Hearing Date: 1/29/2020

Committee: Budget & Taxation

Position: SUPPORT

Thank you to Senators Guzzone and Rosapepe and the rest of the Budget and Taxation committee for hearing our testimony today on this important legislation and a special thank you to Senator McCray for introducing SB3. I am Raimee Eck, Immediate Past President and Advocacy Committee Chair for the Maryland Public Health Association.

Every year tobacco kills more people in this country than all of those who die from all the illegal drugs, alcohol, car crashes, fires, homicides, and suicides *combined*. Each year in the state of Maryland alone, tobacco kills more than 7,500 smokers and hundreds more nonsmokers who die from secondhand smoke. It costs our state \$2.7 billion annually to treat the sick and dying victims of tobacco, many of whom are poor and underserved. Another \$2.2 billion is lost due to tobacco-related losses in productivity. Tobacco is not only the most deadly and addictive drug that we know, it actually kills more than most of the other products that we tax and regulate *put together*.

Maryland has lower rates of smoking for adults than the national average (13.9% vs 17.1%), however; 8.2% of high school students reported smoking, while the national average was 8.8%, a much smaller divergence. We are also doing poorly for our youth in terms of chewing tobacco (6.2% vs 5.5% report use in the past 30 days), little cigars or cigarillos (9.0% vs 8.0%), and electronic nicotine delivery products (ENDs) (13.3% vs 13.2%). This is important as the majority of adults who are addicted to tobacco products started prior to the age of 18. Last year hailed an incredible win for all Marylanders with the increase in purchase age of tobacco products to 21. This is an effective measure to delaying initiation of smoking until a later age and subsequently reducing the likelihood of lifetime addiction. But this is not the end of the story.

Public health interventions to improve health are most effective when they are multi-pronged and multi-leveled and address issues such as advertising, availability, and access. Tobacco taxes are one of the most effective approaches in reducing rates of smoking, which subsequently reduces lifetime addiction rates and health and social economic costs. Taxes increase the real cost of tobacco products—young people are extremely cost-sensitive, and increases in prices lowers their ability to obtain the products. Taxes are not just effective for a youth population, but decreases in use and increases in quit attempts are seen in young adults, too.

Policies such as a tobacco tax not only cost little to implement and enforce, but they have greatly reduced mortality and morbidity, significantly increased worker productivity, and have added billions of dollars to the public coffers for other investments in health. Tax increases on tobacco produce very consistent results; every time the taxes on tobacco go up, more money flows into state coffers and fewer people smoke.

The Centers for Disease Control and Prevention (CDC) have created spending targets for tobacco use prevention in states. Maryland spent \$10.5 million in state funds for tobacco prevention in 2019, achieving only 21.8% of the CDC's recommended target (\$48 million). This is in the face of an estimated \$525 million collected from tobacco settlement revenue and taxes. Additionally, this number hardly offsets the estimated costs to the healthcare system alone of \$2.7 billion. Finally, DC's tobacco taxes are

Maryland Public Health Association (MdPHA)

PO Box 7045 • 6801 Oak Hall Ln • Columbia, MD 21045-9998

GetInfo@MdPHA.org www.mdpha.org 443.475.0242

\$4.50 a pack, the highest in the country, and this presents an opportunity to aim for parity. Tax policy is one of the most powerful tools we have used to protect Marylanders from tobacco over the last few decades.

The Maryland Public Health Association (MdPHA) is a nonprofit, statewide organization of public health professionals dedicated to improving the lives of all Marylanders through education efforts and advocacy of public policies consistent with our vision of healthy Marylanders living in healthy communities. MdPHA is the state affiliate of the American Public Health Association, a nearly 150-year-old professional organization with more than 20,000 members dedicated to improving population health and reducing the health disparities that plague our state and our nation.

MNA Fav SB3

Uploaded by: ELLIOTT, ROBYN

Position: FAV



Committee: Senate Budget and Taxation

Bill Number: SB 3

Title: Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation

Position: Support

Hearing Date: 1/29/2020

The Maryland Nurses Association (MNA) supports *Senate Bill 3 –Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation*. This bill would establish a tax on e-cigarettes, increase the other tobacco product tax, and increase the annual budget appropriation to reduce tobacco use in Maryland.

Our country has seen a remarkable decrease in tobacco use in recent decades thanks to robust tobacco control efforts at multiple levels. However, the rise in popularity of e-cigarettes has quickly reversed that progress among today’s youth. Results from the Centers for Disease Control’s (CDC) 2019 National Youth Tobacco Survey show a disturbing increase in the number of youth using e-cigarettes – from 3.6 million in 2018 to 5 million in 2019.

This increase is not surprising given that e-cigarettes are available in a variety of flavors that appeal to youth, such as mint, candy, fruit, or chocolate, and have been marketed as a safer alternative to cigarettes. However, evolving evidence shows that the use of e-cigarettes can cause irreversible lung damage and lung disease. In addition, youth who use e-cigarettes are more likely to start smoking cigarettes.

We must act fast if we are to stop the rising trend of e-cigarette use, which will expose our youth to a potential lifetime of nicotine addiction, cost countless lives, and undermine the worthy investment made in recent decades to decrease tobacco use in our country.

Thank you for your consideration of our testimony, and we urge a favorable vote. If we can provide any further information, please contact Robyn Elliott at relliott@policypartners.net or (443) 926-3443.

ReferencesTobacco Use: Results from the National Youth Tobacco Survey. Retrieved from: <https://www.fda.gov/tobacco-products/youth-and-tobacco/youth-tobacco-use-results-national-youth-tobacco-survey>

The Impact of E-Cigarettes on the Lung. American Lung Association. Retrieved from: <https://www.lung.org/stop-smoking/smoking-facts/impact-of-e-cigarettes-on-lung.html>

AFT_FAV_SB3

Uploaded by: English, Marietta

Position: FAV



A Union of Professionals
AFT-Maryland

5800 Metro Drive, Suite 100 • Baltimore, MD 21215-3226
410/764-3030 • fax: 410/764-3008
md.aft.org

Marietta English
PRESIDENT

Kenya Campbell
SECRETARY-TREASURER

**Written Testimony from the AFT-Maryland
SB 3– Electronic Smoking Devices, Other Tobacco Products, and Cigarettes –
Taxation and Regulation
Senate Budget and Taxation Committee
January 29, 2020**

SUPPORT

Good afternoon Mr. Chair and members of the Senate Budget and Taxation Committee. On behalf of the 20,000 state, municipal, and public education workers residing in Maryland, AFT-Maryland enthusiastically calls for a favorable report for SB 3, the bill that would more fairly tax electronic cigarettes and other tobacco products.

As the statewide organization for the Baltimore Teachers Union, as well as unions representing thousands of state employees, AFT-Maryland supports bills that modernize and bring our tax code to meet the realities of an economy and market that is rapidly changing thanks to new technologies and products. Senate Bill 3 is an attempt to modernize our state's tax code with respect to the relatively new market of electronic cigarettes, making sure they are taxed just as any other tobacco product.

Members of the committee: As I am sure you all are aware, the scientific community has expressed concerns regarding the safety of electronic tobacco product. Just this last summer, a number of serious illnesses and deaths were linked to these electronic products. The assumption that these products are safer than traditional tobacco products has not yet been verified by the scientific community or the federal government. As such, there is no reason why the state should tax these products at a lower rate than traditional tobacco products.

It is for these reasons that we ask that this committee give a favorable report to SB 3, Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation.

SB 3 - Testimony of Support (1)

Uploaded by: Francaviglia, Joe

Position: FAV



Testimony in Support of Senate Bill 3 - Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation

Budget and Taxation Committee - January 29th, 2020 - 1:00 pm

Strong Schools Maryland supports Senate Bill 3 proposing to raise revenue from certain electronic smoking devices, other tobacco products, and cigarettes.

Strong Schools Maryland is a nonpartisan, nonprofit, 501(c)(3) organization whose sole mission is to establish a world-class public education system for every student in Maryland. We are composed of thousands of volunteers and supporters in nearly every county in the state. Our supporters consist of parents, grandparents, small business owners, retirees, students, teachers, and Marylanders from every background and age. We have built support for implementing and fully funding the 10-year phase in of the Kirwan Commission's recommendations.

A strong public school system is critical to the long term success of our state. In order to build strong schools in every Maryland community, we must implement a new, equitable, accountable, and sustainable funding formula based on the Kirwan Commission's recommendations. A sustainable funding source is critical in order to keep the promise our state has made to families as well as meet our constitutional obligation of a thorough and efficient public education system supported and maintained by taxation¹. To that end, Strong Schools Maryland supports Senate Bill 3 to contribute to the several sources of revenue, both current and new, that will be required to fully fund the Kirwan recommendations.

Tobacco taxes have been proven to effectively deter smoking in younger users which positively impacts their long term health outlook. This legislation supports improved health of young people while simultaneously providing a portion of the revenue necessary to fully fund the implementation of the Kirwan Commission recommendations.

When we invest in our public schools, we make our economy stronger, we reduce crime, lower healthcare costs, and provide opportunities for all Marylanders to lead a life of their choice. It is critical that we support efforts that will help fund a public school system that will allow every child, regardless of where they live or which public school they attend, to receive a world-class education. It is not just the right and moral choice, it is the smart economic investment as well.

We urge the committee to issue a favorable report for Senate Bill 3.

¹ Constitution of the State of Maryland, Article 8, Section 1

Frey_FAV_SB 3

Uploaded by: Frey, Leslie

Position: FAV



Montgomery County

Office of Intergovernmental Relations

ROCKVILLE: 240-777-6550

ANNAPOLIS: 240-777-8270

SB 3

DATE: January 29, 2020

SPONSOR: Senator McCray

ASSIGNED TO: Budget and Taxation

CONTACT PERSON: Leslie Frey (leslie.frey@montgomerycountymd.gov)

POSITION: SUPPORT

Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation

This bill (1) increases the tobacco tax rate from \$2.00 to \$4.00 per pack of cigarettes; (2) generally increases the other tobacco products (OTP) tax rate from 30% to 86% of the wholesale price; (3) imposes an electronic smoking device tax equal to 86% of the wholesale price; (4) requires the Governor to include at least \$21 million in annual funding for the Tobacco Use Prevention and Cessation Program; (5) removes the prohibition from local governments imposing a tax on OTP and cigarettes; and (6) alters the definitions of electronic smoking devices and OTP.

Montgomery County strongly supports Senate Bill 3 because increases in tobacco taxes decrease tobacco use: raising taxes on tobacco and thereby increasing its price is one of the most effective ways to reduce tobacco use. Prices affect virtually all measures of cigarette use, including per-capita consumption, smoking rate, and the number of cigarettes smoked daily.¹⁻⁴ These effects apply across a wide range of racial and socioeconomic groups.⁵

¹ U.S. Department of Health and Human Services. The health consequences of smoking – 50 years of progress: a report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health;2014.

² Hu TW, Sung HY, Keeler TE. Reducing cigarette consumption in California: tobacco taxes vs an anti-smoking media campaign. American journal of public health. 1995;85(9):1218-1222

³Ahmad S, Franz GA. Raising taxes to reduce smoking prevalence in the US: a simulation of the anticipated health and economic impacts. Public health. 2008;122(1):3-10.

⁴ Hu TW, Ren QF, Keeler TE, Bartlett J. The demand for cigarettes in California and behavioral risk factors. Health economics. 1995;4(1):7-14.

⁵ Centers for Disease Control and Prevention. Response to increases in cigarette prices by race/ethnicity, income, and age groups-- United States, 1976-1993. MMWR Morbidity and mortality weekly report. 1998;47(29):605-609.

Currently in Montgomery County, retailers must pay a tax for cigars, cigarette tobacco, pipe tobacco, snuff, or spit tobacco (i.e. any tobacco product that is not subject to the State tobacco tax). An excise tax is imposed on distributors of electronic smoking devices in the County at the rate of 30% of the wholesale price of the electronic smoking device. Under current law, the County does not have authority to tax cigarettes. If Senate Bill 3 is enacted as introduced, the County would gain the authority to tax all tobacco products, including cigarettes.

In addition to the public health imperative to decrease tobacco and nicotine use, counties across the state are searching for new revenue sources as they face impending funding demands for schools, school construction, and the like. Montgomery County urges the Committee to move the bill favorably as introduced and preserve this critical element of the bill.

SB 3 MD GASP Favorable

Uploaded by: Gally, Eric

Position: FAV



MDGASP



Maryland Group Against Smoker's Pollution
P.O. Box 863 - Bowie MD 20718
Phone (301)262-3434 E-Mail MDGASP@aol.com

Testimony in support of Senate Tax Bill Senate Bill 3

by

John O' Hara: Ph. D
President: Maryland Group Against Smoker's Pollution

January 29, 2020

January 29, 2020

Honorable Committee members,

My name is John O' Hara. I am the President of the Maryland Group Against Smoker's Pollution (MDGASP), an organization with over 1,000 members across the state. We have members from every district in the state.

I am 86 years old and over the last four decades I have testified before committees of the Maryland General Assembly every single year pertaining to tobacco and/or vaping control. Over these many years the State of Maryland has passed several bills to protect the health of its citizens from the ravages of tobacco smoke. I commend the General Assembly for these efforts, however, we still have a long way to go.

The tobacco and vaping industry is still out there hooking our children on their products every day. Over 25% of our high school students and even 10% of our eighth graders are hooked on vaping. The facts are clear that vaping is harmful and extremely addictive. Many adults and young people are dying from smoking and vaping.

One way to counter their efforts is to raise the taxes on their products. Raising the taxes is a win-win in that it reduces the use of tobacco/vape products by our kids as well as providing much needed funds to educate our merchants and citizens on the harm these products cause.

I urge you to vote in favor of SB 3.

Respectfully.

John O' Hara: Ph. D
President
Maryland Group Against Smoker's Pollution
Box 863, Bowie, MD 20718
(P) 301-262-3434
(C) 301-351-8839
MDGASP@aol.com

SB3 -- GPA Favorable 2 of 2

Uploaded by: Gally, Eric

Position: FAV

Public Health Policy in Maryland: Lessons from Recent Alcohol and Cigarette Tax Policies

By **Keshia Pollack Porter**, PhD, MPH, **Shannon Frattaroli**, PhD, MPH, **Harpreet Pannu**, MD, MPH

Executive Summary

Taxing some consumer products is a public health policy strategy that has the potential to improve the public's health. Over the past decade, the Maryland General Assembly has passed legislation that increased taxes on two consumer products – alcohol and cigarettes – both of which are associated with large burdens of injury and disease. In this report, we examine two laws affecting these products: The Sales and Use Tax – Alcoholic Beverages – Tax Rates Supplementary Appropriation Act of 2011, and the Transportation and State Investment Act of 2007. We consider the public health benefits of these tax laws and analyze the revenues generated by them and how those revenues were spent.

While the alcohol excise tax had been stable for over 45 years, the 2011 law increased the sales tax rate to 9 percent. Following the alcohol sales tax increase, binge drinking by Maryland adults decreased; the 17 percent reduction seen in Maryland between 2011 and 2016 was greater than the 6 percent reduction nationally. Among Maryland high school students, between 2011 and 2015, there was a 26 percent reduction in the percentage of students who consumed alcohol in the preceding 30 days, a 28 percent reduction in binge drinking, and a 31 percent reduction in students riding in a vehicle operated by a driver who had been drinking alcohol. Published research also documented a decrease in alcohol-positive drivers and in sexually transmitted infections in Maryland following the 2011 alcohol sales tax increase.

Maryland's state tax per pack of cigarettes increased incrementally from 1961 to 2008 and has been stable for the last 10 years. Following the \$1.00 per pack cigarette tax increase in 2008, smoking by Maryland adults decreased by 26 percent among current smokers between 2011 and 2016. Among Maryland high school students there was a 47 percent reduction in students who reported smoking a cigarette in the preceding 30 days, as well as a decline in frequent smoking between 2007 and 2015.

We conclude that these public health impacts, documented both by the published evidence and experts we interviewed, occurred from relatively modest tax increases. Based on this research, we provide four recommendations for maximizing public health gains through state policy:

1. Consider taxes an effective policy strategy to improve the public's health.
2. Monitor the public health impacts of tax policy.
3. Ensure transparency for bills that generate revenue.
4. Employ effective advocacy strategies when promoting public health policy initiatives.

Introduction

Each year during the 90-day legislative session, the Maryland General Assembly approves thousands of bills that the governor decides whether to sign into law. Many of these laws support public health goals, including health promotion, disease and injury prevention, healthy and safe schools, vaccine uptake, and the realization of smoke-free environments. After these laws are enacted, researchers evaluate many of them to determine how they, in fact, have affected the public's health.

Two consumer products, alcohol and tobacco, are associated with large burdens of injury and disease among Marylanders and have also been the subject of legislation that addresses those burdens through taxes. In this report, we examine how these tax increases are affecting Marylanders' health, based on published evaluations and interviews with subject matter experts. The focus of this report is on the following two laws: the Sales and Use Tax – Alcoholic Beverages – Tax Rates Supplementary Appropriation Act of 2011, which increased the sales and use tax rate for alcoholic beverages from 6 percent to 9 percent, effective July 1, 2011 [Maryland General Assembly, 2011]; and the Transportation and State Investment Act of 2007, which increased the excise tax on a pack of 11-20 cigarettes from \$1.00 to \$2.00, effective January 1, 2008 [Maryland General Assembly, 2007].

The proposals to raise taxes on alcohol and cigarettes were, in large part, driven by the significant public health impacts these products have on Marylanders. For example, in 2016, 582 people died from alcohol intoxication in Maryland; most involved the concurrent use of other drugs [Maryland Department of Health and Mental Hygiene, 2017]. Drinking alcohol is also associated with both short-term health effects, including unintentional injuries, violence, overdose, and risky sexual behavior, as well as long-term effects such as heart disease, stroke, liver disease, dementia, and several types of cancer [CDC, 2015d; Cook, 2016].

Smoking has been causally linked to multiple negative health conditions including several types of cancer, cardiovascular disease, diabetes, and respiratory diseases such as chronic obstructive pulmonary disease [U.S. Department of Health and Human Services, 2014]. Each year, approximately 7,500 Marylanders die from a smoking-related disease [CDC, 2017]. These conditions are costly, with estimates of \$3.5 billion for 2015 and \$4.5 billion projected for 2020 [Maryland Department of Health and Mental Hygiene, 2014; Maryland Department of Health and Mental Hygiene, 2016].

Organization and Methodology of this Report

This report includes three sections.

Section I begins with an overview of the public health problems that the tax increases sought to address, and outlines important contextual background information that preceded passage of the laws. This is followed by a review of the evidence about the public health impacts associated with the laws. We also include a description of impacts hypothesized by interviewees that have not been examined through empirical study.

Section II describes the revenues generated through the laws and how that revenue has been used to advance the public health goals specified by each law.

The final section presents recommendations for maximizing public health gains through state policy based on lessons learned from this review. This research does not describe in detail how these laws were passed; others have documented these efforts [Pertschuk, 2010].

We compiled this report based on a review of the proposed bills, accompanying fiscal notes, and the two codified laws – including all subsequent modifications – through the 2017 legislative session. We also conducted a literature review to document the impacts of

these laws, primarily comparing the differences in risk factors before and after each law.

For adults, these data are from the annual national Behavioral Risk Factor Surveillance System (BRFSS), a survey conducted by the Centers for Disease Control and Prevention (CDC) that queries a sample of adults in each state. It is important to note that because of a change in how the survey was administered and analyzed in 2011, the federal government cautions that small increases for health-risk indicators, such as tobacco use and binge drinking, are likely due to changes in survey methodology [CDC, 2013]. Thus, shifts in observed prevalence from 2010 to 2011 for BRFSS measures may reflect true trends in risk-factor prevalence or the new methods of measuring risk factors [CDC, 2012]. As a result, for data on adults, we compare data from 2007 with 2010, and then data from 2011 with 2016 (the most recent data available).

For youth, data are from the Youth Risk Behavior Surveillance System (YRBSS), which is a national survey of thousands of high school students conducted by the CDC. It measures the prevalence of high-risk behaviors among youth, including tobacco, alcohol, and drug use [Eaton, 2012]. Data from the YRBSS did not undergo the same methodological change as the BRFSS survey of adults; however, the data from this biennial survey are only reported through 2015, which are the latest available data. All prevalence numbers in the report have been rounded to the nearest whole number. These rounded numbers were used to calculate the percent change in prevalence over time for each specific health-risk behavior. These percent changes were also rounded to the nearest whole number.

We searched the internet to identify stakeholder organizations and potential key informants for each issue and complemented that search with recommendations for additional interviewees we gained from those original key informants. This process yielded a sample of 10 people highly knowledgeable about the two laws from advocacy organizations, academic institutions, and state government agencies who we

interviewed between July and November 2017. These interviews allowed us to capture a robust and comprehensive account of the public health impacts for each case. Several interviewees requested that their names not be included in this report. We respected these requests and, therefore, do not include any interviewees' names.

We collected financial information about the laws and the revenue they generated from the Maryland Comptroller's Alcohol and Tobacco Tax Annual Reports for the years 2006 to 2016. We also reviewed the 2016 Comprehensive Annual Financial Report, as well as the 2016 Department of Legislative Services Fiscal Briefing [Franchot, 2016a; Franchot, 2016b]. We searched the comptroller's website for information about the sales and use taxes, the Health Department's website for budget information, and the Department of Budget and Management's website to access the list of Special Funds [Department of Budget and Management, 2017]. In addition, the Governor's "Maryland Budget Highlights FY2016" [Hogan, 2015] contained information we used to further understand the Cigarette Restitution Fund.

I. Alcohol and Cigarette Tax Increases: Public Health Problem, Legislative Background, and Public Health Impacts of the Laws

The Alcohol Tax Increase

Public Health Problem Prior to the 2011 Tax Increase

The sales tax on alcohol increased in July 2011. Prior to the alcohol tax increase taking effect, the prevalence of binge drinking (on a single occasion, five or more drinks for men and four or more drinks for women) among Maryland adults was 13 percent in 2007 and 15 percent in 2010 [CDC, 2015b]. In 2011, the prevalence of binge drinking was 18 percent for Maryland adults [CDC, 2015b]. However, as previously

described, the CDC changed its methodology for analyzing adult BRFSS survey responses in 2011. Therefore, the adult survey results from 2010 and prior years cannot be compared with 2011 and subsequent years [CDC, 2012]. The higher prevalence number in 2011 is likely explained by changes in how the CDC collected and analyzed these data, as opposed to real changes in the prevalence of binge drinking.

Among Maryland high school students surveyed in 2007, 43 percent reported drinking alcohol at least once in the preceding 30 days [Eaton, 2008; CDC, 2007-2015]. In 2011, the year of the tax increase, 35 percent of Maryland high school students reported drinking alcohol in the prior 30 days [Eaton, 2012]. When asked about binge drinking alcohol (five or more drinks in a row within a couple of hours), 24 percent of Maryland high school students reported the behavior in 2007 compared to 18 percent in 2011 [Eaton, 2008; Eaton, 2012; CDC, 2007-2015]. Evidence of other risky drinking behaviors over time is seen in the percentage of Maryland students who reported riding in a car with an alcohol-positive driver (29 percent in 2007 and 26 percent in 2011) [Eaton, 2008; Eaton, 2012; CDC, 2007-2015]. In addition, 9 percent of students reported driving after drinking alcohol in 2007 compared to 8 percent in 2011 [Eaton, 2008; Eaton, 2012].

In addition to the risky behaviors documented through surveys, the impact of alcohol on the public's health is also defined in terms of costs. At an estimated \$2.22 per drink and \$860 per person, the total annual cost of consuming alcohol was approximately \$4.9 billion in 2010 [Sacks, 2015; CDC, 2015c]. We were unable to locate post-law estimates of the cost of alcohol consumption in Maryland.

Legislative Background

Excise taxes are charged per unit (e.g., gallon) of an item while sales taxes are a percentage of the sale. An excise tax can have the effect of decreasing the quantity of the item that is sold and consequently its consumption. Maryland alcohol excise taxes have been stable for over 45 years without any adjustments for inflation, which is shown in Table 1. Federal excise taxes are additional taxes: \$13.50 per gallon of distilled spirits, \$1.07 per gallon of wine, and \$0.58 per gallon of beer [Maryland General Assembly, 2011; Xu, 2011].

Maryland also imposes a sales tax on alcohol as well as on most other consumer products; it is added at the point of purchase and is not included in the shelf price of the product. In January 2008, the General Assembly passed a bill that increased the general sales tax from 5 percent to 6 percent [Franchot, 2016a]. A special tax increase went into effect in

Table 1. Maryland's excise tax rates on alcoholic beverages

Alcoholic beverage	Initial tax per gallon (year tax imposed)	Current tax per gallon (years tax rate in effect)
Distilled spirits	\$1.10 (1933)	\$1.50 (1955 – present)
Wine	\$1.10 (1933); reduced to \$0.20 (1935)	\$0.40 (1972 – present)
Beer	\$0.02 (1936)	\$0.09 (1972 – present)

Source: Franchot, 2016b.

According to the state tax data document, per capita consumption of beer decreased by 11 percent between fiscal year 2010 and fiscal year 2016 (from 18 gallons in 2010 to 16 gallons in 2016).

July 2011 and raised the sales tax on alcoholic beverages to 9 percent [Maryland General Assembly, 2011].

This additional 3 percent sales tax on alcoholic beverages reflected a determination to raise the long stagnant tax. In 2011, advocates supporting the alcohol tax increase, known as the Lorraine Sheehan Alcohol Tax Coalition, proposed a dime-a-drink increase in the excise tax on beer, wine, and liquor distributors, with the proceeds to fund public health initiatives including drug and alcohol abuse prevention and treatment, mental health programming, support for people with developmental disabilities, and health care coverage. Near the end of the 2011 general assembly session, it became clear that the excise tax would not pass at the dime-a-drink level. Instead, legislative leaders proposed increasing the state sales tax—on alcoholic beverages only—from 6 percent to 9 percent. This translated to a nickel-a-drink excise tax, which was an acceptable compromise for the advocates. Legislative leaders preferred this approach because it would keep Maryland's alcohol tax at the same rate as the District of Columbia, which has the same excise tax as Maryland and a similar alcohol-specific sales tax.

As enacted, the alcohol sales tax law earmarked some of the funds for the Developmental Disabilities Administration (\$15 million) and dedicated about \$72 million (amount cited by an interviewee) to projects including school aid and construction in the first year, with those proceeds going to the general fund in subsequent years. Although the advocates would have preferred the money to be allocated as they had originally proposed, they agreed to the compromise for

two reasons. First, they were confident that regardless of how the money was spent, it would lead to a significant drop in alcohol abuse and underage drinking. Second, they planned to work closely with the Governor and General Assembly to ensure that most of the proceeds from the alcohol sales tax increase were allocated for the purposes originally identified by the Lorraine Sheehan Coalition after the first year.

While advocates originally proposed an excise tax rather than a sales tax, there are advantages to the sales tax. The alcohol sales tax is a value-based tax on the advertised price of the alcohol and therefore adjusts with inflation and does not diminish with time [Lavoie, 2017]. Unlike the sales tax, the excise tax is a flat, volume-based tax that is part of the advertised price. Importantly, its value decreases over time due to inflation [Lavoie, 2017]. Between 1970 and 2009, inflation is estimated to have decreased the real-dollar value of the average state excise tax on beer by 70 percent [Naimi, 2016]. In addition, several interviewees noted that the sales tax is progressive in that the largest increases are on expensive cocktails at high-end bars and restaurants.

In reflecting on this legislative process, one interviewee pointed out that there was no significant public opposition following either the 2008 general sales tax increase or the 2011 alcohol-specific sales tax increase.

Public Health Impacts of the 2011 Law

The 2011 Maryland alcohol sales tax increase is associated with decreases in alcohol consumption. According to the state tax data

The relationship that is evident across these studies is clear: As the price of alcohol increases, death and injury decrease, with specific declines in alcohol-related diseases, violence, traffic crashes, and crime.

document, per capita consumption of beer decreased by 11 percent between fiscal year 2010 and fiscal year 2016 (from 18 gallons in 2010 to 16 gallons in 2016) [Franchot, 2016b].

This decline in alcohol consumption is seen especially in the adult population. Binge drinking among Maryland adults decreased from 18 percent in 2011 to 14 percent in 2015 but rose slightly to 15 percent in 2016 [Kanny, 2013; CDC, 2015b]. Thus, in Maryland, the prevalence of adult binge drinking was 17 percent lower in 2016 than it was in 2011. This decline is greater than the national trend in which there was only a 6 percent reduction in adult binge drinking between 2011 and 2016 (U.S. prevalence: 18 percent in 2011, 16 percent in 2015, and 17 percent in 2016) [CDC, 2015b].

Declines in alcohol consumption among youth are also documented after the law took effect. Comparing the YRBSS from 2011 with 2015, the percentage of Maryland high school students who had consumed alcohol at least once in the preceding 30 days decreased from 35 percent in 2011 to 26 percent in 2015, a reduction of 26 percent [Eaton 2012; Kann 2016; CDC, 2007-2015]. In comparison, there was a 17 percent reduction among students nationwide over the same time period (from 36 percent in 2011 to 30 percent in 2015) [Eaton 2012; Kann 2016]. In addition, the percentage of Maryland high school students who reported binge drinking on at least one day in the preceding 30 days decreased from 18 percent in 2011 to 13 percent in 2015 [Eaton 2012, Kann 2016; CDC, 2007-2015]. This decrease of 28 percent in binge drinking reported by Maryland youth from the YBRSS is

similar to that seen in the country as a whole (the U.S. median for high school student binge drinking decreased by 27 percent, from 22 percent in 2011 to 16 percent in 2015) [Eaton, 2012; Kann, 2016; CDC, 2007-2015].

The public health benefit of this reduced consumption is evident in studies that examine the relationship between the 2011 alcohol sales tax increase and reductions in alcohol-related automobile deaths and injuries. Self-reports of Maryland high school students who rode in a vehicle driven by a driver who had been drinking alcohol decreased by 31 percent between 2011 and 2015 (26 percent in 2011 and 18 percent in 2015) [Eaton 2012; Kann 2016; CDC, 2007-2015], although the percentage who reported driving after drinking was similar for both years: 8 percent in 2011 and 7 percent in 2015 [Kann, 2016].

Further, a 2017 study evaluated motor vehicle crash reports involving Maryland drivers who tested positive for alcohol. The study compared crashes with alcohol-positive drivers for the 127 months prior to the sales tax increase with the 29 months following the law's effective date [Lavoie, 2017]. The authors documented a 6 percent reduction in alcohol-positive drivers of all ages, and a 12 percent reduction among alcohol-positive drivers ages 15-34 years after the sales tax increase took effect [Lavoie, 2017]. The authors posit that this decrease resulted from lower levels of drinking among younger drivers, who are more price-sensitive. Unlike younger drivers, crash rates among those 55 years and older increased among alcohol-positive drivers involved in crashes [Lavoie, 2017]. The findings for the younger drivers are

consistent with an evaluation of Illinois' alcohol tax increase, which measured a 26 percent decrease in fatal motor vehicle crashes for all drivers, and a 37 percent reduction among drivers under 30 years of age [Wagenaar, 2015].

One other public health benefit described by interviewees, and supported by the literature and the CDC, is a decline in risky sexual behavior explained as a consequence of reduced alcohol consumption [Chesson, 2000; CDC, 2015d]. Alcohol intoxication can lead to unprotected sex and sexually transmitted infections (STIs), and may explain a recent finding in Maryland that the mean monthly rate of gonorrhea cases decreased from 11 cases per 100,000 before the tax increase (January 2003 to June 2011) to nine cases per 100,000 after the tax increase (July 2011 to December 2012) [Staras, 2016]. This is a 24 percent reduction, or almost 1,600 cases

avoided every year [Staras, 2016]. In contrast, there was a non-statistically significant increase in the incidence of chlamydia from a mean monthly rate of 35 cases per 100,000 before the tax increase (January 2003 to June 2011) to 39 cases per 100,000 after the tax increase (July 2011 to December 2012) [Staras, 2016]. The different outcomes for gonorrhea and chlamydia may be because detection of chlamydia is dependent on screening. It is often asymptomatic, while the gonorrhea rate more closely reflects its prevalence in the population. These authors conducted a similar analysis using Illinois data and found there were fewer cases of both gonorrhea and chlamydia in Illinois following an increase in alcohol taxes [Staras, 2014]. A systematic review of the literature has also established that increases in the price of alcohol have

Table 2. Summary of impact of alcohol sales tax in Maryland

Positive impacts of sales tax on alcohol consumption in Maryland			
Population	Parameter	Prevalence (year)	Change in prevalence
Youth ^{1,2,3}	Drinking in last 30 days	35% (2011) vs. 26% (2015)	26% reduction
	Drinking ≥5 drinks in a row	18% (2011) vs. 13% (2015)	28% reduction
	Riding in vehicle with alcohol-positive driver	26% (2011) vs. 18% (2015)	31% reduction
Adults ⁴	Binge drinking	18% (2011) vs. 15% (2016)	17% reduction
General	Decreased alcohol-positive drivers ⁵		
	Health impacts (e.g., decreased risky sexual behavior and sexually transmitted infections ^{6,7})		

Sources: ¹Eaton, 2012; ²Kann, 2016; ³CDC, 2007-2015; ⁴CDC, 2015b; ⁵Lavoie, 2017; ⁶Staras, 2016; ⁷CDC, 2015c. All prevalence numbers in the report have been rounded to the nearest whole number (0.5 and higher numbers were rounded up; 0.4 and lower numbers were rounded down). These rounded numbers were used to calculate the percentage change in prevalence over time for the health-risk behavior. The calculated percentages for prevalence change were also rounded to the nearest whole number.

a small inverse relationship with STIs [Wagenaar, 2010].

Maryland's 2011 alcohol-specific sales tax increase, like similar alcohol tax increases in other states, has had the expected public health benefit of reducing alcohol abuse, particularly among high school students. These Maryland findings are consistent with the national literature demonstrating public health benefits associated with increasing alcohol taxes, with particular gains noted among adolescents and young adult populations [Wagenaar, 2010; Xu, 2011]. The relationship that is evident across these studies is clear: As the price of alcohol increases, death and injury decrease, with specific declines in alcohol-related diseases, violence, traffic crashes, and crime [Wagenaar, 2010]. The Task Force on Community Preventive Services, a respected national body that identifies evidence-based interventions, recommends increasing alcohol taxes and projects that the resulting public health benefits will be proportional to the size of the tax increase [U.S. Task Force on Community Preventive Services, 2010]. Table 2 summarizes the impacts reviewed in this section.

Perceived Unintended Consequences and Contradictory Outcomes

Interviewees recalled that during the alcohol sales tax increase policy debate, opponents described Marylanders' ability to purchase alcohol through alternative venues such as the internet and neighboring states with lower taxes. Such a shift in purchasing could result in a false underestimation of alcohol consumption that would affect impact measures and decrease revenue for the state. Products bought over the internet by Maryland residents may not be subject to the sales tax if the retailer is located out of state. Cross-border shopping has been the subject of a few studies, one of which shows that this occurs when the tax savings compensate for the transportation costs of traveling to

the jurisdiction with lower taxes [Leal, 2010]. Interviewees were unable to cite any evidence showing that these impacts hypothesized by bill opponents actually occurred, and we are unaware of any evidence that supports this concern being realized. While such evidence does not exist to assess whether Maryland is losing alcohol tax revenues to other states, Maryland's 2011 alcohol sales tax increase raises approximately \$70 million in additional tax revenue for the state every year.

Finally, alcohol-related intoxication deaths have increased in Maryland over the last several years from 187 deaths in 2007 to 582 deaths in 2016 [Maryland Department of Health and Mental Hygiene, 2017]. The role of alcohol in these deaths is only one part of the story. In fact, the total number of intoxication deaths from alcohol and/or drugs occurring in Maryland has increased significantly from 815 deaths in 2007 to 2,089 deaths in 2016 [Maryland Department of Health and Mental Hygiene, 2017]. The increase in alcohol-related deaths is related to the use of opioids; approximately half of these deaths (49-54 percent) were combined with heroin or fentanyl intoxication in 2016 [Maryland Department of Health and Mental Hygiene, 2017].

The Cigarette Tax Increase

Public Health Problem Prior to the 2008 Tax Increase

Smoking causes multiple negative health conditions including several types of cancer, cardiovascular disease, diabetes, and respiratory diseases such as chronic obstructive pulmonary disease [U.S. Department of Health and Human Services, 2014]. Smoking is also a leading cause of mortality. Each year approximately 7,500 Marylanders die from a smoking-related disease [CDC, 2017].

In 2007, before the cigarette tax increase, 17 percent of Maryland adults identified as current smokers [CDC, 2015b]. Smoking was also common among Maryland youth. Data from the

Smoking is a leading cause of mortality. Each year approximately 7,500 Marylanders die from a smoking-related disease.

2007 YRBSS reported that 17 percent of Maryland high school students had smoked a cigarette at least once in the preceding 30 days while 5 percent reported smoking daily [Eaton, 2008; CDC, 2007-2015]. Among these high school smokers, 10 percent reported smoking more than 10 cigarettes per day in 2007 [Eaton, 2008; CDC, 2007-2015].

Legislative Background

Tobacco tax increases are considered the most effective policy for reducing tobacco use [Chaloupka, 2017]. The Maryland government first taxed cigarettes in 1958 at \$0.03 per pack [Franchot, 2016b]. The state tax per pack of cigarettes increased incrementally from 1961 to 2002 and reached \$1.00 in 2002 where it held steady until 2008 [Franchot, 2016b].

In 2007, the Maryland General Assembly passed The Transportation and State Investment Act of 2007, which increased the cigarette tax from \$1.00 to \$2.00 per pack of 11-20 cigarettes, effective January 1, 2008. The combined federal and state tax per pack of cigarettes is now \$3.01 compared with \$1.39 in 2007 [Orzechowski and Walker, 2017]. The average cost per pack of cigarettes in Maryland was \$6.72 in 2016, an increase from \$4.28 in 2007 [Orzechowski and Walker, 2017]. Of the total price of cigarettes in 2016, almost half (45 percent) is taxes. This is an increase from 2007 when taxes comprised 33 percent of the retail price [Orzechowski and Walker, 2017].

The main goals of the cigarette tax increase, as described by the experts we spoke with, were twofold: 1) to reduce tobacco use and related negative health conditions, especially lung cancer; and 2) to fund an expansion of health care coverage for low-income Marylanders not eligible for Medicaid; this extended coverage

included tobacco cessation services. During the same time the bill was being considered, there was a separate bill to expand Medicaid to include parents up to 116 percent of the Federal Poverty Level. The Working Families and Small Business Health Care Coverage Act of 2007 preceded the federal Affordable Care Act (ACA). During a Special Legislative Session in 2007, called by the Governor to resolve the state's budget deficit, the Maryland General Assembly passed these two bills that established the cigarette tax increase (\$1.00 per pack) and expanded Medicaid, with the revenue from the tax being used to support expanded health care coverage. Experts we spoke with emphasized that the Medicaid expansion would not have occurred without the cigarette tax increase, as the additional revenue from the tax increase was needed to pay for expanded health care coverage. One interviewee shared that initially many advocates wanted the proceeds from the tax to fund tobacco prevention programs. However, the most politically viable use of the proposed revenue was to fund expansion of the Maryland Medicaid program.

Public Health Impacts of the 2008 Law

There is strong evidence of an inverse association between cigarette prices and sales. Cigarette pack sales in Maryland have declined with each cigarette tax increase [Health Care for All, 2013; Health Care for All, 2017; Orzechowski and Walker, 2017]. In 2007, Maryland retailers sold 269 million cigarette packs compared to 182 million in 2015 [Maryland Department of Health and Mental Hygiene, 2016]. Also, between 2007 and 2016, per capita cigarette consumption decreased

by 38 percent, from 48 packs per person to 30 packs [Orzechowski and Walker, 2017]. Most of this decline occurred in the years immediately following the tax increase and is consistent with decreased consumption patterns following previous cigarette tax increases in Maryland that occurred between 1998 and 2012 [Health Care for All, 2013; Orzechowski and Walker, 2017]. Reductions in cigarette sales and smoking rates were key public health goals of the cigarette tax legislation.

In 2010, two years after the cigarette tax increase went into effect, 15 percent of Maryland adults were current smokers, a decrease of 12 percent compared with the 17 percent smoking prevalence in 2007 [CDC, 2015b]. As previously noted, the CDC changed the methodology for collecting and analyzing adult BRFSS data in 2011, thus limiting comparison of pre-2011 adult data with subsequent years [CDC, 2012]. Under the revised methodology, 19 percent of Maryland adults were identified as current smokers in 2011 [CDC, 2015a; CDC, 2015b]. This prevalence declined to 15 percent in 2015 and to 14 percent in 2016 [CDC, 2015b]. Comparing 2016 with 2011, there has been a 26 percent decrease in the prevalence of adult current smokers in Maryland.

The ability of the law to impact youth smoking was also a goal of the cigarette tax, in part because reducing smoking among youth is an effective strategy for preventing youth from becoming adult smokers. An estimated 90 percent of current smokers began smoking before the age of 18 years [Farber, 2016]. The impact of price on smoking is particularly strong among youth, making tax interventions an important strategy for preventing youth smoking. Several studies document declines in smoking among youth after a tobacco tax increase, noting that youth price sensitivity impacts decision-making [Chaloupka, 2011; Ross, 2001].

High school student cigarette smoking rates in Maryland declined between 2007 and 2009 and have also decreased when 2007 is compared with 2015. More specifically, the percentage of Maryland high school students who reported smoking a cigarette at least once in the preceding 30 days was 17 percent in 2007, 12 percent in 2009, and 9 percent in 2015 [CDC, 2007-2015]. This corresponds to a 29 percent decrease between 2007 and 2009, and a 47 percent decrease between 2007 and 2015. These declines are higher than the national trend, where the prevalence dropped by 3 percent between 2007 and 2009 and by 45 percent between 2007 and 2015 (U.S. prevalence: 20 percent in 2007, 19.5 percent in 2009, and 11 percent in 2015) [CDC, 2007-2015].

Comparing YRBSS Maryland high school student data from 2015 with 2007, there was a 71 percent decline in the prevalence of students who had smoked cigarettes on 20 or more days in the preceding month (Maryland prevalence: 7 percent in 2007 and 2 percent in 2015) [CDC, 2007-2015]. There was also a 60 percent decline in the prevalence of Maryland high school students who smoked cigarettes daily from 5 percent in 2007 to 2 percent in 2015 [CDC, 2007-2015]. The YRBSS data from the same time period also revealed a 10 percent increase in the prevalence of Maryland high school smokers who smoked more than 10 cigarettes a day in the preceding month (10 percent in 2007 and 11 percent in 2015) [CDC, 2007-2015].

Another public health goal of the increased tax was the potential for the cigarette tax to lead to decreases in other illegal substance use by youth. Adolescent smokers are more likely to use illegal drugs than nonsmokers, 55 percent versus 6 percent [Farber, 2016]. National data from the YRBSS revealed that youth who reported smoking cigarettes were 2.6 times more likely to drink alcohol, 3.5 times more likely to use marijuana, and 3.8 times more likely to have four or more sexual partners [Demissie,

Table 3. Summary of impact of cigarette tax in Maryland

Positive impacts of cigarette tax on smoking in Maryland			
Population	Parameter	Prevalence (year)	Change in prevalence
Youth ^{1,2,3}	Smoked cigarette in last 30 days	13% (2011) vs. 9% (2015)	31% reduction
	Smoked cigarettes for >20 days in last 30 days	4% (2011) vs. 2% (2015)	50% reduction
	Smokers who smoke >10 cigarettes a day	6% (2011) vs. 11% (2015)	83% increase
Adults ⁴	All current smokers	19% (2011) vs. 14% (2016)	26% reduction
General	Fewer youth smokers can potentially decrease prevalence of adult smokers in the future. ⁵		
	Health impacts (e.g., decreased smoking-related morbidity and mortality, and potentially decreased health care costs ^{6,7})		

Sources: ¹Eaton, 2012; ²Kann, 2016; ³CDC, 2007-2015; ⁴CDC, 2015b; ⁵Farber, 2016; ⁶CDC, 2014; ⁷Maryland Department of Health and Mental Hygiene, 2014. All prevalence numbers in the report have been rounded to the nearest whole number (0.5 and higher numbers were rounded up; 0.4 and lower numbers were rounded down). These rounded numbers were used to calculate the percentage change in prevalence over time for the health-risk behavior. The calculated percentages for prevalence change were also rounded to the nearest whole number.

2017]. In Maryland, according to the Youth Tobacco and Risk Behavior Survey of 2013, high school smokers are three times more likely to currently drink alcohol, five times more likely to currently use marijuana, nine times more likely to currently abuse prescription drugs, and six times more likely to ever use other illegal drugs [Maryland Department of Health and Mental Hygiene, 2014]. Specifically, 79 percent of high school cigarette smokers reported consuming alcohol, and 67 percent reported using marijuana in the prior 30 days [Maryland Department of Health and Mental Hygiene, 2014]. This is higher than for nonsmokers (24 percent reported consuming alcohol, and 13 percent reported using marijuana in the prior 30 days).

Interviewees also expected the tax would reduce exposure to secondhand smoke and benefit nonsmoking adults and children, although

the individuals who mentioned this specific impact recalled that it received less attention during the policy debate than the direct health impacts to smokers themselves. Few studies have examined this impact, and we were unable to identify any data to support this association. However, an association between the District of Columbia's cigarette excise tax and declines in periodontal disease, which is highly correlated with secondhand smoke exposure, is reported in the literature [Sander, 2013; Sutton, 2012].

Interviewees also described the potential impact on low birthweight babies because of the connections between a pregnant woman's tobacco use and prenatal outcomes [Windham, 2000]. Baltimore has experienced dramatic decreases in infant mortality since

the Baltimore City Health Department launched the B-More for Healthy Babies initiative in 2009 [B'more for Healthy Babies, 2017]. Interviewees were careful not to attribute the declines to the increase in cigarette prices; however, given the relationship between cigarette taxes and smoking, and smoking and low birthweight, interviewees who mentioned this impact explained that the tobacco tax likely amplified the effects of the initiative.

Maryland's 2008 cigarette tax increase, like similar cigarette tax increases across the country, has reduced cigarette use, especially among young people, and can reduce death and disease caused by tobacco use [Chaloupka, 2017]. Table 3 summarizes the impacts reviewed in this section.

Perceived Unintended Consequences and Contradictory Outcomes

Interviewees raised potential unintended consequences in considering the impacts of the tax, many of which opponents highlighted during the policy debate. The most prominent concern was that the cigarette tax could cause youth to switch to more affordable tobacco products such as little cigars, smokeless tobacco, and e-cigarettes. In 2015, among high school students in Maryland, 10 percent had smoked cigars, cigarillos, or little cigars, and 20 percent used electronic vapor products at least once in the past 30 days [Maryland Department of Health, 2014].

At the time the cigarette tax bill was being considered, there were inconsistencies across taxes and policies for cigarettes compared to other tobacco products. Beginning in 2012, the Maryland General Assembly passed several bills that prohibit e-cigarette sales and their components to minors [Maryland General Assembly, 2012a; Maryland General Assembly, 2015], and increased the tax on little cigars and smokeless tobacco [Comptroller of Maryland, 2012]. Although the increased taxes for these tobacco products were not as large as the

cigarette tax, it did bring these products more in-line with cigarette prices. Interviewees hypothesized that increasing the costs of these other products could address concerns about tobacco users switching products because of the cost. In support of this perspective, there was a reported 14 percent decline in cigar smoking in Maryland (from 14 percent in 2010 to 12 percent in 2013) by adolescents after this tax increase went into effect [Maryland Department of Health and Mental Hygiene, 2016].

A second unintended consequence interviewees raised was that the higher tax would result in a new market for smuggled cigarettes from states with lower taxes, particularly neighboring Virginia, West Virginia, Delaware, and Pennsylvania. This was a prominent argument raised by the tobacco industry. After the cigarette tax took effect, the Tax Foundation reported that the percentage of cigarettes smuggled into Maryland increased from 10 percent in 2006 to 20 percent in 2013 [Drenkard, 2015], resulting in lost tax revenue for the state. Interviewees questioned the accuracy of these data and referenced a report from Tobacco-Free Kids that concluded there is a net increase in cigarette tax revenue for Maryland and every other state that has passed a cigarette tax of 50 cents or more since 2008 [Tobacco-Free Kids, 2018]. While smuggling may have increased, Maryland's overall revenues from the cigarette tax increased following the effective date of the new tax. Regardless of the size of the smuggling problem, continued law enforcement actions to address this activity are important.

Another potential unintended consequence interviewees raised, and that was emphasized by the tobacco industry during the policy debate, was the differential impact of the tax on low-income individuals who are spending an increasing proportion of their resources on cigarettes as a result of the tax. Interviewees shared that while there was support for the potential benefits of the tax, a common

Maryland's 2008 cigarette tax increase, like similar cigarette tax increases across the country, has reduced cigarette use, especially among young people, and can potentially reduce death and disease caused by tobacco use.

concern centers around equity, [Dinno, 2009; Franks, 2007; Gospodinov, 2009], and that low-income individuals would be disproportionately impacted by the tax.

One final unintended consequence mentioned was the impact of the cigarette tax on participation in the Supplemental Nutrition Assistance Program (SNAP) among eligible low-income households. One expert mentioned this association, which is supported by a few studies. Rozema and colleagues demonstrated that the likelihood that smokers who are eligible for SNAP benefits actually enroll in SNAP increased between 10 percent and 15 percent after a cigarette tax was passed [Rozema, 2017]. The hypothesized mechanism for this association is that low-income families experience greater financial strains from the higher taxes but cannot easily stop using cigarettes because of their addictive quality. In order to cover the price increase, some may be more likely to obtain governmental assistance to help ease the new tax burden [Rozema, 2015].

II. Revenues from the Alcohol and Cigarette Tax Increases: How Much and What Has it Been Used For?

Revenue Created by the 2011 Alcohol Sales Tax Increase

Of the \$1.13 billion in sales tax collected from food and beverages in fiscal year 2016, alcohol sales generated \$283 million [Comptroller's office, personal communication]. One hundred percent of these alcohol sales tax and excise tax revenues go to the general fund. Further, the alcohol tax revenue is projected to increase by 3.5 percent annually [Maryland General Assembly, 2017]. Thus, the

estimated revenue from the sales tax on alcohol for fiscal year 2017 is \$289 million and \$306 million for fiscal year 2018 [Maryland General Assembly, 2016; Maryland General Assembly, 2017].

The 2011 bill that increased the alcohol sales tax mandated certain appropriations for the following fiscal year, specifically schools and school construction, and the Developmental Disabilities Administration. For fiscal year 2012, the law required that \$15 million be appropriated to the Waiting List Equity Fund for the Developmental Disabilities Administration and \$47.5 million be appropriated to the Public School Construction Financing Fund [Maryland General Assembly, 2011; Maryland General Assembly, 2012b]. The Waiting List Equity Fund provides money for community services to disabled individuals [Maryland General Assembly, 2011]. The Public School Construction Financing Fund is administered by the Board of Public Works for construction projects for public schools [Maryland General Assembly, 2012b; Maryland General Assembly, 2012c].

Appropriations were not specified for subsequent fiscal years, though interviewees noted that they met with the Governor several times to discuss allocation. Perhaps as a result of these meetings, the Governor proposed in his budget for fiscal year 2013 that \$64 million of the approximately \$70 million raised annually from the 2011 alcohol sales tax increase be allocated for the original goals of the Lorraine Sheehan Alcohol Sales Tax Coalition, which included funding for drug and alcohol prevention, support for people with mental health and developmental disabilities, and health care needs such as funding for

Experts emphasized that the Medicaid expansion would not have occurred without the cigarette tax increase, as the additional revenue from the tax increase was needed to pay for expanded health care coverage.

health enterprise zones and home- and community-based long-term care.

Revenue Created by the 2008 Cigarette Tax Increase

The cigarette tax increase became effective on January 1, 2008, during the 2007 fiscal year. According to the Comptroller's office, the revenue from this tax was \$271 million for fiscal year 2006 and \$268 million for fiscal year 2007. It subsequently increased to \$340 million for fiscal year 2008 and \$394 million for fiscal year 2009 [Franchot, 2016b]. Revenue remained between \$394 and \$397 million for fiscal year 2010 through fiscal year 2012. Since fiscal year 2013, cigarette tax revenues have been declining, by about \$11 million annually, to \$357 million in 2015. However, between fiscal year 2015 and fiscal year 2016, revenue increased by \$3 million, according to the report from the Comptroller [Franchot, 2016b]. In general, state revenues following the tax increase remain substantially higher than before the increase took effect.

A review of the legislation revealed that the law did not specifically allocate the revenue for public health purposes. This was confirmed by the experts we spoke with, and, in fact, our interviewees noted that they advocated for revenue to support tobacco prevention programs. However, a couple of experts we spoke with recalled that at the time, the Governor and state policy leaders, in response to strong advocacy efforts, agreed that the revenue would be used to support health care expansion through the Working Families and Small Business Health

Care Coverage Act of 2007, which expanded Medicaid coverage to adults making less than 116 percent of the federal poverty level – about 100,000 Marylanders.

While the cigarette tax revenue goes into the general fund, funds can be earmarked for specific uses. For example, even though the law did not specifically designate the revenue for cigarette-related purposes, to at least one expert we spoke with, it is clear that the revenue is doing what it was intended to do – expanding health care coverage. An additional 100,000 Maryland adults have health care through the Working Families and Small Business Health Care Coverage Act, which, as previously noted, was paid for by the cigarette tax revenue. Thus, although advocates were disappointed that the revenue did not specifically go to tobacco cessation or prevention, a few noted that with the expanded health care coverage, adults could have access to smoking cessation programs through Medicaid.

One interviewee we spoke with noted that these efforts to raise taxes have continued in Maryland in hopes of having additional state money allocated for tobacco prevention in Maryland. The CDC has recommended levels for funding tobacco prevention and cessation programs for each state [CDC, 2014]. For Maryland, based on its population and prevalence of tobacco use, the CDC recommends spending \$48 million to support interventions, mass-reach health communications, cessation programs, and surveillance. According to Tobacco-Free Kids, Maryland is falling short in meeting

recommended funding levels for tobacco prevention, cessation, and treatment. In fiscal year 2017, Maryland spent less than \$11 million on tobacco prevention, even though the state received an estimated \$554 million in tobacco settlement payments and taxes [Tobacco-Free Kids, 2016]. Of note, tobacco companies spent an estimated \$127 million in Maryland on advertising in 2014 [Tobacco-Free Kids, 2016].

III. Recommendations

We propose the following four recommendations for advocates, researchers, funders, and concerned citizens to consider. Based on findings from the literature review and interviews with experts familiar with the policy debate surrounding these two laws and their subsequent implementation, these recommendations are intended to help maximize public health gains through state policy.

1. Consider taxes an effective policy strategy to improve the public's health.

By increasing cigarette and alcohol taxes, policymakers can realize the tremendous public health benefits associated with price increases. It is remarkable that the impacts documented by the evidence, as well as described by interviewees, occurred from relatively modest tax increases. Because of the public health benefits associated with even a modest tax increase, policymakers stand to see more impressive declines in key health indicators by pursuing a higher tax. Moreover, despite anticipated resistance to the bills, interviewees noted the lack of public backlash once the laws were passed.

2. Monitor the public health impacts of tax policy.

The two laws reviewed benefitted from the wealth of existing research documenting how each tax policy could achieve public health goals.

This research was not only critical for developing evidence-based policies for the advocacy

campaigns, which were central to the debates surrounding those bills, but also illustrative for highlighting public health impacts. To fully understand the various ways laws can improve the public's health, continued support for research documenting the impacts of tobacco and alcohol taxes is needed. Additional research to further illuminate the long-term public health impacts of state tax policy, and any unintended consequences for health, as well as disproportionate impacts on certain segments of the population, is crucial to fully understanding these tax policies.

3. Ensure transparency for tax bills that generate revenue.

Information about the revenue generated from these laws is insightful. Although the revenues generated through these laws become part of the general fund, a number of experts who we spoke with were unable to provide clear details about how these funds have been spent. Assuring that funds generated through public health policies are strategically spent to advance public health goals should be standard procedure. At the very least, we recommend that language be included in legislation that requires transparency so that the public can identify how funds are being used.

4. Employ effective advocacy strategies.

Utilizing effective public health advocacy strategies to support policy change was key to the passage of these two tax laws [Pertschuk, 2010]. These efforts indicate the importance of citizen involvement when it comes to informing policy action on matters that impact the public's health. Without strong advocacy for public health policies, it is unlikely that the cigarette and alcohol tax policies highlighted in this report would have been realized. Advocating for evidence-based public health policies with deliberate, strategic, and proven strategies is critical, and should remain a priority in Maryland.

About the Authors

Keshia Pollack Porter, PhD, MPH, is a Professor in the Department of Health Policy and Management and Director of the Institute for Health and Social Policy at the Johns Hopkins Bloomberg School of Public Health. Her research expertise includes promoting policies that create safe and healthy environments where people live, work, play, and travel, and address leading social determinants of health and inequities.

Shannon Frattaroli, PhD, MPH, is an Associate Professor in the Department of Health Policy and Management at the Johns Hopkins Bloomberg School of Public Health. Her research and teaching focus on understanding how to effectively implement evidence-informed policies and programs so that all people can live safer, healthier lives.

Harpreet Pannu, MD, MPH, is a physician and independent research consultant with experience in optimizing patient diagnoses and care. Her research interests are on understanding the interaction of policy and public health.

References

- B'more for Healthy Babies. (2017). Infant Mortality Statistics and Research. Retrieved from: <http://healthybabiesbaltimore.com/about-bhb/infant-mortality-statistics-and-research>
- CDC. (2012). Methodologic Changes in the Behavioral Risk Factor Surveillance System in 2011 and Potential Effects on Prevalence Estimates. *MMWR* June 8, 2012; 61(22); 410-413. Retrieved from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6122a3.htm>
- CDC. (2013). Frequently Asked Questions About Changes to the Behavioral Risk Factor Surveillance System. Retrieved from: https://www.cdc.gov/surveillancepractice/reports/brfss/brfss_faqs.html
- CDC. (2007-2015). High School Youth Risk Behavior Survey: Youth Online. Centers for Disease Control and Prevention. Retrieved from: <https://nccd.cdc.gov/youthonline/App/Results.aspx>
- CDC. (2014). Best Practices for Comprehensive Tobacco Control Programs—2014. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Retrieved from: http://www.cdc.gov/tobacco/stateandcommunity/best_practices/index.htm
- CDC. (2015a). Centers for Disease Control and Prevention. State Tobacco Activities Tracking and Evaluation (STATE) System. Retrieved from: https://nccd.cdc.gov/STATESystem/rdPage.aspx?rdReport=OSH_STATE.Highlights&rdRequestForwarding=Form
- CDC. (2015b). Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data [online]. 2015. Retrieved from: <https://www.cdc.gov/brfss/brfssprevalence/>
- CDC. (2015c). Centers for Disease Control and Prevention. Alcohol and Public Health: Text Description for Data and Maps Page. Retrieved from: <https://www.cdc.gov/alcohol/data-table-text.htm#prevalence>
- CDC. (2015d). Centers for Disease Control and Prevention. Alcohol and Public Health: Fact Sheets - Alcohol Use and Your Health Retrieved from: <https://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm>

- CDC. (June 30, 2017). Extinguishing the Tobacco Epidemic in Maryland. Centers for Disease Control and Prevention. Retrieved from: <https://www.cdc.gov/tobacco/about/osh/program-funding/pdfs/maryland-508.pdf>
- Chaloupka FJ, Straif K, Leon ME; Working Group, International Agency for Research on Cancer. (May 2011). Effectiveness of tax and price policies in tobacco control. *Tob Control*, 20(3), 235-8. doi: 10.1136/tc.2010.039982.
- Chaloupka FJ. (2017). Tobacco Tax Increases Remain Most Effective Policy for Reducing Tobacco Use. A Tobacconomics Research Brief. Chicago, IL: Tobacconomics, Health Policy Center, Institute for Health Research and Policy, University of Illinois at Chicago. Retrieved from: https://tobacconomics.org/wp-content/uploads/2017/11/effectiveness-of-tobacco-taxes_brief.pdf
- Chesson H, Harrison P, Kassler WJ. (2000). Sex under the influence: the effect of alcohol policy on sexually transmitted disease rates in the United States. *J Law Econ*, 43(1), 215-238.
- Comptroller of Maryland. (2012). TT-73: OTP Tax Increase – Floor Tax. Field Enforcement Division. Retrieved from: http://taxes.marylandtaxes.com/Resource_Library/Taxpayer_Assistance/Frequently_Asked_Questions/Business_Tax_FAQs/Alcohol_and_Tobacco_Tax/Cigarette_Floor_Tax_FAQ.pdf
- Cook, PJ. (2016). *Paying the Tab: The Costs and Benefits of Alcohol Control*. Princeton, NJ: Princeton University Press.
- Demissie Z, Everett Jones S, Clayton HB, King BA. (February 2017). Adolescent Risk Behaviors and Use of Electronic Vapor Products and Cigarettes. *Pediatrics*, 139(2), e20162921 doi: 10.1542/peds.2016-2921.
- Department of Budget and Management. (March 2017). Statement of Dedicated Special Funds. Retrieved from: <http://dbm.maryland.gov/budget/Documents/operbudget/StatementofDedicatedSpecialFunds.pdf>
- Dinno A, Glantz S. (April 2009). Tobacco control policies are egalitarian: A vulnerabilities perspective on clean indoor air laws, cigarette prices, and tobacco use disparities. *Soc Sci Med*, 68, 1439-1447.
- Drenkard S, Henchman J. (February 2015). Cigarette taxes and cigarette smuggling by state, 2013. Tax Foundation Fiscal Fact No. 450. Retrieved from: <https://taxfoundation.org/cigarette-taxes-and-cigarette-smuggling-state-2013-0/>
- Eaton DK, Kann L, Kinchen S, et al. (June 2008). Youth Risk Behavior Surveillance --- United States, 2007. *MMWR Surveillance Summaries*, 57(SS04). Retrieved from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/ss5704a1.htm>
- Eaton DK, Kann L, Kinchen S, et al. (June 2012). Youth Risk Behavior Surveillance — United States, 2011. *MMWR Surveillance Summaries*, 61(4). Retrieved from: <https://www.cdc.gov/mmwr/pdf/ss/ss6104.pdf>
- Farber HJ, Pakhale S, Neptune ER; American Thoracic Society Tobacco Action Committee. (December 2016). Tobacco 21: An Important Public Policy to Protect Our Youth. *Ann Am Thorac Soc*, 13(12), 2115-2118.
- Franchot P. (2016a). Comprehensive Annual Financial Report State of Maryland Fiscal year ended June 30, 2016. Retrieved from: http://finances.marylandtaxes.com/static_files/revenue/cafr/cafr2016.pdf
- Franchot P. (2016b). Alcohol and Tobacco Tax Annual Report: Fiscal Year 2016. Comptroller of Maryland. Retrieved from: http://finances.marylandtaxes.com/Where_the_Money_Comes_From/General_Fund_Revenue_Memos/Alcohol_and_Tobacco_Tax/Alcohol_Tax_Annual_Report_Archive.shtml
- Franks P, Jerant AF, Leigh JP, Lee D, Chiem A, Lewis I, Lee S. (October 2007). Cigarette prices, smoking, and the poor: Implications of recent trends. *Am J Public Health*, 97, 1873-1877.
- Gospodinov N, Irvine I. (March 2009). Tobacco taxes and regressivity. *J Health Econ*, 28, 375-384.
- Health Care for All. (October 2013). SIGNIFICANT STRIDES: Reducing Smoking and Expanding Health Care in Maryland: Building on the Success of Maryland's 2008 Cigarette Tax Increase. Retrieved from: <http://healthcareforall.com/wp-content/uploads/2012/01/MD-Success-from-2008-Tax-Increase-Report-DRAFT-10-14-13.pdf>
- Health Care for All. (2017). Chart of Tobacco Control Policies and their Impact in Maryland. Retrieved from: <http://healthcareforall.com/new-campaign-healthy-maryland-initiative/>
- Hogan LJ, Rutherford BK. (January 2015). Maryland Budget Highlights FY 2016. Retrieved from: <http://www.dbm.maryland.gov/budget/Documents/operbudget/2016/highlights.pdf>
- Kann L, McManus T, Harris WA et al. (June 10, 2016). Youth Risk Behavior Surveillance — United States, 2015. *MMWR Surveillance Summaries*, 65(6). Retrieved from: https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2015/ss6506_updated.pdf
- Kanny D, Liu Y, Brewer RD, Lu H. (November 2013). Binge drinking – United States, 2011. *MMWR Supplements*, 62(03), 77-80. Retrieved from: <https://www.cdc.gov/mmwr/preview/mmwrhtml/su6203a13.htm>

- Lavoie MC, Langenberg P, Villaveces A et al. (March 2017). Effect of Maryland's 2011 Alcohol Sales Tax Increase on Alcohol-Positive Driving. *Am J Prev Med*, 53(1), 17-24.
- Leal A, Lopez-Laborda J, Rodrigo F. (2010). Cross-Border Shopping: A Survey. *Int Adv Econ Res*, 16, 135-148.
- Maryland Department of Health. 2014 Maryland Youth Risk Behavior Survey. Baltimore: Maryland Department of Health and Mental Hygiene, Prevention and Health Promotion Administration. Retrieved from: <https://phpa.health.maryland.gov/ccdpc/Reports/Documents/2014%20YRBS%20Reports/2014MDH%20Summary%20Tables.pdf>
- Maryland Department of Health and Mental Hygiene. (August 2014). Monitoring Changing Tobacco Use Behaviors: A Report to the Maryland Governor and the General Assembly, Fiscal Year 2013. Baltimore. Retrieved from: <https://phpa.health.maryland.gov/ohpetup/Documents/HG%2013-1004%20-%20PHPA%20-%20Biennial%20Tobacco%20Study%20.pdf>
- Maryland Department of Health and Mental Hygiene. (May 2016). Monitoring Changing Tobacco Use Behaviors: 2000 -2014. Baltimore: Maryland Department of Health and Mental Hygiene, Prevention and Health Promotion Administration, Primary Care and Community Health Bureau, Center for Tobacco Prevention and Control. Retrieved from: <https://phpa.health.maryland.gov/ohpetup/Documents/Legislative%20Report%20May%202016-%20Biennial%20Tobacco%20Study.pdf>
- Maryland Department of Health and Mental Hygiene. (June 2017). Drug- and Alcohol-Related Intoxication Deaths in Maryland, 2016. Retrieved from: https://bha.health.maryland.gov/OVERDOSE_PREVENTION/Documents/Maryland%202016%20Overdose%20Annual%20report.pdf
- Maryland General Assembly Legislative Special Session 1. (2007). Transportation and State Investment Act. Chapter 6, House bill 5. Retrieved from: <http://mgaleg.maryland.gov/webmga/frmMain.aspx?ys=2007s1/billfile/HB0005.htm>
- Maryland General Assembly Legislative Session. (2011). Sales and Use Tax – Alcoholic Beverages – Supplementary Appropriation. Fiscal and Policy Note, Chapter 571, Senate bill 994. Retrieved from: <http://mgaleg.maryland.gov/webmga/frmMain.aspx?tab=subject3&ys=2011rs/billfile/sb0994.htm>
- Maryland General Assembly Legislative Session. (2012a). Public Health – Electronic Cigarettes – Distribution to Minors Prohibited. Chapter 714, House bill 1272. Retrieved from: <http://mgaleg.maryland.gov/webmga/frmMain.aspx?tab=subject3&ys=2012rs%2fbillfile%2fhb1272.htm>
- Maryland General Assembly Legislative Session. (2012b). Sales and Use Tax – Alcoholic Beverages – Calculation of Tax. Fiscal and Policy Note, Chapter 598, House bill 918. Retrieved from: <http://mgaleg.maryland.gov/webmga/frmMain.aspx?tab=subject3&ys=2012rs/billfile/hb0918.htm>
- Maryland General Assembly Legislative Session. (2015). Electronic Cigarettes – Sale to Minors – Components, Supplies, and Enforcement. Chapter 425, House bill 0489. Retrieved from: <http://mgaleg.maryland.gov/webmga/frmMain.aspx?pid=billpage&tab=subject3&id=hb0489&stab=01&ys=2015RS>
- Maryland General Assembly Legislative Session. (2016). Sales and Use Tax - Alcoholic Beverages - Rate Reduction. Fiscal and Policy Note, Senate bill 0220. Retrieved from: <http://mgaleg.maryland.gov/webmga/frmMain.aspx?id=sb0220&stab=01&pid=billpage&tab=subject3&ys=2016rs>
- Maryland General Assembly Legislative Session. (2017). Sales and Use Tax - Alcoholic Beverages - Rate Reduction. Fiscal and Policy Note, Senate bill 0157. Retrieved from: <http://mgaleg.maryland.gov/webmga/frmMain.aspx?id=sb0157&stab=01&pid=billpage&tab=subject3&ys=2017RS>
- Naimi TS, Daley JI, Xuan Z, Blanchette JG, Chaloupka FJ, Jernigan DH. (May 2016). Who Would Pay for State Alcohol Tax Increases in the United States? *Prev Chronic Dis*, 13, 150450. Doi <http://dx.doi.org/10.5888/pcd13.150450>.
- Orzechowski and Walker. (2017). The Tax Burden on Tobacco Volume 51, 1970-2016. Centers for Disease Control and Prevention. Retrieved from: <https://chronicdata.cdc.gov/Policy/The-Tax-Burden-on-Tobacco-Volume-51-1970-2016/7nwe-3aj9/data>
- Pertschuk M. (2010). The DeMarco Factor: Transforming Public Will into Political Power. Nashville, Tennessee: Vanderbilt University Press.
- Ross H, Chaloupka FJ. (February 2001). The Effect of Public Policies and Prices on Youth Smoking. *ImpacTeen Research Paper Series No. 8*. Retrieved from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.564.781&rep=rep1&type=pdf>
- Rozema K, Ziebarth NR, Cotton C et al. (2015). Taxing Inelastic Consumption: Income Effects and SNAP Take-Up. Retrieved from: <https://www.semanticscholar.org/paper/Taxing-Inelastic-Consumption-Income-Effects-and-SN-Rozema-Ziebarth/a8122e2b1df1255b27a13bbf5a804b7c30c0499b>
- Rozema K, Ziebarth NR. (2017). Taxing Consumption and the Take-up of Public Assistance: The Case of Cigarette Taxes and Food Stamps. *J Law Econ*, 60 (1),1-27.
- Sacks JJ, Gonzales KR, Bouchery EE, et al. (2015). 2010 National and State Costs of Excessive Alcohol Consumption. *Am J Prev Med*, 49(5), e73-e79.

Sander A, Slade G. (April 2013). State Cigarette Excise Tax, Secondhand Smoke Exposure, and Periodontitis in US Nonsmokers. *Am J Public Health*, 103(4), 740–746.

Staras SAS, Livingston MD, Christou AM, Jernigan DH, Wagenaar AC. (2014). Heterogeneous population effects of an alcohol excise tax increase on sexually transmitted infections morbidity. *Addiction*, 109(6), 904–912.

Staras SAS, Livingston MD, Wagenaar AC. (2016). Maryland Alcohol Sales Tax and Sexually Transmitted Infections a Natural Experiment. *Am J Prev Med*, 50(3), e73–e80.

Sutton JD, Ranney LM, Wilder RS, Sanders AE. (Summer 2012). Environmental tobacco smoke and periodontitis in U.S. non-smokers. *J Dent Hyg*, 86(3), 185–94.

Tobacco-Free Kids. (December 2016). Broken Promises to Our Children: A State-by-State Look at the 1998 State Tobacco Settlement 18 Years Later. Retrieved from: http://www.tobaccofreekids.org/microsites/statereport2017/pdf/StateReport_FY2017.pdf

Tobacco-Free Kids. (January 2018). Raising State Cigarette Taxes Always Increases State Revenues (And Always Reduces Smoking). Retrieved from: <http://www.tobaccofreekids.org/research/factsheets/pdf/0098.pdf>

U.S. Department of Health and Human Services. (January 2014). The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Retrieved from: <https://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf>

U.S. Task Force on Community Preventive Services. (February 2010). Increasing Alcoholic Beverage Taxes Is Recommended to Reduce Excessive Alcohol Consumption and Related Harms. *Am J Prev Med*, 38(2), 230–232 doi <http://dx.doi.org/10.1016/j.amepre.2009.11.002>

Wagenaar AC, Tobler AL, Komro KA. (2010). Effects of alcohol tax and price policies on morbidity and mortality: a systematic review. *Am J Public Health*, 100, 2270–2278.

Wagenaar AC, Livingston MD, Staras SS. (September 2015). Effects of a 2009 Illinois Alcohol Tax Increase on Fatal Motor Vehicle Crashes. *Am J Public Health*, 105, 1880–1885 doi:10.2105/AJPH.2014.302428

Windham GC, Hopkins B, Fenster L, Swan SH. (July 2000). Prenatal Active or Passive Tobacco Smoke Exposure and the Risk of Preterm Delivery or Low Birth Weight. *Epidemiology*, 11(4), 427–433.

Xu X, Chaloupka FJ. (2011). The effects of prices on alcohol use and its consequences. *Alcohol Res Health*, 34(2), 236–245.

.....
A B E L L
.....
F O U N D A T I O N
.....

111 South Calvert Street, Suite 2300
Baltimore, Maryland 21202-6174

.....
The
Abell Report
.....

Published by the Abell Foundation
Volume 31, Number 2

**Public Health Policy in Maryland:
Lessons from Recent Alcohol and Cigarette Tax Policies**

**by Keshia Pollack Porter, PhD, MPH, Shannon Frattaroli,
PhD, MPH, Harpreet Pannu, MD, MPH**

About the Abell Foundation

The Abell Foundation is dedicated to the enhancement of the quality of life in Maryland, with a particular focus on Baltimore. The Foundation places a strong emphasis on opening the doors of opportunity to the disenfranchised, believing that no community can thrive if those who live on the margins of it are not included.

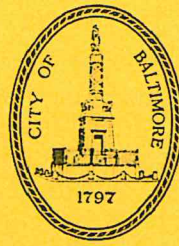
Inherent in the working philosophy of the Abell Foundation is the strong belief that a community faced with complicated, seemingly intractable challenges is well-served by thought-provoking, research-based information. To that end, the Foundation publishes background studies of selected issues on the public agenda for the benefit of government officials; leaders in business, industry and academia; and the general public.

For a complete collection of Abell publications, please visit our website at www.abell.org/publications

SB3BLENDYFAV02278720200129111234

Uploaded by: Green, Kamala

Position: FAV



BERNARD C. "JACK" YOUNG
MAYOR

*Office of Government Relations
88 State Circle
Annapolis, Maryland 21401*

SB 3

January 29, 2020

TO: Members of the Senate Budget and Taxation Committee

FROM: Nicholas Blendy, Deputy Director, Mayor's Office of Government Relations

RE: Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation

POSITION: SUPPORT

Chair Guzzone, Vice Chair Rosapepe, and Members of the Committee, please be advised that the Baltimore City Administration (BCA) supports Senate Bill (SB) 3.

SB 3 applies state tax laws regulating the sale, manufacture, distribution, possession, and use of cigarettes and other tobacco products to electronic smoking products, alters the definition of "other tobacco products" to include consumable products and the components of those products, and requires the Governor to include at least \$21 million in the annual budget for tobacco use reduction efforts beginning in FY 22.

Tobacco use remains the leading cause of preventable death in the United States. It is known to cause cancer, heart disease, and respiratory disease, among other health disorders, and costs the U.S. as much as \$170 billion in health care expenditures each year. The Campaign for Tobacco-Free Kids reports that each day, more than 250 kids under the age of 18 become regular, daily smokers and almost one third will eventually die from smoking related illness.¹

In Maryland in 2017, 8.2 percent of high school students who responded to the Behavioral Risk Factor Surveillance System (BRFSS) smoked on at least once per day in the past 30 days. Of those students, 13.3 percent used e-cigarettes, 6.2 percent used smokeless tobacco, and 9 percent smoked cigars.

¹ "Raising the Tobacco Age to 21," Campaign for Tobacco Free Kids, January 2020.

Tobacco use disproportionately affects many marginalized populations including people in low-income communities, racial and ethnic minorities, LGBTQ individuals and those with mental illness. Research by the “Truth Initiative,” shows that more tobacco retailers exist in areas with higher concentration of black, Hispanic and low-income populations and that tobacco companies strategically market to those groups.

According to the Centers for Disease Prevention scientific studies support that increasing the price of tobacco products its effectiveness in preventing or reducing tobacco use. Taxes on tobacco and tobacco- related products discourage youth use and encourage current smokers to quit, while preventing vulnerable populations from starting in the first place.

In 2016, the City of Chicago increased its tobacco tax. The tax increase resulted in decreased smoking among high school students. Under the city’s *Healthy Chicago* plan, Chicago used the tax dollars to fund tobacco cessation and control efforts.² The city passed and implemented bans on, while restricting retailers selling tobacco from doing so within 500 feet of a school. Rewards were offered such as black market sales outside of retail shops, sales to minors, and sale of single cigarettes. Chicago also introduced smoking cessation programs. Following this model by increasing Maryland’s tobacco taxes would help fund similar efforts.

SB 3 represents a step toward a smoke-free generation for Baltimore’s residents. The allocation of tax revenues is critical for tobacco control. It will build on existing Baltimore City efforts to expand enforcement efforts of tobacco laws, and limit the access of tobacco products to our communities. It will also expand the educational, prevention, and enforcement services to our city through increased funding to decrease health disparities, and reduce expenditures related to premature smoking.

For the forgoing reasons, we respectfully request a **favorable** report on SB 3.

² Tobacco Taxes, Health Affairs, September 2016.

SB 3 American Heart Association Favorable

Uploaded by: Hale, Laura

Position: FAV



January 29th, 2020

Testimony of Laura Hale
American Heart Association

Favorable SB 3 Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation

Dear Chair Guzzone, Vice-Chair Rosapepe and Members of the Budget and Taxation Committee,

Thank you for the opportunity to speak before you today. My name is Laura Hale and I am the Director of Government Relations for the American Heart Association. The American Heart Association strongly supports Senate Bill 3.

Tobacco use is the leading cause of preventable death in the United States. In Maryland alone, 7,500 adults die every year from tobacco¹. If nothing changes, 92,000 kids alive today in Maryland will ultimately die prematurely due to tobacco². But we have a chance to change these grim statistics. With this bill, Maryland steps into a brighter tobacco-free future.

The bill creates this future in two ways. First, by raising the tax on cigarettes by \$2 a pack and creating parity on all other products including e-cigarettes. The data has shown that every time there is a significant increase in the tobacco tax (meaning a tax increase greater than one dollar) the smoking rate has decreased while the revenue for the state has increased. For SB3, the Campaign for Tobacco Free Kids, Tobacconomics, and the American Cancer Society Cancer Action Network projects for the cigarette tax increase alone impacts of:

\$97.43 million in new revenue that can fund a variety of programs including those to help people quit

20.8 percent decline in youth smoking

37,200 adult smokers would quit

14,500 deaths would be prevented

\$9.88 million would be saved for Medicaid over 5 years

\$1.11 billion in health care costs would be saved over the long-term

This truly is a win-win-win for Maryland.

The second way this bill helps Maryland is by dedicating 21 Million Dollars to the tobacco control program. This investment can be used to counter the marketing put in place by the tobacco industry. Currently, the tobacco industry is addicting youth to its deadly product by investing more than 126 million

¹ <https://www.tobaccofreekids.org/problem/toll-us/maryland>

² <https://www.tobaccofreekids.org/problem/toll-us/maryland>

dollars in Maryland alone³. The industry also targets youth, the low-income population, and the African American community. The data shows that there is an increase in tobacco advertising at corner stores near schools, and even more prevalent in low income African American communities⁴. This dedicated funding will allow the Maryland Department of Health to take a stand against big tobacco to counter the messaging that is pushed at Point of Sale as well as to help smokers quit. At any given time, 70 percent of smokers want to quit, they just need the support to make that happen. With programs such as the Quitline, offering Nicotine Replacement Therapy (NRT) free of charge, and with local grants supporting high risk populations, the Maryland Department of Health's Tobacco Control Program will be able to grow their work to counteract the tobacco industry and create a healthier Maryland.

Maryland stands on the cusp to be a leader around the country with a strong tobacco control program, and a robust tobacco tax. The American Heart Association asks for your support in creating a healthier Maryland. We strongly support and ask for swift passage of SB 3.

³ <https://www.tobaccofreekids.org/problem/toll-us/maryland>

⁴ <https://www.tobaccofreekids.org/assets/factsheets/0008.pdf>

SB 3 American Heart Association Favorable

Uploaded by: Hale, Laura

Position: FAV



January 29th, 2020

Testimony of Laura Hale
American Heart Association

Favorable SB 3 Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation

Dear Chair Guzzone, Vice-Chair Rosapepe and Members of the Budget and Taxation Committee,

Thank you for the opportunity to speak before you today. My name is Laura Hale and I am the Director of Government Relations for the American Heart Association. The American Heart Association strongly supports Senate Bill 3.

Tobacco use is the leading cause of preventable death in the United States. In Maryland alone, 7,500 adults die every year from tobacco¹. If nothing changes, 92,000 kids alive today in Maryland will ultimately die prematurely due to tobacco². But we have a chance to change these grim statistics. With this bill, Maryland steps into a brighter tobacco-free future.

The bill creates this future in two ways. First, by raising the tax on cigarettes by \$2 a pack and creating parity on all other products including e-cigarettes. The data has shown that every time there is a significant increase in the tobacco tax (meaning a tax increase greater than one dollar) the smoking rate has decreased while the revenue for the state has increased. For SB3, the Campaign for Tobacco Free Kids, Tobacconomics, and the American Cancer Society Cancer Action Network projects for the cigarette tax increase alone impacts of:

\$97.43 million in new revenue that can fund a variety of programs including those to help people quit

20.8 percent decline in youth smoking

37,200 adult smokers would quit

14,500 deaths would be prevented

\$9.88 million would be saved for Medicaid over 5 years

\$1.11 billion in health care costs would be saved over the long-term

This truly is a win-win-win for Maryland.

The second way this bill helps Maryland is by dedicating 21 Million Dollars to the tobacco control program. This investment can be used to counter the marketing put in place by the tobacco industry. Currently, the tobacco industry is addicting youth to its deadly product by investing more than 126 million

¹ <https://www.tobaccofreekids.org/problem/toll-us/maryland>

² <https://www.tobaccofreekids.org/problem/toll-us/maryland>

dollars in Maryland alone³. The industry also targets youth, the low-income population, and the African American community. The data shows that there is an increase in tobacco advertising at corner stores near schools, and even more prevalent in low income African American communities⁴. This dedicated funding will allow the Maryland Department of Health to take a stand against big tobacco to counter the messaging that is pushed at Point of Sale as well as to help smokers quit. At any given time, 70 percent of smokers want to quit, they just need the support to make that happen. With programs such as the Quitline, offering Nicotine Replacement Therapy (NRT) free of charge, and with local grants supporting high risk populations, the Maryland Department of Health's Tobacco Control Program will be able to grow their work to counteract the tobacco industry and create a healthier Maryland.

Maryland stands on the cusp to be a leader around the country with a strong tobacco control program, and a robust tobacco tax. The American Heart Association asks for your support in creating a healthier Maryland. We strongly support and ask for swift passage of SB 3.

³ <https://www.tobaccofreekids.org/problem/toll-us/maryland>

⁴ <https://www.tobaccofreekids.org/assets/factsheets/0008.pdf>

MCAIlianceBGC_FAV_SB3

Uploaded by: Hoffman, Andy

Position: FAV



SB 3 – SUPPORT

January 29, 2020

Dear Chairman Guzzone, Vice Chair Rosapepe, and members of the Senate Budget and Taxation Committee,

The Maryland Alliance of Boys & Girls Clubs serves more than 23,000 youth at 42 Club sites across the state. Boys & Girls Clubs aim to provide a high-quality Club experience that assures success is within reach of every young person who enters our doors, with all members on track to graduate from high school and plan for the future, demonstrating good character and citizenship, and living a healthy lifestyle. We aim to provide a safe and positive environment – and a hot, nutritious meal at no cost – for youth after school and during the summer.

The current generation is predicted to have a shorter life span and poorer health than their parents. Nearly 1 in 5 young people are obese¹, while 75% of high schoolers do not get the recommended amount of daily physical activity². Additionally, over 6.5 million children live in food insecure households without consistent access to enough food³. Out-of-school time programs focus on teaching good judgement as the basis for healthy decisions. In addition to providing access to physical activity, for many young people, their last meal of the day is the food they receive at an out-of-school time provider. In 2017, Boys & Girls Clubs across the country served more than 88 million healthy snacks and meals at no cost to members. In addition to providing healthy meals, they also support educational and enrichment programs that keep children learning, engaged and safe.

Youth face a variety of factors that can impede their ability to make good decisions, impacting their physical and mental health. It's vital that youth development staff know how to recognize and refer youth to mental health and substance use services. The Centers for Disease Control and Prevention found that 33% of high school students report using alcohol and 22% report using marijuana in the past 30 days⁴.

Additionally, Adverse Childhood Experiences (ACEs) can have negative, lasting effects on health and well-being. ACEs have been linked to risky health behaviors, chronic health conditions, low life potential and even early death. The Centers for Disease Control underscores the need to prevent the impact of ACEs before they even occur because of their detrimental impact on the health and well-being of young people. Therefore, it is critical to create safe and nurturing relationships and environments to help counteract the consequences of potentially traumatic events. Club's address the social and emotional needs of young people can improve overall well-being and build resilience.

Nationally, between 2017-18, e-cigarette use among high-schoolers jumped 78% (from 11.7% to 20.8%) representing the single biggest jump ever reported for adoption of substance among youth. Children must be exposed to opportunities that promote wellness and social-emotional development, including physical health, healthy eating, active living, trauma-informed care and substance abuse prevention. A strength of local Clubs is to provide health promotion programming.

¹ Center for Disease Control and Prevention. *Childhood Obesity Facts*. 2017. <https://www.cdc.gov/obesity/data/childhood.html>

² The Child & Adolescent Health Measurement Initiative (CAHMI). 2016 National Survey of Children's Health. Data Resource Center for Child and Adolescent Health; 2016.

³ Summer Food Service Program, USDA, 2017. <https://www.fns.usda.gov/sfsp/serving-summer-meals>

⁴ Center for Disease Control and Prevention. 2017. *Youth Risk Behavior Surveillance System*. <https://www.cdc.gov/healthyyouth/data/yrbs/index.htm>



We strongly support this legislation which would invest more in programs to keep kids away from tobacco and vaping and encourage the committees to look at out-of-school time organizations like ours as partners for these important programs.

BGCA's National Youth Outcomes Initiative (NYOI) is a system built to measure the impact of Clubs using a common set of research-informed indicators of our priority outcomes. Using data from NYOI and comparing it to data from the CDC's Youth Risk Behavior Survey, teens who regularly attend Clubs perform better than their peers as it pertains to abstaining from using tobacco products. Teens abstained at a higher rate compared to their peers - vapor products (BGCA 89% vs. YRBS 87%), cigarettes (BGCA 97% vs. YRBS 92%), chewing tobacco (BGCA 98% vs. YRBS 94%) and cigars (BGCA 97% vs. YRBS 91%).

Club strategies for healthy living and smoking prevention:

- Club programs focus on social-emotional development and build skills for healthy decision-making to positively address the impact of social determinants of health.
- The Mental Health First Aid program through the National Council of Behavioral Health trains Club staff on how to identify, understand and respond to signs of mental illnesses and substance use disorders.
- The SMART Moves (Skills Mastery and Resilience Training) prevention and education program builds social emotional skills that support healthy decision making, such as substance use and sexual risk behaviors. Young people ages 6 to 15 engage in discussion and role-playing, practicing resilience and refusal skills, developing assertiveness, strengthening decision-making skills while analyzing media and peer influence.
- With support from the U.S. Department of Justice-Office of Juvenile Justice and Delinquency Prevention, Clubs utilize materials from the education program, Positive Action, to provide effective mentoring opportunities for youth. The program engages youth ages 4 to 18 in character development, social-emotional development and academic improvement.
- Club program SMART Girls helps girls from ages 8-18 develop healthy attitudes. It's a small-group health, fitness, prevention/education and self-esteem enhancement program designed to meet the developmental needs of girls in three age groups. Through dynamic sessions, participatory activities, field trips and mentoring opportunities with adult women, Club girls explore their own and societal attitudes and values as they build skills for eating right, staying physically fit, getting good health care and developing positive relationships with peers and adults.

Andy Hoffman
President
Maryland Alliance of Boys & Girls Clubs

Contact: Moira Cyphers, Compass Government Relations

MCyphers@compass-gr.com

(301) 318-4220

SB 3 _MSEA_ FAV_Sean Johnson

Uploaded by: Johnson, Sean

Position: FAV

**Testimony in Support of Senate Bill 3
Electronic Smoking Devices, Other Tobacco Products, and Cigarettes -
Taxation and Regulation**

**Senate Budget and Taxation Committee
January 29, 2020
1:00 PM**

**Sean Johnson
Government Relations**

The Maryland State Education Association supports Senate Bill 3 proposing to increase and expand the tobacco tax to both increase funding to tobacco cessation programs in Maryland and benefit the General Fund in ways that can be used to implement the new school funding formula our students and schools need.

MSEA represents 75,000 educators and school employees who work in Maryland's public schools, teaching and preparing our 896,837 students for the careers and jobs of the future. MSEA also represents 39 local affiliates in every county across the state of Maryland, and our parent affiliate is the 3 million-member National Education Association (NEA).

Educators have joined efforts to support this expansion and increase as a matter of public health, student well-being, and to raise new targeted revenues. Considering the epidemic levels associated with the use of e-cigarettes among young people, expanding the definition of products regulated and taxed will help to reduce tobacco usage rates of students. Maryland has made great strides to reduce smoking rates and has saved lives and resources by increasing the tobacco tax a few times over the years.

MSEA also supports passage of an adequate, sustainable, predictable revenue stream that will adequately fund both the operating and construction costs of our public schools. A great public school for every child means our students have updated technology, small manageable classes, safe and modern schools, proper healthcare and nutrition, and have highly qualified and highly effective educators. The work of the Commission on Innovation and Excellence in Education further recommends improvements to access to Pre-K and Career Technology Education, as well as expansion of the educator workforce and increased salaries to help deliver individualized instruction and recruit and retain the best workforce in the country.

The Kirwan Commission has determined that Maryland will need to invest substantially more resources into education for our citizens to become truly successful in the very competitive national and global economies. This is the time to be locating and allocating more resources to education, and Senate Bill 3 can be part of that dedicated funding solution. Our kids can't wait.

MSEA urges a favorable report of Senate Bill 3.

MedChi & MDAAP_Pam Kasemeyer_FAV_SB0003

Uploaded by: Kasemeyer, Pam

Position: FAV

MedChi

The Maryland State Medical Society

1211 Cathedral Street
Baltimore, MD 21201-5516
410.539.0872
Fax: 410.547.0915
1.800.492.1056
www.medchi.org



TO: The Honorable Guy Guzzone, Chair
Members, Senate Budget and Taxation Committee
The Honorable Cory V. McCray

FROM: Pamela Metz Kasemeyer
J. Steven Wise
Danna L. Kauffman
Richard A. Tabuteau

DATE: January 29, 2020

RE: **SUPPORT** – Senate Bill 3 – *Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation*

On behalf of the Maryland State Medical Society (MedChi) and the Maryland Chapter of the American Academy of Pediatrics, we **support** Senate Bill 3.

Senate Bill 3 increases the tax rate on cigarettes, other tobacco products (OTP) and electronic smoking devices (ESD), and removes the prohibition on local governments imposing a tax on tobacco and electronic smoking devices. It also notably requires the Governor to include at least \$21 million in annual funding for the Tobacco Use Prevention and Cessation Program which administers programs and provides funding for initiatives that focus on reducing the use of tobacco products and the burden of tobacco-related morbidity and mortality in the State. The Program's funding includes grants to local jurisdictions for similar initiatives.

There is conclusive evidence to support the assertion that increasing the tax on tobacco and other tobacco products is directly attributable to a decrease in consumption. Since 1999, Maryland has gradually raised its tax on cigarettes to the current \$2.00 per pack, and the results have been striking. The increase in the cigarette tax will continue to cause a decrease in smoking and also provide additional revenue for increased efforts to curb tobacco use. Similarly, increasing taxes on OTPs and ESDs will also lead to a decline in consumption which is particularly important given that OTPs and ESDs are particularly popular with young people. The proposed tax increase will begin to impact use in the same manner as the tax on cigarettes. Furthermore, the commitment of the revenues to tobacco cessation programs and providing revenues for the State to fund other health care purposes is consistent with the objectives of the tax. It is both smart public health policy and fiscal policy. A favorable report is strongly urged. It is a win for public health, our youth, and for the State.

For more information call:

Pamela Metz Kasemeyer
J. Steven Wise
Danna L. Kauffman
Richard A. Tabuteau
410-244-7000

2a - SB 3_WellnessCouncil_FAV_Jessica Kiel

Uploaded by: Kiel, Jessica

Position: FAV

MARYLAND STATE ADVISORY COUNCIL ON HEALTH AND WELLNESS

MEMBERS

Jessica Kiel, R.D., Chair

Mary Backley

Sumit Bassi, M.D.

Angela Deal

Jennifer Eastman, M.B.A.

Mychelle Farmer, M.D.

Lois Freeman, D.N.P.

Gary Gerstenblith, M.D.

Donna Gugel, M.H.S.

Margaret Gwaltney, M.B.A.

Roger Harrell, M.H.A.

Linda Kline

Namisa Kramer

Seth Martin, M.D.

David McShea

Aruna Nathan, M.D.

Donna Nordstrom, R.N.

Joanne Ogaitis, R.N.

Rachel Pigott, O.T.R./L, M.P.H.

Cameron Pollock, M.P.H.

Vivienne Rose, M.D.

Jason Semanoff, M.S.

Teresa Titus-Howard, PhD.

Kristin Watson, PharmD.

Anne Williams, D.N.P.

Vanina Wolf, L.Ac.

Pamela Xenakis, R.D.

January 29th, 2020

Senator Guy Guzzone
Chair, Budget and Taxation
3 West Miller Senate Office Building
Annapolis, MD 21401

RE: SB 3 – Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation – Letter of Support

Dear Chair Guzzone:

The Maryland State Advisory Council on Health and Wellness (the Council) is submitting this letter of support for Senate Bill 3 (SB 3) entitled “Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation.” This bill proposes a number of measures to bring parity in taxation among all tobacco products, including doubling the tobacco tax rate for cigarettes to \$4/pack and increasing the tax rate for other tobacco products to 86% of wholesale price. SB 3 also introduces a new tax for Electronic Smoking Devices (ESDs) at 86% of wholesale price. A portion of the new tax revenue generated through SB 3 would increase the minimum amount allocated to the Governor’s annual budget for tobacco control from \$10 million to \$21 million beginning in fiscal year 22 (FY 22).

The Council extends its support for SB 3, as it seeks to promote health and prevent disease by reducing use of tobacco products through tax increases. The ramifications of this bill would have a profound impact on tobacco use statewide, and may aid in combatting the worsening trend of youth ESD use. The Council agrees with the following statements as they relate to the passage of SB 3:

- Increasing tobacco tax and price is a highly effective tool for reducing tobacco use, including reductions in use among vulnerable and lower income populations.ⁱ
- Cigarette tax increases have been shown to decrease tobacco use in both adults as well as youth. Each 10 cent increase results in a two percent reduction in consumption by adults and seven percent reduction among youth.^{ii,iii}
- Tax increases on other tobacco products, such as cigars and smokeless tobacco, yield similar results in terms of reducing prevalence and consumption.^{iv}
- Maryland experienced a 73 percent increase in current high school ESD use between the 2016-2017 and 2018-2019 school years, emphasizing the need to implement evidence-based tobacco prevention and control strategies, such as increased taxes, to combat the youth e-cigarette epidemic.^v
- Many youth report being unaware that nearly all ESDs contain nicotine, and the myth that they emit water vapor persists. Taxing e-cigarettes helps to correct such dangerous falsehoods about ESDs, and align them with other tobacco and nicotine products.
- An ESD tax will not create an underground market as this home-manufactured market already exists and is thought to be responsible for the e-cigarette and vaping related lung injury (EVALI) outbreak.
- Claims that ESDs help adults successfully quit smoking have not been substantiated – ESDs are not an FDA-approved cessation device.

- Tobacco taxes should increase over time to continue producing the intended effect of encouraging cessation among current smokers, and preventing vulnerable populations, especially youth, from starting to use these products.^{vi,1}
- When tax revenue supports tobacco control programs, the impact of both is strengthened.^{vii} In Oregon, the combination of a tax increase and added support to the state’s tobacco prevention and education program decreased taxable per capita cigarette consumption by 11 percent.^{viii} In New York City, local tax increases along with tobacco program activities resulted in a decline in cigarette smoking by 19 percent between 2002 and 2006.^{ix}

Health care costs in Maryland directly caused by tobacco use, combined with smoking-caused productivity losses, are estimated at more than \$5 billion annually – and can be expected to grow if today’s youth develop a lifelong nicotine addiction as a result of the youth ESD epidemic.^x This fiscal burden on Maryland employers, governmental health insurance programs, and individuals and families could be offset through increased efforts to reduce the use of tobacco. Data indicate that more substantial investments in comprehensive state tobacco control programs lead to quicker and greater declines in both smoking rates as well as smoking-related disease and death.^{xi,xii} Furthermore, adequately funded state tobacco programs can save 14 to 20 times the cost of implementing them.^{xiii} Comparable initiatives in other states have documented a return on investment greater than \$5 for every \$1 spent on state tobacco programs.^{xiv}

The Council supports SB 3 and its proposed tobacco tax increases and annual budget allocation to reduce tobacco use in Maryland. We strongly urge the committee to support this important public health bill.

Sincerely,



Jessica Kiel, R.D., Chair, Maryland Advisory Council on Health and Wellness

ⁱ U.S. National Cancer Institute and World Health Organization. The Economics of Tobacco and Tobacco Control. National Cancer Institute Tobacco Control Monograph 21. NIH Publication No. 16-CA-8029A. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; and Geneva, CH: World Health Organization; 2016. https://cancercontrol.cancer.gov/brp/tcrb/monographs/21/docs/m21_exec_sum.pdf.

ⁱⁱ Chaloupka, FJ, “Macro-Social Influences: The Effects of Prices and Tobacco Control Policies on the Demand for Tobacco Products,” *Nicotine and Tobacco Research* 1(Suppl 1):S105-9, 1999; other studies at <http://www.ihrp.uic.edu/researcher/frank-jchaloupka-phd> and <http://tobacconomics.org/>.

ⁱⁱⁱ Campaign for Tobacco Free Kids, RAISING CIGARETTE TAXES REDUCES SMOKING, ESPECIALLY AMONG KIDS (AND THE CIGARETTE COMPANIES KNOW IT), Fact Sheet available at <https://www.tobaccofreekids.org/assets/factsheets/0146.pdf>.

^{iv} Chaloupka FJ. How Effective are Taxes in Reducing Tobacco Consumption? In: Jeanrenaud C, Soguel N, eds. *Valuing the Cost of Smoking: Assessment Methods, Risk Perception and Policy Options*. Dordrecht: Springer Netherlands; 1999:205-218.

^v 2018-2019 Maryland Youth Risk Behavior/Youth Tobacco Survey (YRBS/YTS), unpublished data, retrieved 2January2020.

^{vi} The Importance of Tobacco Taxes. 13 January 2020 <https://truthinitiative.org/research-resources/tobacco-prevention-efforts/importance-tobacco-taxes>

^{vii} Dilley JA et al. Program, Policy, and Price Interventions for Tobacco Control: Quantifying the Return on Investment of a State Tobacco Control Program. *Am J Public Health*. 2012 February; 102(2): e22–e28.

^{viii} Centers for Disease Control and Prevention. Decline in cigarette consumption following implementation of a comprehensive tobacco prevention and education program—Oregon, 1996-1998. *MMWR Morbidity and mortality weekly report*. 1999;48(7):140-143.

^{ix} Centers for Disease Control and Prevention. Decline in smoking prevalence—New York City, 2002-2006. *MMWR morbidity and mortality weekly report*. 2007;56(24):604-608.

^x Campaign for Tobacco Free Kids, Tobacco Toll, <https://www.tobaccofreekids.org/problem/toll-us/maryland>.

^{xi} Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Control Programs—2014. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014 https://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2014/comprehensive.pdf.

^{xii} Farrelly MC, Pechacek TF, Chaloupka FJ. The impact of tobacco control program expenditures on aggregate cigarette sales: 1981–2000. *Journal of Health Economics* 2003;22(5):843–59.

^{xiii} Chattopadhyay, S. and Pieper, D., “Does Spending More on Tobacco Control Programs Make Economic Sense? An Incremental Benefit-Cost Analysis Using Panel Data,” *Contemporary Economic Policy*, 2011.

^{xiv} Dilley JA et al. Program, Policy, and Price Interventions for Tobacco Control: Quantifying the Return on Investment of a State Tobacco Control Program. *Am J Public Health*. 2012 February; 102(2): e22–e28.

Leovy_Support_SB3

Uploaded by: Leovy, John

Position: FAV

BRIAN E. FROSH
Attorney General



ELIZABETH HARRIS
Chief Deputy Attorney General

CAROLYN QUATTROCKI
Deputy Attorney General

FACSIMILE NO.

STATE OF MARYLAND
OFFICE OF THE ATTORNEY GENERAL

WRITER'S DIRECT DIAL No.
410-576-6442

January 29, 2020

To: The Honorable Guy Guzonne
Chair, Budget and Taxation Committee

From: The Office of the Attorney General
John M. Leovy, Chief Counsel, Tobacco Enforcement Unit

Re: Senate Bill 3 (Electronic Smoking Devices, Other Tobacco Products, and Cigarettes -
Taxation and Regulation): **SUPPORT**

The Office of the Attorney General submits the following written testimony in support of Senate Bill 3. This bill increases the tobacco tax on cigarettes from \$2.00 to \$4.00 per pack; increases the tax rate on other tobacco products from 30% to 86% of the wholesale price; and, for the first time, taxes the sale of electronic smoking devices (ESD) at the same 86% rate.

Wholesalers are responsible for the tax in quarterly payments to the Comptroller. If wholesalers fail to pay the tax, the licensed ESD retailer or vape shop vendor shall pay the tax in quarterly payments. The tax paid by the retailer or vape shop vendor will be based on the invoice amount charged by the ESD manufacturer, exclusive of any discount, trade allowance, rebate, or other reduction. A person who willfully possesses, sells, or attempts to sell ESDs on which the tobacco tax has not been paid is guilty of a misdemeanor and is subject to a fine not exceeding \$500 or imprisonment not exceeding 3 months, or both.

Studies show that increasing tobacco taxes deter and decrease use of tobacco products and ESD initiation and use should likewise decrease in response to taxation. The best current data show that a \$2.00 per pack tax increase will reduce smoking among those aged 18-24 by 12 %, and a 10% increase in the price of e-cigarettes will reduce youth use of these products by as much as 19%. Reducing youth use of tobacco products now will prevent Maryland's taxpayers from



spending billions in future medical expenses and save its businesses from untold sums in future lost medical insurance costs and lost productivity at work.

For these reasons, we ask that this Committee return a favorable report on this bill.

cc: Members of the Budget and Taxation Committee

SB3 American College of Cardiology Favorable

Uploaded by: Marine, Joseph

Position: FAV



Maryland
CHAPTER

1783 Forest Drive
Suite 238
Annapolis, MD 21401

marylandacc.org

January 28, 2020

Senator Guy Guzzone, Chair
Senate Budget and Tax Committee
Miller Senate Office Building
Annapolis, MD 21401

Re: SUPPORT FOR SB 3 – Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation

The Maryland Chapter of the American College of Cardiology would like to offer its strong support for Senate Bill 3 which would increase the state sales tax on cigarettes.

While rates of smoking are, thankfully, in decline, smoking-related illness including heart disease, remain a substantial public health burden. Nicotine is a highly addictive substance which can ensnare teens, often under the influence of peer pressure, and lead to a lifetime of health problems. The Surgeon General has called the rise of the cost of cigarettes ‘one of the most effective tobacco interventions.’¹ The Campaign for Tobacco free kids estimates that an increase of two dollars in the current tax would decrease teen smoking by twenty percent in our state.² Because smoking-related disease takes many years to develop, it is crucial that the youth of our state are discouraged at every turn from starting a habit which can lead to lifelong addiction.

The Maryland Chapter of the American College of Cardiology respectfully requests the committee give SB 3 a favorable report.

Sincerely,

Joseph E. Marine, MD, FACC
President

¹U.S. Department of Health and Human Services (HHS), *The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General*, Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for ChronicDiseasePreventionandHealthPromotion,OfficeonSmokingandHealth,2014. <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/index.html>.

² Projections are based on research findings that nationally, each 10% increase in the retail price of cigarettes reduces youth smoking by 6.5%, young adult prevalence by 3.25%, adult prevalence by 2%, and total cigarette consumption by about 4% (adjusted down to account for tax evasion effects). However, the impact of the tax increase varies from state-to-state, based on the starting pack price. Significant tax increases generate new revenues because the higher tax rate per pack brings in more new revenue than is lost from the tax-related drop in total pack sales.

MACo_FAV_SB0003

Uploaded by: Mehu, Natasha

Position: FAV



Senate Bill 3

Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation

MACo Position: **SUPPORT**

To: Budget and Taxation Committee

Date: January 29, 2020

From: Natasha Mehu

The Maryland Association of Counties (MACo) **SUPPORTS** SB 3 as it provides resources and tools to support local public health efforts to address tobacco use and related deaths, disease, and disparities.

SB 3 increases the tobacco tax rate on cigarettes and other tobacco products and imposes a tax on electronic smoking devices. It also removes the prohibition from local governments imposing a tax on cigarettes and other tobacco products -- enabling counties to access an additional tool for use in their own anti-tobacco strategies. These tax changes would generate revenues that can be used to advance state and local public health efforts and other priorities.

Additionally, the bill requires the Governor to increase annual funding for the Tobacco Use Prevention and Cessation Program. Tobacco use is not only the number one cause of preventable death and disease in the U.S., it leads to thousands of deaths and hundreds of thousands of cases of tobacco-related diseases in Maryland alone.

Local health departments oversee and implement county tobacco control policies. Increasing the funding for the Tobacco Use Prevention and Cessation Program from \$10 million to \$21 million would result in an estimated \$3.9 million for local health departments. This funding would directly support crucial local priorities including addressing youth use of tobacco and vaping products, tobacco cessation classes, and tobacco treatment programs.

Stemming tobacco use remains a public health priority for counties and their communities. SB 3 removes preemptive barriers and boosts the resources necessary to implement effective education, prevention, and treatment strategies to advance this effort. For these reasons, MACo **SUPPORTS** SB 3.

SB 3 MD GASP Favorable

Uploaded by: O'Hara, John

Position: FAV



MDGASP



Maryland Group Against Smoker's Pollution
P.O. Box 863 - Bowie MD 20718
Phone (301)262-3434 E-Mail MDGASP@aol.com

Testimony in support of Senate Tax Bill Senate Bill 3

by

John O' Hara: Ph. D
President: Maryland Group Against Smoker's Pollution

January 29, 2020

January 29, 2020

Honorable Committee members,

My name is John O' Hara. I am the President of the Maryland Group Against Smoker's Pollution (MDGASP), an organization with over 1,000 members across the state. We have members from every district in the state.

I am 86 years old and over the last four decades I have testified before committees of the Maryland General Assembly every single year pertaining to tobacco and/or vaping control. Over these many years the State of Maryland has passed several bills to protect the health of its citizens from the ravages of tobacco smoke. I commend the General Assembly for these efforts, however, we still have a long way to go.

The tobacco and vaping industry is still out there hooking our children on their products every day. Over 25% of our high school students and even 10% of our eighth graders are hooked on vaping. The facts are clear that vaping is harmful and extremely addictive. Many adults and young people are dying from smoking and vaping.

One way to counter their efforts is to raise the taxes on their products. Raising the taxes is a win-win in that it reduces the use of tobacco/vape products by our kids as well as providing much needed funds to educate our merchants and citizens on the harm these products cause.

I urge you to vote in favor of SB 3.

Respectfully.

John O' Hara: Ph. D
President
Maryland Group Against Smoker's Pollution
Box 863, Bowie, MD 20718
(P) 301-262-3434
(C) 301-351-8839
MDGASP@aol.com

MD Center on Economic Policy_FAV_SB3

Uploaded by: Orr, Benjamin

Position: FAV

Modernizing Maryland's Tobacco Tax Will Improve Public Health, Raise Needed Revenue

Position Statement in Support of Senate Bill 3

Given before the Senate Budget and Taxation Committee

Maryland's economy has changed in important ways since the turn of the century, but our revenue system has not always kept up. Outdated provisions in our tax code contribute to stagnating revenue growth, making it harder each year to meet Marylanders' needs—and in some cases, these provisions can actively harm public health. Improving Maryland's tobacco tax would raise needed revenue and simultaneously curb new and old threats to Marylanders' health. For these reasons, the Maryland Center on Economic Policy supports Senate Bill 3.

Although we have made encouraging strides in reducing smoking during the last several decades, tobacco still poses a major threat to Marylanders' health. Old and well-understood dangers remain, with approximately 150 million packs of cigarettes—3 billion cigarettes altogether—sold in Maryland each year.ⁱ And new, less-understood dangers are growing, as the popularity of vaping products has increased young Marylanders' nicotine use and caused a small number of users to suffer severe, sometimes deadly lung injuries. Among the most devastating effects of tobacco on Marylanders' health, more than 2,600 of our state's residents died of lung cancer in 2016, with Black men facing a higher age-adjusted mortality rate than any other group.ⁱⁱ

At the same time, Maryland has been underinvesting in the foundations of our communities ever since the Great Recession. We chipped away at public school funding, allowing the number of school districts that were close to full funding under the Thornton formula to fall from 23 out of 24 in fiscal year 2008 to only six by 2017—with more than half of the state's Black students going to school in a district that was underfunded by 15 percent or more. We have allowed other essential investments to erode as well. State support for local boards of health was 42 percent lower in fiscal year 2019 than in 2008, adjusted for inflation, and only 5 percent higher than the 2011 post-recession nadir. In fact, state support for local boards of health was only slightly higher in 2019 than it had been in 2011—*before adjusting for inflation*. In constant-dollar terms, the state contributed less than half as much to local boards of health in 2019 as it did in 1990.

Senate Bill 3 would both discourage tobacco and nicotine use and simultaneously raise an average of about \$50 million each year that we can invest in essential services like public health and public schools. It is long past time for Maryland to tax vaping products just as we do to other tobacco products—as nearly all of our neighboring states do—and strengthen our cigarette tax to reduce smoking.

For these reasons, the Maryland Center on Economic Policy respectfully requests that the Senate Budget and Taxation Committee make a favorable report on Senate Bill 3.

Equity Impact Analysis: Senate Bill 3

Bill summary

Senate Bill 3 takes multiple steps to update Maryland's tobacco taxes. The bill increases the tax on cigarettes from \$2 per pack to \$4 per pack; it standardizes the tax rate on other tobacco products such as pipe tobacco and cigars to 86 percent of wholesale price; applies equal standards to vaping products as to other tobacco products; and repeals a provision that currently prohibits local governments from setting their own tobacco tax policy.

Background

Vaping products have become increasingly popular in recent years, with United States sales of vaping products nearing \$7 billion in 2018.ⁱⁱⁱ Although vaping products are not currently known to pose the same long-term cancer risk as cigarettes, they were linked to striking, and sometimes deadly, acute lung injuries in 2019.

Equity Implications

Senate Bill 3 has three conflicting equity implications:

- Our current, inadequate tax policies and regulations allow large, multistate corporations to profit by selling addictive, dangerous products to Marylanders. The harms of our current policy are spread unevenly, with Black men in Maryland facing a higher age-adjusted mortality rate from lung disease than any other group in the state. Senate Bill 3 would counteract these harms by financially discouraging the use of tobacco products.
- Improving our tobacco tax policies would generate public resources that could be invested in things like world-class schools and public health. Investing in these basics strengthens our economy and can dismantle the economic barriers that too often hold back Marylanders of color.
- Despite these benefits, Senate Bill 3 would worsen Maryland's upside-down tax code, which already allows the wealthiest 1 percent of households to pay a smaller share of their income in state and local taxes than the rest of us do. Like other so-called "sin taxes," tobacco taxes place the greatest responsibilities on people who already struggle to make ends meet.^{iv} Altogether, typical Maryland households pay six times as much in excise taxes (including sin taxes as well as others) as a share of their income than do the wealthiest 1 percent, while the one in five Marylanders with annual income less than \$24,000 paid 12 times as much in excise taxes as the wealthiest 1 percent.^v
- Enacting Senate Bill 3 as part of a comprehensive package of reforms to clean up Maryland's tax code would improve this source of inequity, especially if it were paired with working family tax credits to offset the impact on Marylanders who already struggle to make ends meet.

Impact

Senate Bill 3 would likely **have mixed effects on racial and economic equity** in Maryland.

ⁱ Based on MDCEP analysis of Maryland cigarette tax revenue data. At \$2 per pack, approximately \$300 million in estimated annual revenue in fiscal years 2020 and 2021 translates into about 150 million packs of cigarettes sold.

ⁱⁱ Centers for disease Control and Prevention,

ⁱⁱⁱ Lora Jones, "Vaping: How Popular Are E-Cigarettes?" *BBC News*, 2019, <https://www.bbc.com/news/business-44295336>

^{iv} "Cigarette Taxes: Issues and Options," Institute on Taxation and Economic Policy, 2016, <https://itep.org/cigarette-taxes-issues-and-options-1/>

^v MDCEP analysis of 2018 Institute on Taxation and Economic Policy state tax data.

2b - SB 3_MACHO_FAV_ Ruth Maiorana

Uploaded by: Polsky, Laurence

Position: FAV



**TESTIMONY BEFORE THE
SENATE BUDGET AND TAXATION COMMITTEE
SENATE BILL 3**

Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation

**Laurence Polsky, MD, MPH, FACOG, Health Officer, Calvert County Health Department
For the Maryland Association of County Health Officers MACHO)**

Position: Support – January 29, 2020

The Maryland Association of County Health Officers strongly supports SB 3.
Tobacco remains the leading cause of preventable death and disability in the U.S.¹

Each year, tobacco-related diseases:

- **Cost the Maryland economy \$2.7 billion in direct medical expenses**
- **Result in \$576 million of Medicaid expenses**
- **Cost Maryland businesses \$2.2 billion in lost productivity**
- **Cost the average Maryland household \$824 in higher taxes**²

Currently, 14 states have higher average prices for cigarettes than Maryland.³

E-cigarettes are being used at an alarming rate among youth. In Maryland, there was a 73 percent increase in high school use between the 2017 and 2019 school years.⁴ **Due to lack of taxation, vaping costs teens approximately 50% less than cigarettes for a comparable amount of nicotine.**^{3,5}

- Effects of nicotine on the adolescent brain include harming attention regulation, learning, impulse control, and mood.⁶
- Adolescent nicotine addiction increases the risk for addiction to other drugs, including opioids.⁶

Increases in price are very effective in reducing smoking among lower socioeconomic populations that have been targeted for decades by the tobacco industry.⁷

Increased taxation results in **4x greater reduction in smoking among adolescents than adults.**⁸

Research shows that greater investments in comprehensive state tobacco control programs lead to quicker and greater declines in smoking rates and in smoking-related disease and death.^{9,10} **Adequately funded state tobacco programs can save 14 to 20 times the cost of implementing them.**¹¹

Therefore, MACHO encourages the Maryland General Assembly to devote \$2.4 million/year from this new revenue to MDH nicotine-cessation programs and underage sales enforcement (an average of \$100,000/jurisdiction).

Raising the tax on tobacco products, including the institution of a specific tax on e-cigarettes, will lead to a healthier and more fiscally sound Maryland for generations to come. For more information, please contact Ruth Maiorana, MACHO Executive Director at рмаioral@jhu.edu or 410-614-6891. *This communication reflects the position of MACHO.*

1. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/index.htm
2. http://www.tobaccofreekids.org/facts_issues/toll_us/maryland
3. <http://worldpopulationreview.com/states/cigarette-prices-by-state/> Accessed 1/25/2020.
4. 2018-2019 Maryland Youth Risk Behavior/Youth Tobacco Survey (YRBS/YTS), unpublished data, retrieved 23January2020
5. <https://www.juul.com/resources/JUUL-Pods-Cost-and-Pricing-Pods-Prices-for-All-Flavors>
6. U.S. Department of Health and Human Services. E-Cigarette Use Among Youth and Young Adults. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2016. https://e-cigarettes.surgeongeneral.gov/documents/2016_SGR_Full_Report_508.pdf
7. Smoking Cessation. A Report of the Surgeon General. U.S. Dept. of HHS. 2020. p. 601. <https://www.hhs.gov/sites/default/files/2020-cessation-sgr-full-report.pdf>. Accessed 25January2020.
8. Feirman SP, Glasser AM, Rose S, Niaura R, Abrams DB, Teplitskaya L, Villanti AC. Computational models used to assess U.S. tobacco control policies. *Nicotine and Tobacco Research* 2017;19(11):1257–67.
9. Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Control Programs—2014. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. https://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2014/comprehensive.pdf
10. Farrelly MC, Pechacek TF, Chaloupka FJ. The impact of tobacco control program expenditures on aggregate cigarette sales: 1981–2000. *Journal of Health Economics* 2003;22(5):843–59.
11. Chattopadhyay, S. and Pieper, D., “Does Spending More on Tobacco Control Programs Make Economic Sense? An Incremental Benefit-Cost Analysis Using Panel Data,” *Contemporary Economic Policy*, 2011.

SB3_Maryland PIRG_FAV_tobacco tax_FINAL

Uploaded by: Scarr, Emily

Position: FAV

Testimony for SB3

Budget and Taxation Committee, Wednesday Jan. 29, 2020

Electronic Smoking Devices, Other Tobacco Products, and Cigarettes - Taxation and Regulation

POSITION: FAVORABLE

*Maryland PIRG is a state based, non-partisan, citizen funded public interest advocacy organization with grassroots members across the state and a student funded, student directed chapter at the University of Maryland College Park. For forty five years we've stood up to powerful interests whenever they threaten our health and safety, our financial security, or our right to fully participate in our democratic society. **That includes a long history of supporting evidence based solutions to reduce tobacco use.***

Maryland PIRG urges you to support legislation that would reduce the burden of tobacco related death and disease in our state by increasing the cigarette tax and establishing a parallel tax on all other tobacco products, as outlined in SB3.

According to preliminary data from the Maryland Health Department's Youth Risk Behavior Survey & Youth Tobacco Survey 2018-2019, tobacco use--e-cigarette use especially--remains a problem among Maryland's high schoolers:

- 23% of Maryland high school students currently use electronic smoking devices (ESD), a rate 5 times higher than adult use.
- Maryland high school students currently smoke cigars at 6%, cigarettes at 5%, and smokeless tobacco at 4.6%.

E-cigarette use among young people has reached epidemic levels in Maryland. It's important to establish a tax that has parity across all tobacco products, as laid out in SB3, so that we can reduce overall tobacco use, not just the use of one product.

If we want a future free from tobacco related death and disease, we need to address youth tobacco use. [Nearly 9 out of 10 cigarette smokers first try cigarettes by age 18. \[1\]](#) Increasing the price of tobacco products makes it less likely that youth will use them in the first place, and more likely that they'll quit.

- [Tobacco use is the number one cause of preventable death and disease in the United States.\[2\]](#)

- [In Maryland, 7,500 adults die every year from causes attributed to tobacco use--that's roughly 20 loved ones, friends, and family members dying every day. \[3\]](#)
- Health care costs in Maryland directly caused by tobacco use amount to \$2.71 billion annually.[4]

A \$2.00 per pack increase in the cigarette tax in Maryland would prevent 17,500 youth under 18 years old from becoming adult smokers. It would result in 14,500 fewer premature deaths from smoking related diseases, and save more than a billion dollars in long term health care costs from smoking declines. [5]

SB3 will prevent kids from getting dragged into a potentially life-long struggle with tobacco addiction, and all of the problems that come with it. We recommend a favorable report.

[1] CDC, *Youth and Tobacco Use*, accessed online 24 January, 2020,

https://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/index.htm

[2] Centers for Disease Control and Prevention, *Tobacco Use*, accessed online 24 January,

2020, <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/tobacco.htm>

[3] Maryland Department of Health, *The Center for Tobacco Prevention and Control*, accessed online 24 January, 2020, https://phpa.health.maryland.gov/ohpetup/pages/tob_home.aspx

[4] American Cancer Society CAN, Campaign for Tobacco Free Kids, and Tobacconomics, *New Revenues, Public Health Benefits, and Cost Savings from a \$2.00 cigarette tax increase in Maryland fact sheet*, accessed 24 January, 2020.

[5] Ibid.

Contact Information John Wells

Uploaded by: wells, john

Position: FAV

Contact John Wells

Jnw.wells@gmail.com cc: jw@WellsAnalytics.net

Cell 410 507-1862

Google Spreadsheet (Read Only) with combined Tax Data:

https://docs.google.com/spreadsheets/d/e/2PACX-1vSib1DNtYYo7WVr5TLDjWCXnU4IF_8vwsV3K0P07onfqTEibxIUBccIVcJLQgBjIQ/pubhtml

or:

bitly.com/MdTaxGroup-CombinedData

(case sensitive)

I am open to sharing the document for people who want to add comments or new data.

Features:

- Combines tax/revenue/spending reduction bills into a single “package”
- Monitors fiscal “balance sheet” across the bills
- Provides detailed data in quick access format for each bill
- Additional spreadsheet shows all bills (Currently 1192) with:
 - Title/subject/synopsis
 - Hearing dates
 - Sponsor, primary and secondary committees
 - Links to bill data.

Table 1 TaxGroup Basics and Links

Uploaded by: wells, john

Position: FAV

Bill_Numb	XFile_Bill_N	Links to MD Website	MDCEP Category	Sponsor	Committee	Broad Subject Name	Title	Synopsis
HB0185	SB0223	Main Text Fnote		Delegate Dumais	W&M	Taxes - Miscellaneous	Commission on Tax Policy, Reform, and Fairness	Establishing the Commission on Tax Policy, Reform, and Fairness; specifying the membersh
HB0295		Main Text n/a	Combined Reporting	Delegate Lehman	W&M	Taxes - Income	Corporate Income Tax - Combined Reporting	Requiring affiliated corporations to compute Maryland taxable income using a certain com
SB0024		Main Text n/a	Combined Reporting	Senator Young	B&T	Taxes - Income	Small Business Fairness Act	Requiring affiliated retail trade and food services corporations with multiple locations to cc
HB0439	SB0216	Main Text Fnote		Delegate Mosby	W&M	Taxes - Income	Income Tax - Carried Interest - Additional Tax	Imposing a tax of 17% on the Maryland taxable income attributable to certain investment
HB0222		Main Text n/a	Offset Special Treatment of Capital	Delegate Palakovich Carr	W&M	Taxes - Income	Income Tax Rates - Capital Gains Income	Providing for an additional State individual income tax rate of 1% on net capital gains of in
HB0224	SB0263	Main Text n/a	Eliminate Opportunity Zones	Delegate Palakovich Carr	W&M	Taxes - Income	Opportunity Zone Tax Deduction Reform Act of 2020	Requiring certain taxpayers to add a certain deduction for gains from sales or exchanges of
HB0507		Main Text n/a	Close Pass-Through Loophole	Delegate Palakovich Carr	W&M	Taxes - Income	Income Tax - Pass-Through Entity - Additional Tax	Imposing a State income tax on income distributed to certain members of certain pass-thr
HB0223		Main Text n/a	End BSA	Chair, Ways and Means Com	W&M	Taxes - Income	End Ineffective Business Subsidies Act of 2020	Prohibiting the Secretary of Commerce from designating or expanding certain enterprise z
HB0045	SB0122	Main Text Fnote	End Opportunity Zones	Delegate Palakovich Carr	W&M	Economic and Commu	Economic Development - Opportunity Zone Incentives - Alt	Altering certain terms relating to eligibility for benefits under the More Jobs for Marylan
HB0473		Main Text n/a	Throwback Rule	Delegate Stewart	W&M	Taxes - Income	Corporate Income Tax - Throwback Rule	Requiring that certain sales of tangible personal property be attributed to the State for ap
HB0256		Main Text n/a	Clean Up Our Tax Code	Delegate Wilkins	W&M	Taxes - Miscellaneous	Maryland Estate Tax - Unified Credit	Altering a certain limit on the unified credit used for determining the Maryland estate tax
SB0223	HB0185	Main Text n/a		Senator Feldman	B&T	Taxes - Miscellaneous	Commission on Tax Policy, Reform, and Fairness	Establishing the Commission on Tax Policy, Reform, and Fairness; specifying the membersh
SB0003		Main Text n/a	Expand Sales Tax Base	Senator McCray	B&T	Taxes - Miscellaneous	Electronic Smoking Devices, Other Tobacco Products, and C	Applying certain provisions of tax law regulating the sale, manufacture, distribution, posse
SB0002		Main Text Fnote	Expand Sales Tax Base	Senator Miller	B&T	Taxes - Miscellaneous	Digital Advertising Gross Revenues - Taxation	Imposing a tax on annual gross revenues derived from digital advertising services includi
SB0311		Main Text Fnote	n/a	Senator Pinsky	B&T	Taxes - Income	Corporate Tax Fairness Act of 2020	Requiring that certain sales of tangible personal property be included in the numerator of
SB0263	HB0224	Main Text Fnote	Eliminate Ineffective credits	Senator Rosapepe	B&T	Taxes - Income	Opportunity Zone Tax Deduction Reform Act of 2020	Requiring certain taxpayers to add a certain deduction for gains from sales or exchanges of
SB0004		Main Text n/a		Senator Zucker	B&T	Gaming	Gaming - Sports Betting - Implementation	Authorizing sports wagering license holders to accept wagers on sporting events from indi
HB0342	SB0278	Main Text n/a		Speaker	W&M	Taxes - Income	Retirement Tax Reduction Act of 2020	Allowing a subtraction modification under the Maryland income tax for up to a \$100,000 c
HB0386		Main Text n/a	Expand Sales Tax Base	Delegate Lewis, R.	W&M	Taxes - Sales and Use	Sales and Use Tax - Transportation Network Services - Appli	Imposing the sales and use tax on the sale of certain transportation network services; requ
HB0400		Main Text n/a	Expand Sales Tax Base	Delegate Pena-Melnyk	W&M	Taxes - Miscellaneous	Tax - General - Vaping Product Tax	Requiring vaping product tax revenue to be used for the State Reinsurance Program; provi
HB0061		Main Text Fnote		Delegate Grammer	W&M	Taxes - Income	Income Tax - Subtraction Modification - Retirement Income	Including income from certain retirement plans within a certain subtraction modification a
HB0371		Main Text n/a		Delegate Lisanti	W&M	Taxes - Income	Income Tax - Subtraction Modification - Military Retirement	Phasing out, over 4 taxable years, a certain limitation on the amount of certain military ret
SB0066		Main Text n/a		Senator Ellis	B&T	Taxes - Income	Income Tax - Credit for Small Businesses - State Minimum W	Allowing a credit against the State income tax for certain wages paid by certain small busi
SB0108		Main Text Fnote		Senator Ellis	B&T	Taxes - Income	Income Tax - Credit for Qualified Commuters	Allowing a credit against the State income tax for certain commuting costs incurred by cert
Referendum/setup for future income								
SB0058		Main Text n/a	IS THIS A CROSSFILE?	Senator West	B&T	Gaming	Expansion of Commercial Gaming - Referendum - Sports Wa	Providing that the General Assembly may authorize, by law, the State Lottery and Gaming
HB0169		Main Text Fnote	NOT LISTED, but look identical	Delegate Patterson	W&M	Gaming	Expansion of Commercial Gaming - Referendum - Sports Wa	Providing that the General Assembly may authorize, by law, the State Lottery and Gaming
Policy and Commissions								
SB0192	HB0152	Main Text n/a		President	B&T	Operating Budget	Budget Reconciliation and Financing Act of 2020	Authorizing, altering, or requiring the distribution and payment of certain revenue in certa
HB0436		Main Text N/A		Delegate Buckel	W&M	Taxes - Miscellaneous	Task Force on Tax Policy, Reform, and Fairness	Establishing the Task Force on Tax Policy, Reform, and Fairness to study the State's revenue
Exemptions								
HB0016	SB0121	Main Text n/a		Delegate Adams	W&M	Taxes - Sales and Use	Sales and Use Tax - Aircraft Parts and Equipment - Exemptio	Providing an exemption from the sales and use tax for materials, parts, and equipment use
SB0121	HB0016			Senator Eckardt	B&T	Taxes - Sales and Use	Sales and Use Tax - Aircraft Parts and Equipment - Exemptio	Providing an exemption from the sales and use tax for materials, parts, and equipment use

Table 3 Sample Detail Page for a Bill

Uploaded by: wells, john

Position: FAV

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
BACK	fy 2021	fy 2022	fy 2023	fy 2024	fy 2025	Next5	10 yr			FISCAL SUMMARY ADDITIONAL TEXT AND NOTES				
Revenue	-86.7	-286.5	-627	-726.3	-758.9	-3870.39	-6355.79							
Expense	0	0	0	0	0	0	0							

(\$ in millions)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
GF Revenue	(\$86.7)	(\$286.5)	(\$627.0)	(\$726.3)	(\$758.9)
Expenditure	0	0	0	0	0
Net Effect	(\$86.7)	(\$286.5)	(\$627.0)	(\$726.3)	(\$758.9)

House Bill 61 (Delegate Grammer)
Ways and Means

Income Tax - Subtraction Modification - Retirement Income

This bill alters the existing pension exclusion subtraction modification under the State income tax by (1) exempting 100% of eligible pension income, phased in over three tax years and (2) allowing income from the additional plans or sources to be included within the subtraction modification. **The bill takes effect July 1, 2020, and applies to tax years 2020 and beyond.**

<http://mgaleg.maryland.gov/mgaweb/Legislation/Details/XXXXX?ys=2020RS>
[Main](#) [Text](#) [Fnote](#)

WEB PAGE

1ST READING REFERRAL TO CMTE 2ND READING 3RD READING 1ST READING REFERRAL TO CMTE 2ND READING 3RD READING REVIEW IN ORIGINAL CHAMBER CONF. CMTE (IF NECESSARY)

Income Tax - Subtraction Modification - Retirement Income
Delegate Grammer
In the House - Hearing 1/28 at 1:15 p.m.
[Fiscal and Policy Note](#)
Including income from certain retirement plans within a certain subtraction modification allowed under the Maryland income tax for certain individuals who are at least a certain age or who are dis is disabled; altering the maximum amount of the subtraction modification beginning in taxable year 2020; providing that income included in certain subtraction modifications may not be taken into of the subtraction modification for retirement income; etc.
Original:
[Ways and Means](#)
Bill File Type: Regular
Effective Date(s): July 1, 2020

Fiscal Summary

State Effect: General fund revenues decrease by \$86.7 million in FY 2021 due to additional retirement income being exempted. Future year revenue decreases reflect phase-in specified by the bill and the projected growth in the number of eligible taxpayers and retirement income. Expenditures are not affected.

(\$ in millions)	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
GF Revenue	(\$86.7)	(\$286.5)	(\$627.0)	(\$726.3)	(\$758.9)
Expenditure	0	0	0	0	0
Net Effect	(\$86.7)	(\$286.5)	(\$627.0)	(\$726.3)	(\$758.9)

Note: () = decrease; GF = general funds; FF = federal funds; SF = special funds; - = indeterminate increase; () = indeterminate decrease

Local Effect: Local revenues decrease by \$12.7 million in FY 2021 and by \$513.6 million in FY 2025. Local expenditures are not affected.

BILL FRONT PAGE

FISCAL SUMMARY TEXT AND NOTES

HOUSE BILL 61

Q3 01r0658

By: **Delegate Grammer**
Introduced and read first time: January 9, 2020
Assigned to: Ways and Means

A BILL ENTITLED

AN ACT concerning

Income Tax - Subtraction Modification - Retirement Income

FOR the purpose of including income from certain retirement plans within a certain

Analysis

Bill Summary: The bill alters the maximum exclusion amount for qualifying individuals to equal (1) 30% of qualified income in tax year 2020; (2) 60% in tax year 2021; and (3) 100% beginning in tax year 2022. The maximum exclusion amount in each year is not reduced by the amount of Social Security payments received as provided under current law.

The bill expands the pension exclusion by allowing income from the following plans or sources to be included within the subtraction modification: (1) individual retirement accounts and annuities under Section 408 of the Internal Revenue Code (IRC); (2) Roth

Table 4 Spreadsheet with all Bills

Uploaded by: wells, john

Position: FAV

Bill_Num	File_Bill	Hearing_1	Hearing_1	Sponsor	Committee	Committee	Broad_Subject_Name	Title	Synopsis
HB0238	SB0240	2/5/2020	2:00 p.m.	Allegany County Delegation	Ways and Means		Education - Local Bills	Allegany County Board of Education - Elected Members	Requiring the Board of County Commissioners to
HB0435	SB0338			Allegany County Delegation	Ways and Means		Gaming	Allegany County - Video Lottery Terminals - Distribution	Repealing the alteration of the distribution
HB0570	SB0366			Carroll County Delegation	Ways and Means		Primary and Secondary	Carroll County - Education - Junior Reserve Officers Training Corps Instructors	
HB0571	SB0238			Carroll County Delegation	Economic Matters		Alcoholic Beverages - Local	Carroll County - Alcoholic Beverages - Hours and Days for Consumption and Sale	
SB0238	HB0571			Carroll County Senators	Education, Health, and		Alcoholic Beverages - Local	Carroll County - Alcoholic Beverages - Hours and Days for Consumption and Sale	Altering the hours and days for consumption
SB0048		1/9/2020	2:00 p.m.	Chair, Budget and Taxation	Budget and Taxation		Taxes - Property	Property Tax - Homeowners' and Renters' Property Tax	Extending from September 1 to October 1
SB0115		1/9/2020	2:00 p.m.	Chair, Budget and Taxation	Budget and Taxation		Taxes - Property	Annual and Personal Property Reports - Submission	Altering the reference to a certain report
SB0007		1/9/2020	2:00 p.m.	Chair, Budget and Taxation	Budget and Taxation		State Government - Agriculture	Maryland Green Building Council - Membership	Altering the membership of the Maryland
SB0079		1/9/2020	2:00 p.m.	Chair, Budget and Taxation	Budget and Taxation		Gaming	Gaming - Video Lottery Facilities and Licenses - Definition	Altering the definition of 'video lottery facility'
SB0344				Chair, Budget and Taxation	Rules		Capital Budget	University System of Maryland - Academic Facilities	Approving certain projects for the acquisition
HB0144		1/30/2021	1:00 p.m.	Chair, Economic Matters	Economic Matters		Insurance - Other than Health	Insurance - Uninsured or Enhanced Underinsured Motorists	Clarifying that certain motor vehicle liability
SB0006		1/9/2020	2:00 p.m.	Chair, Education, Health	Education, Health, and		Business Regulation and	State Real Estate Commission - Sunset Extension	Continuing the State Real Estate Commission
SB0009		1/16/2021	2:30 p.m.	Chair, Education, Health	Education, Health, and		Agriculture	Agriculture - Maryland Egg Law - Revisions	Altering the scope of certain provisions
SB0012		1/22/2021	1:00 p.m.	Chair, Education, Health	Education, Health, and		Business Regulation and	Professional Engineers - Qualifications for Licensure	Requiring certain applicants for a license
SB0018		1/16/2021	2:30 p.m.	Chair, Education, Health	Education, Health, and		Environment	Environment - Lead Poisoning Prevention Commission	Altering the membership of the Lead Poisoning
SB0071		1/9/2020	2:00 p.m.	Chair, Education, Health	Education, Health, and		Business Regulation and	State Board of Pilots - Sunset Extension	Continuing the State Board of Pilots in a
SB0074		1/16/2021	2:30 p.m.	Chair, Education, Health	Education, Health, and		Environment	Environment - Marine Contractors Licensing Board - Sunset	Establishing that the Marine Contractor
SB0080		1/15/2021	3:00 p.m.	Chair, Education, Health	Education, Health, and		Public Safety	Maryland Intrastate Emergency Management Assistance	Renaming the Maryland Emergency Management
SB0081		1/15/2021	3:00 p.m.	Chair, Education, Health	Education, Health, and		Public Safety	State Government - Emergency Management - Continuation	Requiring certain principal departments
SB0083		1/21/2021	1:30 p.m.	Chair, Education, Health	Education, Health, and		State Government - Agriculture	State Government - Delivery of Notices and Communications	Authorizing a unit of State government
SB0092		1/16/2021	2:30 p.m.	Chair, Education, Health	Education, Health, and		Agriculture	Secretary of Agriculture - Weed Control Law	Authorizing the Secretary of Agriculture
SB0114		1/23/2021	1:00 p.m.	Chair, Education, Health	Education, Health, and		Hunting and Fishing	Natural Resources - Nuisance Organisms - Pilot Project	Authorizing the Department of Natural
SB0116		1/9/2020	2:00 p.m.	Chair, Education, Health	Education, Health, and		Business Regulation and	Maryland Home Improvement Commission - Sunset	Continuing the Maryland Home Improvement
SB0118		1/16/2021	2:30 p.m.	Chair, Education, Health	Education, Health, and		Agriculture	Land Use - Alcohol Production and Agricultural Alcohol	Defining the terms 'alcohol production'
SB0182	HB0303	1/30/2021	1:00 p.m.	Chair, Education, Health	Education, Health, and		Health Occupations	State Board of Professional Counselors and Therapists	Continuing the State Board of Professional
SB0306	HB0391	2/6/2020	1:00 p.m.	Chair, Education, Health	Education, Health, and		Health Occupations	State Board of Dental Examiners - Sunset Extension	Continuing the State Board of Dental Examiners
HB0149		2/4/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Real Property	Real Property - Ground Leases - Required Notification	Altering the requirement that a ground lease
HB0172		2/4/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Real Property	Real Property - Ground Leases - Repeal of Registration	Repealing certain fees for the registration
HB0133		2/6/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Vehicle Laws - Equipment	Vehicle Emissions Inspection Program - Deployed Motor Vehicle	Exempting certain active duty members
HB0153		2/4/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Public Safety	Public Safety - Maryland Building Performance Standards	Altering the time, from 18 months to 36
HB0154		2/6/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Vehicle Laws - Equipment	Motor Vehicles - Electronic Inspection Certificates for	Extending to June 30, 2023, the termination
HB0157		2/6/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Vehicle Laws - Licensing	Vehicle Laws - Business or Occupational Licenses - Administration	Authorizing the Motor Vehicle Administration
HB0158		2/6/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Vehicle Laws - Equipment	Vehicle Laws - Equipment and Inspections - Standards	Altering for vehicle operation and inspection
HB0159		2/4/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Ethics	State Ethics Commission - Determination of Public Conflicts	Requiring the secretary of a principal department
HB0160		2/4/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Economic and Community	Baltimore Regional Neighborhood Initiative Program	Expanding the eligibility requirements for
HB0161		2/12/2021	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Agriculture	Nutrient Management - Professional Fertilizer Application	Prohibiting a person from commercially
HB0162		2/6/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Transportation - General	Transportation - Potomac River Bridges Towing Commission	Including the Governor Harry W. Nice/S
HB0173		2/12/2021	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Hunting and Fishing	Natural Resources - Sunday Hunting	Clarifying certain provisions of law governing
HB0174		2/6/2020	1:00 p.m.	Chair, Environment and	Environment and	Transportation	Vehicle Laws - Rules of the	Motor Vehicle Offenses - Following Too Closely - Applicable	Establishing that certain motor vehicle offenses
HB0177				Chair, Environment and	Environment and	Transportation	Environment	Environment - Water Infrastructure Assets - Authorization	Authorizing the Department of the Environment
HB0549				Chair, Environment and	Environment and	Transportation	Agriculture	State Board of Veterinary Medical Examiners - Sunset Extension and Program Evaluation	
SB0008		2/11/2021	1:00 p.m.	Chair, Finance Committee	Finance		Workers' Compensation	Uninsured Employers' Fund - Additional Assessment	Altering the percentage of the additional
SB0014		1/22/2021	1:00 p.m.	Chair, Finance Committee	Finance		Financial Institutions	Financial Institutions - State Banks, Trust Companies	Reducing the number and altering the
SB0015		1/22/2021	1:00 p.m.	Chair, Finance Committee	Finance		Financial Institutions	Financial Institutions - Commissioner of Financial Regulation	Altering the process for and circumstances
SB0023		1/16/2021	1:00 p.m.	Chair, Finance Committee	Finance		State Government - Agriculture	Business Regulation - Trademarks, Service Marks, and	Altering certain classes of goods and services
SB0026		1/22/2021	1:00 p.m.	Chair, Finance Committee	Finance		Economic and Community	Partnership for Workforce Quality Program - Alteration	Expanding the purpose of the Partnership
SB0042		1/15/2021	1:00 p.m.	Chair, Finance Committee	Finance		Health Care Facilities and	Health Services Cost Review Commission - Duties and	Altering the information required to be
SB0049		1/9/2020	1:45 p.m.	Chair, Finance Committee	Finance		Social Services - General	Department of Human Services - Food Supplement	Renaming the food supplement program
SB0050		1/9/2020	1:45 p.m.	Chair, Finance Committee	Finance		Insurance - Other than Health	Insurance - Maryland Automobile Insurance Fund -	Requiring the Maryland Automobile Insurance
SB0070		1/30/2021	2:00 p.m.	Chair, Finance Committee	Finance		Public Safety	Correctional Institutions - Correctional Education Commission	Increasing, from 120 to 240, the minimum
SB0082		1/9/2020	1:45 p.m.	Chair, Finance Committee	Finance		State Government - Procurement	Management of eMaryland Marketplace	Providing that the Department of General
SB0093		1/14/2021	1:00 p.m.	Chair, Finance Committee	Finance		Insurance - Other than Health	Insurance - Nonresident Insurance Producers - Cancellation	Requiring the holder of a nonresident insurance
SB0095		1/14/2021	1:00 p.m.	Chair, Finance Committee	Finance		Insurance - Health	Public Adjusters - Disbursement of Insurance Settlement	Obligating public adjusters to disburse in

Maryland Rural Health Association_FAV_SB 03

Uploaded by: Wilson, Lara

Position: FAV



Statement of Maryland Rural Health Association

To the Budget and Taxation Committee

January 29, 2020

Senate Bill 3: Electronic Smoking Devices, Other Tobacco Products, Cigarettes - Taxation and Regulation

POSITION: SUPPORT

Senator McCray, Chair Guzzone, Vice Chair Rosapepe, and members of the Budget and Taxation Committee, the Maryland Rural Health Association (MRHA) is in **SUPPORT** of Senate Bill 3: Electronic Smoking Devices, Other Tobacco Products, Cigarettes - Taxation and Regulation.

This legislation would apply certain provisions of tax law regulating the sale, manufacture, distribution, possession, and use of cigarettes and other tobacco products to certain electronic smoking devices; alter the definition of "other tobacco products" to include certain consumable products and the components or parts of those products and to exclude certain other products; require the Governor, in fiscal year 2022 and thereafter, to include at least \$21,000,000 in the annual budget for certain activities aimed at reducing tobacco use; etc.

MRHA's mission is to educate and advocate for the optimal health and wellness of rural communities and their residents. Membership is comprised of health departments, hospitals, community health centers, health professionals, and community members in rural Maryland.

Rural Maryland represents almost 80 percent of Maryland's land area and 25% of its population. Of Maryland's 24 counties, 18 are considered rural by the state, and with a population of over 1.6 million they differ greatly from the urban areas in the state.

Maryland law states that "many rural communities in the State face a host of difficult challenges relating to persistent unemployment, poverty, changing technological and economic conditions, an aging population and an out-migration of youth, inadequate access to quality housing, health care and other services, and deteriorating or inadequate transportation, communications, sanitations, and economic development infrastructure." (West's Annotated Code of Maryland, State Finance and Procurement § 2-207.8b)

And while Maryland is one of the richest states, there is great disparity in how wealth is distributed. The greatest portion of wealth resides around the Baltimore/Washington Region; while further away from the I-95 corridor, differences in the social and economic environment are very apparent.

MHRA believes this legislation is important to support our rural communities and we thank you for your consideration.

Lara Wilson, Executive Director, larawilson@mdruralhealth.org, 410-693-6988

Maryland Hospital Association_FAV_SB 03

Uploaded by: Witten, Jennifer

Position: FAV



Maryland
Hospital Association

**Senate Bill 03 – Electronic Smoking Devices, Other Tobacco Products, and Cigarettes –
Taxation and Regulation**

Position: *Support*

January 29, 2020

Senate Budget & Taxation Committee

MHA Position

Maryland's 61 nonprofit hospitals and health systems care for millions of people each year, treating 2.3 million in emergency departments and delivering more than 67,000 babies. The 108,000 people they employ are [caring for Maryland](#) around-the-clock every day—delivering leading edge, high-quality medical service and investing a combined \$1.75 billion in their communities, expanding access to housing, education, transportation, and food.

To advance health care and the health of all Marylanders, hospitals are committed to curbing the use of tobacco—a recognized public health epidemic. If unaddressed, the Centers for Disease Control and Prevention estimates that 5.6 million of today's Americans younger than 18 will die early from a smoking-related illness. That's about one of every 13 American youth alive today.

Senate Bill 3 changes the definition of “other tobacco products.” It would include certain consumable products and the components and exclude other products, changing the definition for electronic smoking devices and imposing the tobacco tax on some electronic smoking devices. The Surgeon General reports higher prices on cigarettes and tobacco products is “one of the most effective tobacco control interventions” because increasing price is proven to reduce smoking—especially among kids.ⁱ If the tax only applies to certain products consumers could switch to alternative products that have a lower price point but the same negative health benefits.

Economic modeling shows a higher tobacco tax boosts state tax revenue and lessens rates of smoking. In fiscal year 2019, Maryland received an estimated \$525 million from tobacco settlement payments and taxes. Of this revenue, \$10.5 million was invested in tobacco prevention.ⁱⁱ The changes included in SB 3 would allow the state to receive all the tax benefits from the sale of these products.

Directing some of the funds from this tax toward reduction and prevention programs can increase the benefits for this population. The 2009 federal tobacco tax increase reduced smoking among young people and benefited low-income individuals, researchers found that half of the people whose lives were saved were living below the federal poverty line.ⁱⁱⁱ Aside from health risks associated with tobacco products, the economic impact is substantial. Nationally, smoking-related health care costs were estimated to be \$2.71 billion per year, while productivity losses were estimated to be \$2.22 billion.^{iv}

For these reasons, we urge a *favorable* report.

For more information, please contact:

Jennifer Witten

Jwitten@mhaonline.org

ⁱ Centers for Disease Control and Prevention. E-Cigarette Use Among Youth and Young Adults: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2016. https://www.cdc.gov/tobacco/data_statistics/sgr/e-cigarettes/index.htm

ⁱⁱ Truth Initiative (June 28, 2019) Tobacco use in Maryland 2019. <https://truthinitiative.org/research-resources/smoking-region/tobacco-use-maryland-2019> and CDC Data and Facts. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/index.htm

ⁱⁱⁱ Campaign for Tobacco-Free Kids (January 14, 2020) Tobacco Tax Increases Benefit Lower-Income Smokers and Families <https://www.tobaccofreekids.org/assets/factsheets/0147.pdf>

^{iv} Truth Initiative (June 28, 2019) Tobacco use in Maryland 2019. <https://truthinitiative.org/research-resources/smoking-region/tobacco-use-maryland-2019>

MVA_FWA_SB3

Uploaded by: Anthony, Jenna

Position: FWA

Jenna Antony

Planet Of The Vapes

2531 Mountain Rd

Pasadena, MD 21122

(410) 874-0279

jenna@planetofthevapesmd.com

28th January 2020

Firstly, I'd like to thank the chair and committee members for allowing us the time to share our concerns over the proposed legislation. My name is Jenna Anthony and I'm the owner of a small vape shop in Pasadena, Maryland. If passed in its current form this bill will cause serious damage to our industry.

This industry is comprised of mom and pop businesses like mine that simply cannot survive an excessive wholesale tax. If this legislation passes in its current form, most of the shops in Maryland will close our doors for good. The economic impact will be severe.

When I started my business 6 years ago, it was because I knew our products helped adults quit traditional tobacco products for a healthier alternative. I knew this because it helped me. As a pack a day smoker of 12 years, I had tried the patch, cold turkey, the gums, hypnosis, and everything in between to no avail. I never liked tobacco flavors but was immediately able to transition to vaping using fruit, candy, and dessert e-liquid flavors.

Moreover, I am proud to say after over 5 years of vaping and slowly lowering the amount of nicotine, I was also able to completely quit using a vape all together. I have now been completely tobacco free for over 6 years and nicotine free for almost a year.

By passing this bill you will take away the best option for combatting the tobacco epidemic. Not only will it remove vaping as an option for adults, it will also fall short of keeping vapes and tobacco out of the hands of children.

While that last point may seem counterintuitive, please let me elaborate. It is important to note that over two years, the state of Maryland in conjunction with the FDA performed a sting operation to catch and document underage sale of tobacco and vapor products. During that two year period not one single vape shop was cited for underage sale. Not one. However, hundreds of underage sales took place in stores like CVS, Walgreens, Royal Farms, and Exxon. This legislation will likely shut the doors of the only stores consistently upholding the state age laws.

Furthermore, the only companies that could possibly withstand an onerous wholesale tax or

flavor ban are ones with massive funding like Juul, Vuse, and Blu. With the backing of big tobacco, these companies have endless resources and massive marketing firms behind them.

History has taught us that banning things in lieu of sensible regulation only serves to create a black market that puts the banned products in the hands of individuals who have no regard for keeping these products out of the hands of kids.

In closing, Juul and their ilk are not representative of our industry. We, who stand before you today, are mothers, fathers, coaches, and community members who share your concerns regarding keeping vapes out of the hands of kids. Please, rethink your approach. Let's work on a sensible point of sale tax that won't push small businesses out and open the door for Juul to take over. Rethink banning the sale of flavored vapor products and instead keep them limited to sale within licensed vape shops. Together, we can absolutely keep kids safe while still not denying adults the best shot at quitting tobacco for good.

Thank you again for your time and consideration.

Jenna Anthony

MVA_FWA_SB3

Uploaded by: Milby, Matt

Position: FWA



**Maryland Vapor
Alliance**

SB 3

Favorable with Amendment

January 29, 2020

Honorable Guy Guzzone
Chairman
Budget and Taxation Committee

Chairman Guzzone,

The Maryland Vapor Alliance represents approximately 200 brick-and-mortar vapor shops across Maryland. We are small businesses and defined in statute as vape shop vendors meaning 70% or more of our retail sales are derived from vapor products and accessories such as hardware and liquids. For almost all of our shops, this number is closer to 90% - 100%.

We have helped thousands of Maryland tobacco users transition to vapor products through the use of “open systems” that allow the user to control the amount of nicotine intake. This allows the adult user to decrease their nicotine intake over time. What we sell differs significantly from the products sold in gas stations, convenience stores and pharmacies. The primary product sold by these retailers are “closed systems” with a fixed amount of nicotine. The fixed amount is up to 20x the amount of nicotine per milliliter in an open system. Additionally, the high-nicotine products sold by these shops are traditionally owned by “big tobacco.” JUUL is an example of these products and are not a staple of our shops.

We have included an attachment of one year of compliance data for the sale of ENDS/E-Liquids to minors compiled by the FDA for Maryland. You will see almost every product sold to minors is a high nicotine, closed system product and none of the offenses occurred at a shop classified as a vape shop vendor.

Should this legislation pass as drafted, vapor shop vendors will go out of business. Pennsylvania instituted a 40% wholesale tax and more than 100 shops closed. Montgomery County passed a 30% wholesale tax and one-fifth of the shops in the county closed. The only businesses that will survive an 86% wholesale tax on vapor products are the ones selling to underage individuals.

The Maryland Vapor Alliance proposes doubling the point-of-sale tax from 6% to 12%. This will ensure adults that use open system vapor products will continue to have access to these products.

Matt Milby
Vice President, Maryland Vapor Alliance
443-421-8669

The Truth About Vaping: Myth vs. Reality

E-Cigarettes Are An Effective Smoking Cessation Tool



The NEW ENGLAND
JOURNAL of MEDICINE

In February 2019 the New England Journal of Medicine published the study, "A Randomized Trial of E-Cigarettes versus Nicotine-Replacement Therapy" which found:

- ✓ *E-cigarettes are far more effective at helping smokers quit than FDA-approved therapies such as the nicotine gum, lozenges and patches*
- ✓ *18% of e-cigarettes users were smoke-free after 1 year*
- ✓ *The e-cigarette group reported greater declines in the incidence of cough and phlegm production*

The New York Times

"The study...found that e-cigarettes were nearly twice as effective as conventional nicotine replacement products, like patches and gum, for quitting smoking."
E-Cigarettes Are Effective at Helping Smokers Quit, a Study Shows. 1/30/2019.

As ENDS products have increased in use, the number of cigarette smokers have dropped dramatically:



The Centers for Disease Control reports that the number of U.S. smokers dropped from 20.6% in 2009 to only 15.5% as of 2016

E-Cigarettes Are Safer than Combustible Cigarettes & Save Lives

In 2015, 2016, 2017 and 2018, the United Kingdom's Health Agency England and the Royal College of Physicians each conducted a full review of all vapor research and concluded that *vapor products are at least 95% safer than combustible cigarettes*. The UK National Health Service now *promotes e-cigarettes as a means to quit smoking*.



Public Health
England

In the U.S., the National Academies of Sciences Engineering and Medicine conducted its own review of all the research and concluded in 2018:

- ✓ *"There is conclusive evidence that completely substituting e-cigarettes for combustible tobacco cigarettes reduces users' exposure to numerous toxicants and carcinogens present in combustible tobacco cigarettes."*
- ✓ *"There is substantial evidence that completely switching from regular use of combustible tobacco cigarettes to e-cigarettes results in reduced short-term adverse health outcomes in several organ systems."*
- ✓ *"The evidence about harm reduction suggests that across a range of studies and outcomes, e-cigarettes pose less risk to an individual than combustible tobacco cigarettes."*

The National
Academies of

SCIENCES
ENGINEERING
MEDICINE



GEORGETOWN UNIVERSITY
Georgetown University Medical Center

Georgetown University Medical Center published its study declaring that if we could encourage people to switch from traditional cigarettes to e-cigarettes we would prevent up to 6.6 million premature deaths annually in the U.S.

The Truth About Flavors: Myth vs. Reality

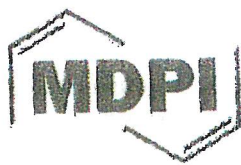
Science Proves Flavors Help Adult Smokers Quit

Published peer-reviewed research has shown that the flavors in vapor products are essential to helping adult smokers quit and are not the reason that youth vape.

- ✓ Contrary to the popular narrative, adults of all ages like many categories of flavors – including fruit, sweet, and cool flavors ([Zare, et al., 2018](#); [Harrell, et al., 2017b](#); [Bonhomme, et al., 2016](#); [Berg, 2016](#); [Bowler, et al., 2017](#); and [Krishnan-Sarin, et al., 2014](#)).
- ✓ In the journal **Addictive Behavior**, concluded that flavored vapor was directly related to a reduced amount of smoking amongst adults. ([Buu, et al. 2018](#))
- ✓ In **Substance Use & Misuse**, Professor Chen from the **University of Maryland Department of Public Health** concluded that users of *non-tobacco and non-menthol* flavors were significantly more likely to have quit smoking. ([Chen, et al. 2018](#))
- ✓ As smokers transition from combustible cigarettes to vapor products, they first tend to use tobacco and menthol-flavored e-liquids, but eventually transition to non-tobacco flavors as their dependency on combustible cigarettes decreases ([Farsalinos, et al., 2013b](#); [Truman, et al., 2018](#); [Adriaens, et al., 2017](#); [Simmons, et al., 2016](#)).
- ✓ As smokers wean themselves off of cigarettes with vapor products, they move toward non-tobacco flavored products to avoid the taste associated with tobacco flavors that they believe may cause them to relapse into smoking. ([Farsalinos, et al., 2013b](#); [Simmons, et al., 2016](#)).
- ✓ Studies conclude that flavors do not significantly increase youth interest in trying vapor products **and** that flavors are not in the top reasons why youth may experiment. ([Pepper, et al., 2016](#); [Pepper, et al., 2013](#)).

Bottom Line:

Making it harder for adults to access flavored vapor products will only hinder their attempts to quit and ensure that they smoke longer.



Taylor & Francis
Taylor & Francis Group



National
Center for
Biotechnology
Information





Health Risks of E-cigarettes

E-cigarettes are still fairly new, and more research is needed over a longer period of time to know what the long-term effects may be.

So far, research has found that using e-cigarette products is likely to be significantly less harmful than smoking regular cigarettes. This is mostly because e-cigarettes do not burn tobacco, a process that produces an estimated 7,000 chemicals, including at least 70 chemicals that cause cancer. But e-cigarettes do contain nicotine, which comes from tobacco and is very addictive.

While the possible long-term health effects of e-cigarettes aren't yet clear, there have been recent reports of serious lung disease in some people using e-cigarettes or other vaping devices. Symptoms have included:

- Cough, trouble breathing, or chest pain
- Nausea, vomiting, or diarrhea
- Fatigue, fever, or weight loss

Some cases have been severe enough to require hospitalization, and several people have died from their illness. However, it's not yet clear exactly how widespread these cases are, or if they all have the same cause. There are a huge number of different vaping devices on the market, and an even larger number of different chemicals (in the form of e-juice) that can be used in them, including ones that users sometimes add themselves. At this time, the main thing these cases have in common is that the people used e-cigarettes or other vaping devices. The US Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), and several state health departments are looking into these cases to try to figure out what else they might have in common. For the latest information on this topic, see this notice from the CDC (https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html).

You can learn about answers to other questions about e-cigarettes in What Do We Know About E-cigarettes? (<https://www.cancer.org/cancer/cancer-causes/tobacco-and-cancer/e-cigarettes.html>)

Written by References



The American Cancer Society medical and editorial content team (</cancer/acs-medical-content-and-news-staff.html>)

Our team is made up of doctors and oncology certified nurses with deep knowledge of cancer care as well as journalists, editors, and translators with extensive experience in medical writing.

Last Medical Review: November 15, 2018 | Last Revised: September 9, 2019

American Cancer Society medical information is copyrighted material. For reprint requests, please see our [Content Usage Policy \(/about-us/policies/content-usage.html\)](/about-us/policies/content-usage.html).

MORE IN CANCER A-Z

OCE_Inspection_Search_Report

Compliance Check Inspections of Tobacco Product Retailers Through 12/31/19 - Search Results											
You searched for:											
State is MD											
Product Type Purchased by Minor is: ENDS / E-liquid											
Decision Date: 01/01/2019 through 12/31/2019											
Minor Involved: Yes											
Sale to Minor: Yes											
Retailer Name	Street Address	City	State	Zip	Minor Involved	Sale to Minor	Product Type	Brand	Inspection Date	Decision Date	Inspection Result
ROYAL FARMS	6100 HOLABIRD AVENUE	BALTIMORE	MD	21224	Yes	Yes	ENDS / E-liquid	JUUL	11/26/2019	12/26/2019	Warning Letter Issued
MONTEREY MART AND CAFE	5901 MONTROSE ROAD	ROCKVILLE	MD	20852	Yes	Yes	ENDS / E-liquid	JUUL	11/20/2019	12/19/2019	Warning Letter Issued
TOBACCO REPUBLIC	7091 BERRY ROAD	ACCOKEEK	MD	20607	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	12/16/2019	Civil Money Penalty
BP	910 WEST STREET	ANNAPOLIS	MD	21401	Yes	Yes	ENDS / E-liquid	JUUL	11/13/2019	12/12/2019	Warning Letter Issued
BP/GK MARKET	18403 MAUGANS AVE	HAGERSTOWN	MD	21742	Yes	Yes	ENDS / E-liquid	JUUL	11/21/2019	12/12/2019	Warning Letter Issued
SHOP EXPRESS CONVENIENCE STORE	5010 FREDERICK AVE	BALTIMORE	MD	21228	Yes	Yes	ENDS / E-liquid	JUUL	11/15/2019	12/12/2019	Warning Letter Issued
TOBACCO MASTERS	5426 SILVER HILL RD	DISTRICT HEIGHTS	MD	20747	Yes	Yes	ENDS / E-liquid	JUUL	11/14/2019	12/12/2019	Warning Letter Issued
24 HR TOBACCO AND GROCERY	3216 BRANCH AVE	TEMPLE HILLS	MD	20748	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	12/10/2019	Civil Money Penalty
SEFANIT BP	2801 EDMONDSON AVENUE	BALTIMORE	MD	21223	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	12/10/2019	Civil Money Penalty
ROYAL FARMS 34	15 HANOVER PIKE	REISTERSTOWN	MD	21136	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	12/06/2019	Civil Money Penalty
LIBERTY GAS AND FOOD COURT	6425 DOBBIN ROAD	COLUMBIA	MD	21045	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	12/04/2019	Civil Money Penalty
MOBIL / SNACK SHOP	7460 ANNAPOLIS ROAD	HYATTSVILLE	MD	20784	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	12/03/2019	Civil Money Penalty
MORAVIA BP	5921 MORAVIA ROAD	BALTIMORE	MD	21206	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	12/02/2019	Civil Money Penalty
ZIP IN MART	6801 LIVINGSTON ROAD	OXON HILL	MD	20745	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	11/19/2019	Civil Money Penalty
SHELL	8711 GREENBELT ROAD	GREENBELT	MD	20770	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	11/19/2019	Civil Money Penalty
7-ELEVEN	3224 WASHINGTON BLVD	BALTIMORE	MD	21230	Yes	Yes	ENDS / E-liquid	JUUL	10/23/2019	11/14/2019	Warning Letter Issued
MARATHON	900 E PATAPSCO AVE	BALTIMORE	MD	21225	Yes	Yes	ENDS / E-liquid	JUUL	10/22/2019	11/14/2019	Warning Letter Issued
HAMPTON MALL EXXON / TIGER MART	8901 CENTRAL AVENUE	CAPITOL HEIGHTS	MD	20743	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	11/13/2019	Civil Money Penalty
SUNOCO	7750 ANNAPOLIS ROAD	HYATTSVILLE	MD	20784	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	11/07/2019	Civil Money Penalty
NEWSSTAND / FABER SHOPS 1211	1515 NORTH CHARLES STREET	BALTIMORE	MD	21201	Yes	Yes	ENDS / E-liquid	JUUL	10/02/2019	10/31/2019	Warning Letter Issued
EXXON / TIGER MART	1601 BELMONT AVENUE	BALTIMORE	MD	21244	Yes	Yes	ENDS / E-liquid	JUUL	10/04/2019	10/31/2019	Warning Letter Issued
TOBACCO STOP	400 WEST LEXINGTON STREET SUITE 22A	BALTIMORE	MD	21201	Yes	Yes	ENDS / E-liquid	blu	10/02/2019	10/31/2019	Warning Letter Issued
SHOCKERS	7110 HARFORD ROAD	PARKVILLE	MD	21234	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	10/29/2019	Civil Money Penalty
FOOD LION 1442	6920 CRESTWOOD BOULEVARD	FREDERICK	MD	21703	Yes	Yes	ENDS / E-liquid	Vuse	See Complaint	10/25/2019	Civil Money Penalty
7-ELEVEN 23860	100 SOUTH BROADWAY	BALTIMORE	MD	21231	Yes	Yes	ENDS / E-liquid	JUUL	08/28/2019	10/24/2019	Warning Letter Issued
CARROLL MOTOR FUELS / CARROLL MARKET	8710 LIBERTY ROAD	RANDALLSTOWN	MD	21133	Yes	Yes	ENDS / E-liquid	JUUL	09/26/2019	10/24/2019	Warning Letter Issued
LUCKIES STORE AND DELI	7713 BALTIMORE ANNAPOLIS BOULEVARD	GLEN BURNIE	MD	21060	Yes	Yes	ENDS / E-liquid	JUUL	09/25/2019	10/24/2019	Warning Letter Issued
WOODMOOR SHELL	10144 COLESVILLE ROAD	SILVER SPRING	MD	20901	Yes	Yes	ENDS / E-liquid	JUUL	09/26/2019	10/24/2019	Warning Letter Issued
7-ELEVEN 28840	7305 MACARTHUR BOULEVARD	BETHESDA	MD	20816	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	10/22/2019	Civil Money Penalty
ONE STOP CONVENIENCE AND DELI	11700 REISTERSTOWN ROAD, SUITE D	REISTERSTOWN	MD	21136	Yes	Yes	ENDS / E-liquid	blu	09/18/2019	10/10/2019	Warning Letter Issued
MARATHON	909 DUNDALK AVENUE	BALTIMORE	MD	21224	Yes	Yes	ENDS / E-liquid	JUUL	09/19/2019	10/10/2019	Warning Letter Issued
SHELL	6001 GREENBELT ROAD	BERWYN HEIGHTS	MD	20740	Yes	Yes	ENDS / E-liquid	JUUL	09/05/2019	10/10/2019	Warning Letter Issued
EXXON / TIGER MART	6211 OLD BRANCH AVENUE	CAMP SPRINGS	MD	20748	Yes	Yes	ENDS / E-liquid	JUUL	09/17/2019	10/03/2019	Warning Letter Issued
FUSION MART GROCERY STORE	3709 PULASKI HIGHWAY	ABINGDON	MD	21009	Yes	Yes	ENDS / E-liquid	JUUL	09/16/2019	10/03/2019	Warning Letter Issued
7-ELEVEN 34747	2101 SANDYMOUNT ROAD	FINKSBURG	MD	21048	Yes	Yes	ENDS / E-liquid	JUUL	07/08/2019	09/26/2019	Warning Letter Issued
SUNOCO / APLUS	9630 MYERSVILLE ROAD	MYERSVILLE	MD	21773	Yes	Yes	ENDS / E-liquid	JUUL	09/12/2019	09/26/2019	Warning Letter Issued
CROWN	501 EAST 33RD STREET	BALTIMORE	MD	21218	Yes	Yes	ENDS / E-liquid	Other	08/29/2019	09/26/2019	Warning Letter Issued
LUCKY'S DELI AND MARKET	445 EAST FORT AVENUE	BALTIMORE	MD	21230	Yes	Yes	ENDS / E-liquid	blu	08/28/2019	09/26/2019	Warning Letter Issued
EXXON / TIGER MART	2333 EASTERN BOULEVARD	MIDDLE RIVER	MD	21220	Yes	Yes	ENDS / E-liquid	JUUL	09/12/2019	09/26/2019	Warning Letter Issued
JIMMIE'S PADDOCK LIQUORS	4740 CRAIN HIGHWAY	WHITE PLAINS	MD	20695	Yes	Yes	ENDS / E-liquid	JUUL	09/10/2019	09/26/2019	Warning Letter Issued
7-ELEVEN 34280	1465 KEY HIGHWAY	BALTIMORE	MD	21230	Yes	Yes	ENDS / E-liquid	JUUL	08/28/2019	09/19/2019	Warning Letter Issued
ANN'S GROCERY	140 SOUTH ANN STREET	BALTIMORE	MD	21231	Yes	Yes	ENDS / E-liquid	JUUL	08/22/2019	09/12/2019	Warning Letter Issued
GLI SMOKER'S CHOICE	4 ALLEGHENY AVENUE	TOWSON	MD	21204	Yes	Yes	ENDS / E-liquid	JUUL	08/20/2019	09/12/2019	Warning Letter Issued
EXXON	31 HEATHER LANE	PERRYVILLE	MD	21903	Yes	Yes	ENDS / E-liquid	JUUL	08/23/2019	09/12/2019	Warning Letter Issued
EXXON	11430 ROCKVILLE PIKE	ROCKVILLE	MD	20852	Yes	Yes	ENDS / E-liquid	JUUL	08/20/2019	09/12/2019	Warning Letter Issued
THE GREAT GREEN GOAT SMOKE SHOP	1507 WEST PATRICK STREET, SUITE 3	FREDERICK	MD	21702	Yes	Yes	ENDS / E-liquid	JUUL	08/14/2019	09/12/2019	Warning Letter Issued
HANOVER LIQUOR	1701 S HANOVER ST	BALTIMORE	MD	21230	Yes	Yes	ENDS / E-liquid	JUUL	08/28/2019	09/12/2019	Warning Letter Issued
MIMI'S STATION	12020 ROUSBY HALL RD	LUSBY	MD	20657	Yes	Yes	ENDS / E-liquid	JUUL	08/28/2019	09/12/2019	Warning Letter Issued
RAS AND NATTY	402 YORK ROAD	TOWSON	MD	21204	Yes	Yes	ENDS / E-liquid	JUUL	08/20/2019	09/12/2019	Warning Letter Issued
SHEETZ	429 VIRGINIA AVENUE	CUMBERLAND	MD	21502	Yes	Yes	ENDS / E-liquid	JUUL	08/15/2019	09/12/2019	Warning Letter Issued
MARLBORO VILLAGE EXXON	5111 JOHN ROGERS BOULEVARD	UPPER MARLBORO	MD	20772	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	09/03/2019	Civil Money Penalty
FOOD LION 1211	1216 NANTICOKE RD	SALISBURY	MD	21801	Yes	Yes	ENDS / E-liquid	blu	08/05/2019	08/29/2019	Warning Letter Issued

ROYAL FARMS 127	7900 ROYALTY WAY	SALISBURY	MD	21801	Yes	Yes	ENDS / E-liquid	JUUL	08/05/2019	08/29/2019	Warning Letter Issued
BP	5320 YORK ROAD	BALTIMORE	MD	21212	Yes	Yes	ENDS / E-liquid	JUUL	07/30/2019	08/29/2019	Warning Letter Issued
EXXON / TIGER MART	7801 SANDY SPRING ROAD	LAUREL	MD	20707	Yes	Yes	ENDS / E-liquid	JUUL	08/05/2019	08/29/2019	Warning Letter Issued
ROYAL FARMS	7204 YORK ROAD	BALTIMORE	MD	21212	Yes	Yes	ENDS / E-liquid	JUUL	07/30/2019	08/29/2019	Warning Letter Issued
HIGH'S	22550 JEFFERSON BLVD	SMITHSBURG	MD	21783	Yes	Yes	ENDS / E-liquid	JUUL	08/08/2019	08/29/2019	Warning Letter Issued
7-ELEVEN 32390	3393 LAUREL FORT MEADE ROAD	LAUREL	MD	20724	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	08/26/2019	Civil Money Penalty
FOOD LION 2566	12675 LAUREL BOWIE ROAD	LAUREL	MD	20708	Yes	Yes	ENDS / E-liquid	blu	See Complaint	08/23/2019	Civil Money Penalty
FREESTATE	11295 VEIRS MILL ROAD	WHEATON	MD	20902	Yes	Yes	ENDS / E-liquid	blu	See Complaint	08/23/2019	Civil Money Penalty
2 & 4 LIQUORS	6200 SOLOMONS ISLAND RD	HUNTINGTOWN	MD	20639	Yes	Yes	ENDS / E-liquid	JUUL	07/27/2019	08/22/2019	Warning Letter Issued
DISCOUNT MART 24/7	5519 LIVINGSTON ROAD	OXON HILL	MD	20745	Yes	Yes	ENDS / E-liquid	JUUL	07/12/2019	08/08/2019	Warning Letter Issued
MGM AND COMPANY	101 MGM NATIONAL AVENUE	OXON HILL	MD	20745	Yes	Yes	ENDS / E-liquid	JUUL	07/11/2019	08/08/2019	Warning Letter Issued
SUNOCO/ FOOD MART	398 BALTIMORE BOULEVARD	WESTMINSTER	MD	21157	Yes	Yes	ENDS / E-liquid	JUUL	07/11/2019	08/08/2019	Warning Letter Issued
LIBERTY FOOD SHOP	23 CARROLL PLZ	WESTMINSTER	MD	21157	Yes	Yes	ENDS / E-liquid	JUUL	07/15/2019	08/08/2019	Warning Letter Issued
ONE FLIGHT UP	56 MAIN ST	REISTERSTOWN	MD	21136	Yes	Yes	ENDS / E-liquid	JUUL	06/26/2019	07/25/2019	Warning Letter Issued
24 HR TOBACCO AND GROCERY	3216 BRANCH AVE	TEMPLE HILLS	MD	20748	Yes	Yes	ENDS / E-liquid	JUUL	06/19/2019	07/18/2019	Warning Letter Issued
ROYAL FARMS 347	2050 YELLOW SPRINGS RD	FREDERICK	MD	21702	Yes	Yes	ENDS / E-liquid	JUUL	06/11/2019	07/18/2019	Warning Letter Issued
DISCOUNT TOBACCO	3905 BRANCH AVENUE	TEMPLE HILLS	MD	20748	Yes	Yes	ENDS / E-liquid	JUUL	06/14/2019	07/18/2019	Warning Letter Issued
EXXON	3000 COLEBROOK DRIVE	SUITLAND	MD	20746	Yes	Yes	ENDS / E-liquid	blu	06/17/2019	07/18/2019	Warning Letter Issued
TOBACCO AND WIRELESS	3217 BRINKLEY ROAD	TEMPLE HILLS	MD	20748	Yes	Yes	ENDS / E-liquid	JUUL	06/14/2019	07/18/2019	Warning Letter Issued
MORAVIA BP	5921 MORAVIA ROAD	BALTIMORE	MD	21206	Yes	Yes	ENDS / E-liquid	JUUL	06/07/2019	07/11/2019	Warning Letter Issued
TOBACCO REPUBLIC	7091 BERRY ROAD	ACCOKEEK	MD	20607	Yes	Yes	ENDS / E-liquid	JUUL	06/07/2019	07/11/2019	Warning Letter Issued
TIGER MART / EXXON	1804 EDGEWOOD ROAD	EDGEWOOD	MD	21040	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	07/01/2019	Civil Money Penalty
ROYAL FARMS STORE #47	12545 EASTERN AVENUE	MIDDLE RIVER	MD	21220	Yes	Yes	ENDS / E-liquid	JUUL	05/14/2019	06/27/2019	Warning Letter Issued
ROYAL FARM STORE 66	9600 PULASKI HIGHWAY	MIDDLE RIVER	MD	21220	Yes	Yes	ENDS / E-liquid	JUUL	05/14/2019	06/27/2019	Warning Letter Issued
7-ELEVEN	140 FREDERICK ROAD, SUITE A	THURMONT	MD	21788	Yes	Yes	ENDS / E-liquid	JUUL	05/14/2019	06/27/2019	Warning Letter Issued
LOVE'S TRAVEL STOP	14188 PERINI DRIVE	HAGERSTOWN	MD	21742	Yes	Yes	ENDS / E-liquid	JUUL	05/07/2019	06/27/2019	Warning Letter Issued
TOBACCO STOP	3351 CORRIDOR MARKET PL	LAUREL	MD	20724	Yes	Yes	ENDS / E-liquid	JUUL	05/20/2019	06/27/2019	Warning Letter Issued
CITGO / XPRESS MART	7237 RITCHIE HIGHWAY	GLEN BURNIE	MD	21061	Yes	Yes	ENDS / E-liquid	Other	05/06/2019	06/20/2019	Warning Letter Issued
TOBACCO & GIFTS	7387 BALTIMORE ANNAPOLIS	GLEN BURNIE	MD	21061	Yes	Yes	ENDS / E-liquid	blu	05/13/2019	06/20/2019	Warning Letter Issued
TOBACCO STOP	7110 RITCHIE HWY	GLEN BURNIE	MD	21061	Yes	Yes	ENDS / E-liquid	JUUL	05/13/2019	06/20/2019	Warning Letter Issued
7-ELEVEN 23702	9100 LIBERTY ROAD	RANDALLSTOWN	MD	21133	Yes	Yes	ENDS / E-liquid	blu	See Complaint	06/14/2019	Civil Money Penalty
7-ELEVEN 25816	6001 HARFORD ROAD	BALTIMORE	MD	21214	Yes	Yes	ENDS / E-liquid	JUUL	05/03/2019	06/13/2019	Warning Letter Issued
SHELL / CORNER MART	935 YORK ROAD	TOWSON	MD	21204	Yes	Yes	ENDS / E-liquid	JUUL	05/01/2019	06/13/2019	Warning Letter Issued
EXXON / TIGER MART	5425 FALLS ROAD	BALTIMORE	MD	21210	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	06/12/2019	Civil Money Penalty
7-ELEVEN 27456E	5401 RADECKE AVENUE	BALTIMORE	MD	21206	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	06/11/2019	Civil Money Penalty
PILOT TRAVEL CENTER	11633 GREENCASTLE PIKE	HAGERSTOWN	MD	21740	Yes	Yes	ENDS / E-liquid	JUUL	04/30/2019	06/06/2019	Warning Letter Issued
ROYAL FARMS 16	6901 RITCHIE HIGHWAY	GLEN BURNIE	MD	21061	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	06/04/2019	Civil Money Penalty
DISCOUNT CIGARETTES	5716 RITCHIE HIGHWAY	BROOKLYN PARK	MD	21225	Yes	Yes	ENDS / E-liquid	blu	See Complaint	06/03/2019	Civil Money Penalty
29 CONVENIENCE MART	10755 COLUMBIA PIKE	SILVER SPRING	MD	20901	Yes	Yes	ENDS / E-liquid	JUUL	04/06/2019	05/30/2019	Warning Letter Issued
ROYAL FARMS STORE #34	15 HANOVER PIKE	REISTERSTOWN	MD	21136	Yes	Yes	ENDS / E-liquid	JUUL	04/22/2019	05/30/2019	Warning Letter Issued
7-ELEVEN	1752 JARRETTSVILLE ROAD	JARRETTSVILLE	MD	21084	Yes	Yes	ENDS / E-liquid	JUUL	04/18/2019	05/30/2019	Warning Letter Issued
CF CARROLL / CARROLL MART	1900 NORTH ROLLING ROAD	WINDSOR MILL	MD	21244	Yes	Yes	ENDS / E-liquid	JUUL	04/22/2019	05/30/2019	Warning Letter Issued
CF CARROLL MOTOR FUELS / CARROLL MART	1755 JARRETTSVILLE ROAD	JARRETTSVILLE	MD	21084	Yes	Yes	ENDS / E-liquid	JUUL	04/18/2019	05/30/2019	Warning Letter Issued
GULF	7600 ANNAPOLIS RD	LAMHAM	MD	20706	Yes	Yes	ENDS / E-liquid	JUUL	04/09/2019	05/23/2019	Warning Letter Issued
DISCOUNT TOBACCO PALACE	4823 MARLBORO PIKE	CAPITOL HEIGHTS	MD	20743	Yes	Yes	ENDS / E-liquid	JUUL	04/02/2019	05/16/2019	Warning Letter Issued
EXXON	11055 BALTIMORE AVENUE	BELTSVILLE	MD	20705	Yes	Yes	ENDS / E-liquid	JUUL	04/08/2019	05/16/2019	Warning Letter Issued
SHELL / FOOD MART	8711 GREENBELT ROAD	GREENBELT	MD	20770	Yes	Yes	ENDS / E-liquid	JUUL	04/09/2019	05/16/2019	Warning Letter Issued
TOBACCO & GROCERY	6302B MARLBORO PIKE	DISTRICT HEIGHTS	MD	20747	Yes	Yes	ENDS / E-liquid	JUUL	04/02/2019	05/16/2019	Warning Letter Issued
SHELL	10920 BALTIMORE AVE	BELTSVILLE	MD	20705	Yes	Yes	ENDS / E-liquid	JUUL	04/08/2019	05/16/2019	Warning Letter Issued
VAPE N TOBACCO	1346 CAPE SAINT CLAIRE ROAD	ANNAPOLIS	MD	21409	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	05/10/2019	Civil Money Penalty
FASTOP / SHELL	9880 SOUTHERN MARYLAND	DUNKIRK	MD	20754	Yes	Yes	ENDS / E-liquid	JUUL	03/26/2019	05/09/2019	Warning Letter Issued
MONOPOLY GROCERY & TOBACCO	329 N EUTAW ST	BALTIMORE	MD	21201	Yes	Yes	ENDS / E-liquid	JUUL	03/29/2019	05/09/2019	Warning Letter Issued
FOOD LION 1543	121 CRAIN HIGHWAY NORTH	GLEN BURNIE	MD	21061	Yes	Yes	ENDS / E-liquid	blu	See Complaint	05/08/2019	Civil Money Penalty
WALGREENS 7554	7901 RITCHIE HIGHWAY	GLEN BURNIE	MD	21061	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	05/08/2019	Civil Money Penalty
CARROLL MART / CARROLL MOTOR FUELS	500 FREDERICK RD	CATONSVILLE	MD	21228	Yes	Yes	ENDS / E-liquid	JUUL	03/13/2019	05/02/2019	Warning Letter Issued
EXXON / TIGER MART	12245 VEIRS MILL ROAD	SILVER SPRING	MD	20906	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	05/02/2019	Civil Money Penalty
BT NEWSTAND	3 BETHESDA METRO CENTER, UNIT B011	BETHESDA	MD	20814	Yes	Yes	ENDS / E-liquid	blu	03/06/2019	04/25/2019	Warning Letter Issued
EXXON	10335 OLD GEORGETOWN ROAD	BETHESDA	MD	20814	Yes	Yes	ENDS / E-liquid	JUUL	03/05/2019	04/25/2019	Warning Letter Issued
EXXON	26 SOUTH YODER STREET	GRANTSVILLE	MD	21536	Yes	Yes	ENDS / E-liquid	Vuse	02/25/2019	04/18/2019	Warning Letter Issued
FOOD LION #1442	6920 CRESTWOOD BLVD	FREDERICK	MD	21703	Yes	Yes	ENDS / E-liquid	Vuse	02/19/2019	04/11/2019	Warning Letter Issued
7-ELEVEN 39220	7729 SUNDAYS LANE	FREDERICK	MD	21702	Yes	Yes	ENDS / E-liquid	JUUL	02/19/2019	04/11/2019	Warning Letter Issued
CROWN EXPRESS MART	17700 ELGIN ROAD	POOLESVILLE	MD	20837	Yes	Yes	ENDS / E-liquid	JUUL	02/12/2019	04/11/2019	Warning Letter Issued
SHELL / DASH IN	9220 CRAIN HIGHWAY	UPPER MARLBORO	MD	20772	Yes	Yes	ENDS / E-liquid	blu	02/21/2019	04/11/2019	Warning Letter Issued
EXXON/VILLAGE SHOP	5111 JOHN ROGERS BLVD	UPPER MARLBORO	MD	20772	Yes	Yes	ENDS / E-liquid	JUUL	02/21/2019	04/11/2019	Warning Letter Issued
EXXON / TIGER MART	4040 POWDER MILL ROAD	BELTSVILLE	MD	20705	Yes	Yes	ENDS / E-liquid	blu	02/14/2019	04/11/2019	Warning Letter Issued
7-ELEVEN 21081 D	9398 BALTIMORE NATIONAL PIKE	ELLCOTT CITY	MD	21042	Yes	Yes	ENDS / E-liquid	JUUL	02/07/2019	04/04/2019	Warning Letter Issued
7-ELEVEN 32390	3393 LAUREL FORT MEADE	LAUREL	MD	20724	Yes	Yes	ENDS / E-liquid	JUUL	01/30/2019	04/04/2019	Warning Letter Issued
7-ELEVEN	8472 PINEY BRANCH RD	SILVER SPRING	MD	20901	Yes	Yes	ENDS / E-liquid	blu	01/26/2019	04/04/2019	Warning Letter Issued

7-ELEVEN	7411 CENTRAL AVE	CAPITOL HEIGHTS	MD	20743	Yes	Yes	ENDS / E-liquid	JUUL	01/31/2019	04/04/2019	Warning Letter Issued
CORK 'N BOTTLE LIQUOR	516 MAIN ST	LAUREL	MD	20707	Yes	Yes	ENDS / E-liquid	JUUL	01/30/2019	04/04/2019	Warning Letter Issued
CITGO	7750 ANNAPOLIS RD	LANHAM	MD	20784	Yes	Yes	ENDS / E-liquid	blu	01/25/2019	04/04/2019	Warning Letter Issued
EXXON / TIGER MART	8901 CENTRAL AVE	CAPITOL HEIGHTS	MD	20743	Yes	Yes	ENDS / E-liquid	JUUL	01/31/2019	04/04/2019	Warning Letter Issued
MOBIL / SNACK SHOP	15450 GEORGIA AVENUE	ROCKVILLE	MD	20853	Yes	Yes	ENDS / E-liquid	Vuse	01/28/2019	04/04/2019	Warning Letter Issued
WALGREENS #5623	3801 LIBERTY HEIGHTS AVENUE	BALTIMORE	MD	21215	Yes	Yes	ENDS / E-liquid	JUUL	01/11/2019	03/28/2019	Warning Letter Issued
BP / SNACK SHOP	3601 DOLFIELD ROAD	BALTIMORE	MD	21215	Yes	Yes	ENDS / E-liquid	JUUL	01/11/2019	03/28/2019	Warning Letter Issued
SHELL / DASH IN	3620 MATTAWOMAN BEANTOWN ROAD	WALDORF	MD	20601	Yes	Yes	ENDS / E-liquid	blu	01/17/2019	03/28/2019	Warning Letter Issued
7-ELEVEN	730 EAST COLLEGE PKWY	ANNAPOLIS	MD	21409	Yes	Yes	ENDS / E-liquid	JUUL	01/04/2019	03/21/2019	Warning Letter Issued
TOBACCO MALL	2039 EAST JOPPA ROAD	BALTIMORE	MD	21234	Yes	Yes	ENDS / E-liquid	JUUL	01/05/2019	03/21/2019	Warning Letter Issued
SHELL / FOOD MART	8309 ANNAPOLIS ROAD	NEW CARROLLTON	MD	20784	Yes	Yes	ENDS / E-liquid	JUUL	12/20/2018	03/07/2019	Warning Letter Issued
FREESTATE	11295 VEIRS MILL RD	SILVER SPRING	MD	20902	Yes	Yes	ENDS / E-liquid	blu	12/10/2018	02/28/2019	Warning Letter Issued
US FUEL	5901 GREENBELT ROAD	BERWYN HEIGHTS	MD	20740	Yes	Yes	ENDS / E-liquid	JUUL	12/13/2018	02/28/2019	Warning Letter Issued
SUNOCO	3599 EAST WEST HWY	HYATTSVILLE	MD	20782	Yes	Yes	ENDS / E-liquid	JUUL	12/14/2018	02/28/2019	Warning Letter Issued
7-ELEVEN	4404 KNOX ROAD	COLLEGE PARK	MD	20740	Yes	Yes	ENDS / E-liquid	JUUL	12/04/2018	02/14/2019	Warning Letter Issued
THE MARKET AT AC AND T	713 NORTH MAIN STREET	BOONSBORO	MD	21713	Yes	Yes	ENDS / E-liquid	Vuse	12/04/2018	02/14/2019	Warning Letter Issued
AC&T / THE MARKET AT AC&T	18141 GARLAND GROH BLVD	HAGERSTOWN	MD	21740	Yes	Yes	ENDS / E-liquid	Vuse	12/06/2018	02/14/2019	Warning Letter Issued
SUNOCO	6360 NEW HAMPSHIRE AVENUE	TAKOMA PARK	MD	20912	Yes	Yes	ENDS / E-liquid	JUUL	10/29/2018	02/14/2019	Warning Letter Issued
SHELL	3617 FORESTVILLE ROAD	DISTRICT HEIGHTS	MD	20747	Yes	Yes	ENDS / E-liquid	blu	11/24/2018	02/07/2019	Warning Letter Issued
7-ELEVEN	9464 LANHAM SEVERN ROAD	SEABROOK	MD	20706	Yes	Yes	ENDS / E-liquid	JUUL	11/14/2018	01/24/2019	Warning Letter Issued
ANDREWS SHELL SERVICE	6408 AUTH ROAD	SUITLAND	MD	20746	Yes	Yes	ENDS / E-liquid	JUUL	11/13/2018	01/24/2019	Warning Letter Issued
EXXON / TIGER MART	10375 RED RUN BOULEVARD	OWINGS MILLS	MD	21117	Yes	Yes	ENDS / E-liquid	blu	11/14/2018	01/24/2019	Warning Letter Issued
ZIP IN MART	6801 LIVINGSTON ROAD	OXON HILL	MD	20745	Yes	Yes	ENDS / E-liquid	JUUL	11/08/2018	01/17/2019	Warning Letter Issued
W EXPRESS	9400 LANHAM SEVERN ROAD 6	LANHAM	MD	20706	Yes	Yes	ENDS / E-liquid	JUUL	11/01/2018	01/10/2019	Warning Letter Issued
MOBIL / SNACK SHOP	7460 ANNAPOLIS ROAD	HYATTSVILLE	MD	20784	Yes	Yes	ENDS / E-liquid	JUUL	11/07/2018	01/10/2019	Warning Letter Issued
SHELL	100 UNIVERSITY BOULEVARD WEST	SILVER SPRING	MD	20901	Yes	Yes	ENDS / E-liquid	JUUL	10/29/2018	01/10/2019	Warning Letter Issued
BP	1601 YORK ROAD	LUTHERVILLE TIMONIUM	MD	21093	Yes	Yes	ENDS / E-liquid	JUUL	See Complaint	01/08/2019	Civil Money Penalty
7-ELEVEN 11655	8200 MARTIN LUTHER KING JUNIOR HIGHWAY	GLENARDEN	MD	20706	Yes	Yes	ENDS / E-liquid	JUUL	11/01/2018	01/03/2019	Warning Letter Issued

Anthony Capotosti & Tzion Gavriel
529Vapes
529 S Broadway Baltimore MD 21231

To whom it may concern my name is Anthony Capotosti and I am writing you on behalf of my shop, 529 Vapes. We are a small independent business located in historic Fells Point, Baltimore. Our shop is dedicated to bringing the people of Fells Point a clean and pleasant atmosphere while providing them with the highest quality vape liquids on the market. It is our goal as a shop to help our customers through the rough road of quitting smoking harmful cigarettes and to ensure each and every one of them gets on a path to cleaner healthier living.

An 86% wholesale tax increase would not only drastically hurt myself, my business, and my employees. It also has the potential to hurt every one of my customers. A tax increase of this magnitude would make it very hard for my business to stay afloat resulting in my livelihood being affected as well as my employees who rely on this shop to support themselves, and their families.

This tax would also be detrimental to those actively striving for a healthier alternative to an addiction that kills over 7,500 adults each year in Maryland. The prices of E-liquids and vape devices would skyrocket, causing these individuals to go back to smoking addictive cigarettes. This would have a direct impact on the individuals throughout Maryland. An increase of wholesale tax would almost certainly cause the preventable death of many adults.

I implore you to actively look at the lives of adult smokers who have switched from cigarettes to vaping and hear the stories of how their lives have changed. It is truly inspiring and is what drives me and my shop to provide the best care possible for our surrounding community.

529 Vapes is aware of the issues plaguing our youth-related to vaping and we strive every day to ensure any and all of our products do not fall into the hands of minors and that they are only used in responsible ways by responsible adults. We ask today that you dismiss this 86% tax increase so that we can continue providing this service to the great people of Baltimore.

Sincerely a concerned vape shop owner and Baltimore city citizen
Anthony Capotosti

January 28, 2020

To whom it may concern,

I'm writing you as a Maryland taxpayer, voter, and business owner that I am opposed to bill SB03. A wholesale tax of that magnitude would not only destroy my business, but the businesses of many others like me. Taxes like SB03 have been implemented in other states around the country and have had catastrophic results. If this bill passes, I would be out of a job and would lose my entire investment into my business. We are not big tobacco, nor are we Juul. We are a small business that helps adults stop using cigarettes. We also employ other Marylanders that will also lose their jobs if this bill passes. Please consider local business when you make your choice and consider other more reasonable options that could not only help local business, but help keep these products on the market to continue helping our citizens.

Thank you,

Brett Bibb

Class 5 Vapors

January 22, 2020

Dear Legislators,

My name is Candice Gott and I am a small business owner and member of the Maryland Vapor Alliance. I am writing to oppose SB 3, a bill that would tax my small business into bankruptcy.

I want you to know that I am not big tobacco and I am not Juul. Per the National Youth Tobacco Survey, the product teens are using most is Juul. My Vape shop, as well as the other vape shops in Maryland, do not sell Juul or other big tobacco products. The products we are selling is what adults are using to get off cigarettes, and stay off cigarettes. We do not allow anyone who is under the age of 21 in our stores. In fact, no Maryland vape shop has a failed compliance check in the last 2 years.

I smoked cigarettes for 15 years. I tried everything to quit smoking. I tried patches, gum, pills, I even tried being hypnotized. Nothing worked. That is, until I went by a vape shop. I started with a menthol tobacco flavor, which helped me sustain from cigarettes for a few days but I quickly relapsed and was smoking cigarettes again. I went back to the vape shop and got green apple e-liquid. I have not touched a cigarette since that day. I also found I like caramel coffee flavored eliquid. Caramel coffee flavor seems to be a flavor many adults enjoy in many different ways. After a few months of using these flavors, the thought of smoking a cigarette, and tasting tobacco makes me nauseous. I finally rid myself of Marlboro Menthol lights using flavored eliquid.

My husband had a similar experience. Out of this experience, we pooled every dime we had and formed our business. We were moved by how effective vaping was in helping us quit smoking, and decided we could help other people in our community quit as well. We have been in business almost 6 years and while I do not have an exact number, I'm sure we've helped thousands of adults quit combustible cigarettes using flavored eliquid.

We are a total vape shop. What I mean by the word total is that majority of our sales come from vape products. A wholesale tax of this measure would bankrupt me and put me out of business. It would also leave my 13 employees without a means to provide for their families. A vape shop vendor by law means that 70% of our inventory is vape products or accessories. Unlike a gas station or convenience store that can spread this cost out amongst thousands of products, my shop only sells one type of product. The price of my inventory would almost double, this is a cost I would have to float until a product is sold to a customer. This is simply not something my business would be able to sustain over time, or survive. In fact, a 40% wholesale tax was put in place by our neighboring state of Pennsylvania and this put many shops out of business. Many of the shops that remain open in Pennsylvania are struggling to survive. If a 40% wholesale tax did that to small business vape shops in Pennsylvania, imagine what an 86% wholesale tax would do in Maryland. It would be devastating. Once all Maryland vape shops are put out of business that leaves only the big players left. Juul and other big tobacco products would then be able to corner the market.

I am not opposed to a tax. However, I think it should be done in a way that does not put me out of business. Putting small business vape shops out of business has consequences that include my customers finding products on the black market. Items obtained on the black market with not have proper quality control, nor will they be taxed. If such a devastating wholesale tax is imposed, nobody

wins as customers flock to the black market and no taxes are collected, and I close the doors of a business I've dumped my life savings into.

The fact remains, cigarettes kill 480,000 people each year. Flavored nicotine vaping is a harm reduction tool to help people get away from combustible tobacco. The Royal College of Physicians released its warning in 1962 that smoking causes lung cancer and bronchitis. America surgeon general did not release its own warning until 1964. The Royal College of physicians is now telling us that vaping is at least 95% safer than combustible tobacco products. Why would we tax vaping in a way that gives customers no incentive to switch to a much less harmful product?

On top of the Royal College of Physicians claims, there are millions of adults in the United States now claiming the same thing: Vaping has helped them quit smoking and they feel a lot better because of it.

Please impose a fair tax that would keep me in business, keep my employees with a job, and give customers a reason to switch to an alternative that is at least 95% safer than smoking combustible cigarettes.

Very respectfully,

Candice Gott

63 E Chesapeake Beach Rd.
Owings MD 20736

Chad Warehime
97 Westview Manor
York, PA 17408
Founder/Owner at Place of Vapes, LLC 10037 York Road, Cockeysville Maryland
21030

To Whom It May Concern:

We opened our business in February with one goal in mind, to help people find a way to quit combustible cigarettes. However, within our first year of business,"our" industry has been attacked countless times, to the point where we almost haven't made it a full year in business. After having severe asthma my entire childhood, as well as being a smoker from the age of 11 to 22, I switched to vaping in 2011. I started with a Traditional Nic Blue Razz Menthol 24mg liquid and worked my way down from there(We didn't have Salt-nic when I started). I have been smoke free since 2011, and in that time, I never had to use my albuterol sulfate inhaler(which has Propylene Glycol in it). Within my first 6 months of vaping my overall health was much better, my gums/teeth were healthier, and I had a lot more money that I was able to start saving. I have been to the dentist and to my respiratory therapist and both have told me there are no negative effects to me at this point(Thats 9 straight years of vaping).

Not only would this tax affect my health and well-being, but my mothers health as well, who after having 5 stints placed in her heart started vaping and has been smoke free for over 3 months. This tax would be detrimental to myself and the one employee that I just hired in the past month, as well as the now 300 plus customers that I serve in my area. The tax itself would cause many businesses like myself to go out of business, and in doing that would cut all sources of income tax and sales tax from those respective businesses. What happened to the "American Dream"? I was a low life dope fiend with no hope and vaping gave me something to live for, but more importantly something to work towards, A dream of owning my own businesses and helping save peoples lives at the same time. Now, after one of my toughest struggles in life(heroin) isn't in the picture anymore, vaping and the people that I meet and get a chance to help in my shop, are why I do what I do now, but if this tax goes into effect, then how am I able to continue helping these people. In just under a year I have been able to help so many people, some of those same people, who now are vape free have come in to tell me how "I saved their life", but with a proposed tax like this, those things won't be possible anymore. With a tax like this, more children will have to bury their parents prematurely, more families will lose/bury loved ones prematurely, thousands of people will become jobless, potentially homeless, and most of those people like me will struggle to pay bills and taxes, but most importantly provide for their families. As a vaper and vape shop owner I hope that you people in power will look at the TRUTH and the LIVES AT STAKE here, and make the right decision.

Thank You,
Chad Warehime

January 25, 2020

Dear Maryland Legislators,

My name is Charles Gott and I am the owner of Vape Jungle, which consists of 3 small business vape shops in the Maryland community. I am writing to oppose SB3. I provide 13 jobs to employees who have families to support. This small business I have cultivated with my life savings and an immense amount of time, is also how I support my own family.

I smoked cigarettes for a very long time. So long in fact, I never thought I'd actually quit. Since there were so many failed attempts at other "approved" cessation products, I figured all hope was lost and that I would spend the rest of my life addicted to cigarettes. A friend of mine let me try her vape one night at a party. The next day I went into a vape shop and got my first set up. I have now been tobacco free for 5 and a half years. I no longer wheeze, I sleep much better, and I no longer have a nasty smoker's cough. I used coffee flavor to quit, and there is no way I would ever go back to smoking or using a tobacco flavored product. Tobacco is the flavor I wanted to move away from and I'm so glad that I did.

My success in quitting smoking through vaping led me to open my own business. I knew if I could quit smoking using this method, than anyone could. I have helped thousands of people quit smoking in my community. This includes veterans and the elderly.

I want Maryland legislators to understand that we are not big tobacco. We do not carry any big tobacco products or products that big tobacco has a stake in such as Juul. Juul is what the teens are using and for this very reason we have avoided selling this and similar products in our locations, as have other Maryland vape shops. I also take pride in the fact that my business has passed multiple compliance checks. Per FDA generated website data, no Maryland vape shop has failed a compliance check in 2 years! We are doing our part to keep these away from teens. So much that we do not allow anyone under 21 years of age in our stores. We ID at the door, and turn away customers we believe to be making a straw purchase.

An 86% wholesale tax would put me out of business. I cannot float the cost of inventory in my shops at such a steep rate. Just last year, Pennsylvania imposed a 40% wholesale tax and that put a lot of vape shops out of business. If a 40% wholesale tax could do that much damage I believe an 86% wholesale tax would shut down every vape shop in Maryland. This leaves only the big players like Juul left. It ultimately hands the industry back over to big tobacco.

Cigarettes kill close to 500,000 people each year. Yet nicotine flavored vapes have killed no one. Such a steep tax will keep cigarette smokers from converting to a product that is at least 95% safer than cigarettes. This tax will push cigarette smokers away from a technology that could potentially save their life.

Please impose a fair tax that would not shut my shops down. A sales tax option would be much better as I will not be able to keep my doors open with a wholesale tax. I believe our Maryland legislators can

find the right compromise to not hurt small businesses and push current vapers to a dangerous black market to obtain their items.

Kind regards,

Charles Gott

63 E .Chesapeake Beach Rd.
Owings MD 20736

Ed Hubert

1209 Liberty Rd Apt 226

Eldersburg, MD 21784

To Whom it may concern:

I want to write to strongly oppose SB03 that consists of an 86% wholesale tax and a floor tax. I work for a local vapor shop and I depend on that income. If this bill goes through my employer will close its doors and I will be out of a job. I also depend on this life saving technology to keep me off cigarettes which I quit using flavored vapor products. All you hear on the news is that small businesses are the backbone of our society, but this bill would kill off more than 100 small businesses in Maryland and hundreds of employees would lose their livelihood.

I'm sure there is some way to tax this industry and keep small businesses alive to pay those taxes. The whole point of our legislature is to work with the people of Maryland to find common sense laws that work for everyone and not to make laws that destroy local businesses and jobs. There is always a better way to do things and I urge you to either work with the industry or vote unfavorably on this bill.

I am a single father and I have a teenage daughter that I provide for. In all my years I never thought I would be taxed out of a job, especially by the people that are supposed to be working for the people. So, I urge you to reconsider this action against an industry that is helping people quit deadly cigarettes. The number 1 cause of preventable death in America.

Sincerely,

Ed Hubert

To My Esteemed Maryland State Representatives
Annapolis MD

From: E.P. Bailey III The Vapor Emporium llc.
11717 Old National Pike
New Market, MD 21774

I am writing you today to ask for your reconsideration and vote against SB003.

I am the owner of a Maryland Small Business dedicated to the eradication of smoking rates in Our great state, for the past eight years, we have worked hard to provide our citizens and customers With FDA registered products which have been proven to be a safer and more effective method to Transition smokers from the harmful effects of cancer causing combustible tobacco products and help them quit nicotine altogether.

This Bill will effectively shut down my business, will create a loss of jobs to the employees and myself but more importantly, reduce the efforts made to reduce smoking rates and may turn our Maryland customers back to cancerous tobacco products.

In previous years, our industry and Maryland stores have worked with our state, to increase penalties for those selling to minors, we have supported the legislation to increase the age to purchase tobacco products and ENDS devices to minors, and have supported increased licensing fees to fund additional compliance. This Bill will completely destroy many small businesses, create black market products, and undo the vast gains we have made in reducing the smoking and cancer rates in Maryland, which also has reduced health costs associated with treating those diseases.

I would like to point out, that not a single Maryland licensed shop, has been in violation of the current policies we have worked with the state to decrease youth access to tobacco products.

I would also like to mention, Flavored products have been the single most effective adult product to transition adult smokers to ending their nicotine habit, in what the FDA itself has deemed the least harmful and most effective product on the continuum of risk of cessation products and devices.

Its always been the ultimate goal to reduce the harm done by Big Tobacco companies in our state and and on a national level.

I am urging you to oppose this overreaching, and business and health killing bill, I would love to see the state work hand in hand with this technology to end smoking rates in our state.

We, as an industry, would also love to see our Great State of Maryland, lead the nation, in working with our industry as an example of how this life changing and saving technology and products can eradicate smoking and the related costs and diseases associated with combustible tobacco. We have this opportunity now, please consider it and oppose these unfair and unreasonable regulations and bills

Sincerely
E. P. Bailey III

Erica Wood

220 painter woods way

Saint Leonard, MD 20685

My name is Erica Wood and I am a Shop Manager for a small family owned business called Vape Jungle. If an 86% tax was implemented it would force the company out of business starting with not being able to keep our products in stock. We would have to raise the prices on product in order to pay the tax and this will cause low wages due to more money being put into the tax. Customers will not continue to shop with us if we cannot keep the products they want in stock. This will cause a huge decrease in sales and will potentially put us out of business.

If my wages were cut I would not be able to afford many things I need including my rent, car, and school. This would be detrimental to my life and my mental stability because I would not be support myself and would be behind on all payments while struggling to find a new job.

This tax would put many Maryland vape shops out of business or the products will be so high in price that people will not want to switch from smoking cigarettes to vaping. Vaping is a safer alternative and should be available and taxed reasonably for the sake of small business owners and all adults.



Hi my name is Jack Nguyen,

I am one of the co owners of DC Vapor, Vape Ink and Vape Exchange. I am writing today in response to bill SB03 to say my partners and I are opposed to this taxation bill. With a taxation bill like this we would be put into a financial crisis along with the dozens of employees that are currently under our employment. We believe that this bill is a direct misrepresentation of what or legislature stands for as well as acting as a sign of carelessness and lack of commitment to its people who heavily relies on it.

Time and time again has the facts been ignored and the research goes unnoticed. We the people put trust in our legislators to look past the veil to uncover your own truth but that too has turned a blind eye. We sacrifice what little we have to fight for the truths and to bring it to your attention, we show reputable research and data and that too falls into idle hands. We ask you to reconsider the implications that this bill will have on our small businesses. It would not just cripple our shops but burden the people that relied on it for a means to an end. An end to traditional and cancerous combustible cigarettes with the highest success chance made possible through vape products. Many may say there are other means to an end but they have not faced the realities of smoking cigarettes.

The other issue this bill will cause is the unemployment of 1000s of people across the state. As I write this letter I am faced with the consequence of telling those who have become friends and family that they will have no job in the future. Those who have spent years with us in order to grow and learn will have seen their time wasted due to those they voted into office.

Accusation targeting the vaping industry for causes of teen deaths were all lies in which the CDC and FDA had proven and linked to THC devices yet no one cares. Allegations that children are addicted to vapes due to its flavors all debunked and proven wrong by universities across the country. International countries who report that vaping in fact saves lives and is 95% safer than combustible cigarettes go ignored. With these many signs and facts it is hard to understand why our legislation is heading backwards rather than forwards. If our younger generation is a concern then why is it that the legislation being presented interest the old. I end this letter by emphasizing that reconsideration of SB03 must happen because the future of many livelihoods depends on it.

Thank you for your efforts,
Jack Nguyen



Office : 301-937-2807

Gerald Reed

837 Streaker Rd.

Eldersburg, MD 21784

To Whom it May Concern:

Hi my name is Jerry Reed and I quit smoking using flavor vapor products over 6 years ago and I am still cigarette free as of today. I own a small business in my community, and I participate in my local community. Our business has helped Ellicott City residents when they were flooded out twice, We have sponsored local suicide prevention initiatives and collect food for local food drives for the needy. We take pride in our community and we are an active part of said community.

SB03 would destroy my business entirely. There is no way I could comply with an 86% wholesale tax and a floor tax. We do not have the billions that big tobacco has, we are small businesses with much tighter margins that help people quit cigarettes. The Maryland Vapor Alliance is proposing an amendment that would bring a point of sale tax in addition to the 6% sales tax we already pay. I don't like this option, but it would be survivable and displays more common sense than a draconian wholesale tax, especially on small businesses who you know cannot afford it.

I strongly urge you to either accept the MVA's amendment or vote unfavorable on this bill. This is an industry killing bill that no small business can comply with. I've talked with other small businesses in the area and I asked them and even though different industry they could not survive a wholesale tax either. Why are you out to destroy a business and product that helps people quit cigarettes? 1300 people die a day from smoking related illness, EVERY DAY. 7,000 Marylanders die every year from the same cause. Help us save lives and small businesses and not destroy them.

Sincerely,

Jerry Reed

Kyle Vega (Owner)
Vapor Villa
730 Frederick Rd.
Suite 202
Catonsville MD 21228

Maryland Vape Taxation and Regulation (SB0003)

To whom it may concern:

My name is Kyle Vega, and I am the owner of three vape stores in Maryland. My stores are located in Catonsville, Halethorpe, and Eldersburg. I am writing to you to express my concern about what an 86% wholesale tax would do to my business, customers, employees, my financial situation, and, more importantly, my employees' finances. Over the six years of business, I have employed over 30 people and help thousands make the switch from combustible cigarettes to vaping products. If this 86% were to be implemented, all of that would end. An 86% wholesale tax would mean that my business would have to close its doors at all 3 locations, no question about it. My business would not be the only one, every vape shop owner in Maryland I have spoken to and members of the Maryland Vapor Alliance (MVA), representing 31 vape stores, has said the same. Sudden closure of business would leave me with three leases that still need to be paid, employees that will have no work or income, and customers that will be forced to go back to the single product they wanted to avoid. A product that we know kills half of its users, cigarettes. This tax would make products so expensive that consumers will have no choice but to go back to what will now be the cheaper option, once again, cigarettes. Forcing consumers to retreat back to cigarettes will have an adverse effect on public health. My employees will be without income, without the ability to pay rent, mortgages, car payments, tuition, or provide for themselves or others that depend on them. In a challenging time to find jobs, myself, my two business partners, and our current employees will all be unemployed, searching for our next employment opportunity and stressing everyday of when that day may come. Unfortunately, the bills will not stop coming in, but none of us will have the income to pay those bills.

Additionally, the state will not see additional tax revenue due to the new desired tax implication on nicotine e-liquid products. Simply because there will no longer be any retailers that can support this drastic tax, and no products will be sold. In fact, the state will potentially lose the current 6% of sales tax income received from e-cigarettes related businesses, because once again, this tax will force companies to close. I genuinely hope that you reconsider this significant tax increase on nicotine e-liquid products, for the sake of small businesses in this state, for workers, and for consumers that wish to remain combustible cigarette free. Please also consider the Maryland Vapor Alliance (MVA) amendment of a point of sale tax. Thank you for your time and your public service.

Thank you,

Kyle Vega

Matthew Milby

6814 Autumn View Dr.

Eldersburg, MD 21784

To whom it may concern:

I am writing in opposition to SB03. I've read this bill and an 86% wholesale tax would completely destroy my local small business. The bill also seems to include a floor tax which I simple would not be able to afford. We are Maryland small businesses. We are not big tobacco and we are not Juul. We don't have millions of dollars to comply with high taxes. We could not even survive a 30% wholesale tax, we would close our doors. It looks to me this bill was meant for one thing and one thing only, destroy Maryland small businesses.

They Maryland Vapor Alliance is proposing and amendment that pushes for a point of sale tax. I urge to you consider that tax. That way we can stay and business and still pay increased taxes. I also have 7 employees that would lose their job along with myself and my business partner. I have 3 children under the age of 10 years old that depend on my income. I am a United States Army Disabled Veteran and I have no other way of providing for my family. I suffer from Multiple Sclerosis and I would have no choice but to go on disability to provide for my family.

I don't understand why we would want to tax a 95% safer product to the point of extinction. Cigarettes are the number 1 cause of preventable death in the United States. There is plenty of research to back up my previous statement and can be provided upon request. The CDC has also admitted (tragically late) that the cause of all the disease and death that happened this year was due to Black Market THC cartridges tainted with Vitamin E acetate oil sold by drug dealers. Plain and simple, we get people off of cigarettes and that is a good thing no matter which way you slice it.

I urge you to work with the working small business owners of Maryland to amend this bill to a tax that is palatable and doesn't force us to go out of business. Either that or vote unfavorable on this industry killing bill.

Thank you,

Matthew Milby

Sal Filippelli
Harbor Vapor
1743 Fleet St Baltimore, MD 21231

My name is Sal Filippelli and I am the owner of Harbor Vapor in Baltimore Maryland. It has come to my attention that an 86% wholesale tax is being proposed in the State of Maryland. This tax would effectively close my business, as this would make products unaffordable for my customers. When we opened nearly 6 years ago our mission was to give adult smokers an alternative to tobacco cigarettes. We offer the best products and competitive prices. We are in a constant battle with online retailers who price their products barely over wholesale pricing and with little to no overhead they have a huge advantage. Implementing an 85% wholesale tax would give our customers no choice but to purchase online since they could not afford the increase on their vapor products. Our loyal customer base comes to brick and mortar retailers for our customer service, expertise and support with these products. They can also trust that they are getting authentic and properly produced items that purchasing from an Internet retailer cannot guarantee. This wholesale tax would not only affect our customers but as a business we could not sustain and have to layoff our employees. This means loss of income for them to provide for their families. When we close we will no longer be collecting sales tax for the state, which is less money to help with projects that our city and state desperately need. This tax is unfair to adult smokers who want an alternative to cigarettes and they should have the right to have a choice. Taxing these products at such a high rate sends them a message that the state does not care about them nor their freedoms. The state should be encouraging adults to quit tobacco cigarettes, which we know causes many illnesses and disease. Vapor product users are looking to better their lives and taking more money out of their pockets sends them the wrong message. I urge you to rethink this bill and levy this tax on vapor products. My livelihood is at stake and so are the lives of my customers. Many have expressed that this tax would force them back cigarettes since they would be cheaper. This would only lead to more people getting sick and dying from tobacco cigarettes. I know several owners of vape shops in other states where a large tax was implemented and they had to close their doors. If Maryland passes this tax I foresee most of the vapor stores closing here and thousands of people without a job.

In closing I oppose this 86% tax on vapor products and I hope the state can see the detrimental affect this would have on store owners, employees and customers. Nobody wins if this tax bill passes, not even the state. It will be hard to collect 86% of 0 since this would shut down the vapor industry here in Maryland.

Sincerely,

Sal Filippelli
Harbor Vapor

SB0003

Maryland Vapor Alliance

William and Sarah Roberts

BS Vapes LLC

8154 Ritchie Hwy

Pasadena, MD 21122 Suite B

As business owners of a vape shop in Maryland, we are very concerned with the fact this bill is both unjust and will not have the effect anyone is looking for. If taxed at 86% we will close our business effectively immediately upon enactment. We cannot afford this tax.

Cigarettes were taxed heavily to help ease the state health care costs. While we understand that we need to educate our teenagers on addiction and pay for compliance enforcement, taxing vape shops because we are classified as tobacco product to this level will not achieve this. Instead all revenue will be lost, as we will be closed. The only viable option we see is a point of sale tax.

We are not Juul or Big Tobacco. We have direct contact with our customers. We see the health improvements in our customers from week to week. To tax an entire industry into extinction that is helping ease state health care costs makes zero sense to us.

Our business has 7 employees that would all lose their jobs and collect unemployment. We would lose our entire retirement as we invested in a product that we believe in that helps our community and eases the burden on state health care costs. We are a combat veteran and woman owned business. We believe in our country and community. If this tax is implemented the wrong outcome will happen in our communities. The black market will thrive and the state will get even less money. The black market will cause more health costs for the state as well. It's just a lose, lose situation if this tax is implemented.

As a community we need to "right" a "wrong" for an entire generation that is hooked on cigarettes that will die. We have a harm reduction solution that is proven to work and work more than twice as well than anything else on the market. This tax will not do this and in fact do the opposite. Vape shops in Maryland have not had a single violation in two years. We are not the problem and should not be taxed into extinction. Let us be part of the solution and all parties will win and our communities will grow, thrive and evolve with time.

Thank you for your time.

Travis Johnson
509 Burning Tree Dr
Arnold, MD 21012

My name is Travis Johnson and I am a 34-year-old former smoker. Currently, I am the assistant manager of the Vape Loft in Edgewater, MD. We sell vaporizers, flavored e-liquids, and accessories as well as advising adult vapers on the proper and safe usage of nicotine replacement vaporizers. As a former smoker who personally used nicotine vaporizers and flavored e-liquids to quit and stay off of cigarettes, I am very passionate about helping other adults transition their smoking habits to this safer alternative. With the proposal of these new draconian laws, including flavor bans as well as a very steep tax, I have become very concerned about the future of my current livelihood. Such laws would severely detriment our industry, to a point where I could no longer pursue my passion for nicotine vaporizers and the aiding of other adults in switching to a less harmful alternative. In which case, I would become unemployed. I have dedicated a lot of time and energy in educating myself in the proper and safe usage of nicotine vaporizers and I use that knowledge to inform other adults about the benefits and proper maintenance of such products. We are all aware of the lack of success of prohibition; whether we're talking about alcohol, illicit drugs or otherwise. Prohibition has been shown time and time again to simply not work. If vape shops, like the one at which I'm currently employed, were to go out of business, the individuals whom would undoubtedly still be acquiring these types of products wouldn't have access to a reliable source for information and training or even a source from which to purchase safe, regulated, compliant flavored e-liquids. The laws proposed would reprehensibly affect my life and livelihood, I would have neither have an income nor access to the types of flavored nicotine products that I use to keep me from smoking cigarettes. Beyond myself, such laws would also have a drastic effect on the consumers that rely on vape shops for advice on the safe operation of nicotine vaporizers as well as a place to purchase regulated, compliant e-liquids. I deeply urge you to reconsider the taxation and outright banning of flavored nicotine e-liquids.

MEAN STREET VAPOR, LLC

8A CENTRAL AVE
GLEN BURNIE, MD 21061
(410) 595-5338
MEANSTREETVAPOR@GMAIL.COM

JANUARY 28TH, 2020

Dear Reader,

My name is Trenton and I am the business manager for Mean Street Vapor, LLC. I am writing in opposition to SB0003. The proposed 86% wholesale tax on vapor products will effectively kill the industry in Maryland and eliminate thousands of jobs and careers like mine and the employees that I manage. Before I began this career 6 years ago I made sure to do my due diligence by informing myself on every facet of vaping from how to do it safely and the potential dangers of it. I was satisfied with my findings. All ingredients are FDA approved, propylene glycol is used safely in inhalers, and vegetable glycerin is generally regarded as safe by the FDA so I started. I admit, I was skeptical at first as to whether or not I would be able to kick my habit of smoking but the results were near instantaneous. I was able to ditch my years long habit and now I am a new me. From there, I've applied to a bevy of local stores run by small business owners because I wanted to A.) Teach others how to use electronic cigarettes safely and effectively and B.) To help contribute to our local economy. Across my 6 years I've sold hundreds of thousands of dollars worth of nicotine containing e-liquid and electronic vaping products to adults in our area generating hundreds of thousands of dollars of tax revenue to Maryland.

Not one locally owned shop will be able to sustain an 86% wholesale tax. Mean Street Vapor would have to close our doors and I would have to inform the 14 employees I manage that we will not be able to keep them employed because the

State of Maryland taxed them out of jobs. They will not be able to afford their childcare. They will not be able to afford their cars. They will not be able to afford their rent. With the economy in the state that it is now, a lot of my employees will have a hard time finding work to be able to effectively pay their bills and live their lives. Instead, I beseech the politicians on the Budget and Taxation committee to amend the bill to soften the blow on locally owned vape stores. I believe there is a common ground we can achieve to keep our stores open, keep our staff employed, and to bolster our economy by way of taxation. I urge the committee to amend or oppose SB0003.

Sincerely,

Trenton Davis
Mean Street Vapor

Vapors Lounge LLC /William Jameson
28943 Three Notch Road
Mechanicsville MD 20659

Email – Vaporslounge.md@gmail.com

Phone 240 249 3209

January 28, 2020

To Whom It May Concern:

I am a current small business owner in Mechanicsville, Maryland for the last 5 years. The proposed 86% wholesale/floor tax on vape products will not only threaten jobs and businesses but will in fact **eliminate them!** There are roughly three hundred plus vape shops listed in the State of Maryland (I am sure that number is far greater). Those three hundred plus businesses conservatively employ over 1,000 people. With this proposed tax the owner would close their business and the employees would be out of a job.

Let's put this into perspective, as a small business owner if I have roughly \$30,000 in inventory you are asking me to cut a check to the State of Maryland for \$25,000. There is not business that I know of that could absorb or survive this kind of cost, maybe big Pharma or Tobacco but we are not them, we are small business owners. Another example, if a product costs 100.00 and you want 86% tax on that product, the cost now for the product is \$186.00. Vape owners would have no chance of selling that product, we would not recoup the cost, much less a profit.

In closing, here are some other items to consider with regards to this proposed tax. Three hundred plus vape shops that rent/lease/mortgage that will close and the utilities/sales tax and other services we employ on a weekly/monthly basis will be gone. This tax is not going to generate money, its actually going to cost the State of Maryland hundred of thousands of dollars, if not millions, due to shop's going out of business. If this proposed bill is implemented, it will eliminate the Vape industry in the state of Maryland.

Sincerely,

William Jameson

Vic Vega II
5527 Highridge St
Baltimore, MD 21227

January 28, 2020

To Whom It May Concern:

I'm writing in regard to Maryland Senate Bill 3. I have been a Business Owner in the Baltimore area for over six years with three Vape Shop retail locations. I'm incredibly concerned about the 86% wholesale tax currently being proposed on our products. While taxation plays an important role in our State economy, it must not come at the expense of an entire industry. An industry that employs MD residents and pays a healthy share of taxes already.

An absurd 86% tax would decimate mine and many other businesses in the Maryland vape industry. Correction, not "many others" but rather literally all of them! None of us can survive this financial burden. It would remove nearly any room for profitability on products sold.

In our only attempt to survive this tax, we would have to nearly double the cost of all products to the end buyer customer. This is not something our customers can handle nor should they. It would be pricing them out of products which testing has shown them to be at least 95% less harmful than traditional cigarettes. This is a public health net negative for Maryland residents.

How much revenue will this 86% tax create if all the businesses it applies to go out of business? The answer is \$0. This does not feel like a way to implement reasonable taxation but rather a way to simply wipe us out. Out of sight out of mind, right? You will be putting Business Owners out of business who have literally dumped their entire life savings into their company. Business Owners who have heavy financial responsibilities and a Family to provide for. Employees will lose jobs and increase demands on State unemployment.

Since this tax ultimately will not create the desired revenue and will completely destroy a Maryland business industry there will be zero benefits for all. We want to be around to provide this healthier alternative to adult smokers who need these products to better their lives. We want to be a part of the effort to curb youth use of these products which are already illegal for them to obtain, to begin with. Help us help those that need these products most.

We implore you to please work with us and not simply against us!

Sincerely,

Vic Vega II

Owner – Vapor Villa, Corp

JUUL_UNF_SB3

Uploaded by: Hatton, Brandon

Position: UNF



January 28, 2020

Written Testimony of

**Brandon K. Hatton, Sr. Regional Manager
State Government Affairs, JUUL Labs Inc. (JLI)**

Concerning

S.B. 3: Electronic Smoking Devices, Other Tobacco Products, and Cigarettes

Before the

**Senate Budget and Taxation Committee
Maryland General Assembly**

Chair and Distinguished Members of the Budget and Taxation Committee,

Good afternoon. My name is Brandon K. Hatton and I am the Sr. Regional Manager for JUUL Labs Inc. (JLI) and I appreciate the opportunity to present this testimony. I am writing today to provide my insights and general observations on S.B. 3, which concerns the taxation of electronic smoking devices.

JLI exists to transition adult smokers away from combustible cigarettes. We pursue this mission while actively combatting underage use of our products. A robust regulatory framework that preserves access to electronic smoking devices, better known as Electronic Nicotine Delivery Systems (ENDS), for adults, while addressing access, appeal and underage use is a critical foundation to accomplishing our mission and we support efforts to put that framework in place.

ENDS products hold the potential for harm reduction and provide an alternative to adult smokers interested in transitioning away from combustible cigarettes. Therefore, the government should not disincentivize smokers from transitioning to ENDS by levying exorbitant excise taxes on this new and emerging category. While still a small part of the overall tobacco product category, ENDS products could lead to the end of smoking combustible cigarettes, which continue to take the lives of nearly 500,000 Americans each year.

ENDS are generally classified into two distinct categories: 1) “closed systems”, and 2) “open systems”.

- **Closed systems** consist of pre-filled, sealed cartridges, or pods, that are typically low volume and have variable degrees of nicotine strength.
- **Open systems** are refilled manually, generally require much more liquid than closed systems, and users of these systems often have their preferred liquid and preferred nicotine strength mixed, or “manufactured”, inside a vape shop.

Given the inherent differences between open and closed systems, policymakers should be mindful of how any tax will impact the category as a whole. Policymakers should also consider whether the government is able to enforce whatever tax regime it enacts. The administrative challenges regarding the taxation of ENDS products stem from the nascent nature of an industry that offers products that are not uniform across the product category. Unlike traditional tobacco products, which are generally homogenous across product class, ENDS products can vary drastically depending on the e-liquid solution and delivery device.

States have taken various approaches to tax ENDS. Many states have instituted volume-based taxes, which impose the tax on milliliters of vaping liquid, ranging from 5 cents to 40 cents per milliliter. Other states have imposed a tax at the wholesale level based on a percentage of the wholesale cost of the product. Last year, the State of New York enacted a 20% tax levied at the point-of-sale, which the state believes could generate more revenue as well as provide more oversight of the category by tracking the product through the entire supply chain and ensuring the appropriate tax is collected where the manufacturer, wholesaler, and retailer can be the same entity with the ability to manipulate the tax when based on a wholesale price.



Underage Prevention

Although S.B. 3 concerns taxation, I would like to take this opportunity to address the importance of ensuring that ENDS products only end up in the hands of our intended consumers: current adult smokers. As a company, it is essential that we do our part in preventing underage use of our products. Underage use is antithetical to our mission, and we have taken definitive steps towards the goal of restricting it, including:

- Voluntarily discontinuing the sale of all flavored products other than Virginia Tobacco, Classic Tobacco, and Menthol, unless and until the FDA determines through its Premarket Tobacco Product Application (PMTA) process that their sale is appropriate for the protection of public health.
- Restricting sales on our ecommerce platform (JUUL.com) through industry-leading age-verification technology, including using third parties to verify the purchaser's personal information against publicly-available records, and limiting the amount of product that can be purchased.
- Establishing our Retail Access Control Standards (RACS) program for retailers of JUUL products, a technological standard at the point-of-sale that requires electronic ID scanning to verify age and ID validity and limits the amount of product that can be purchased. In the spring of 2019, JUUL Labs ran a pilot study among retail outlets that had adopted RACS, which showed that the overall age-verification failure rate fell to just 0.2% after implementation.¹
- Instituting a "three-strikes policy" as part of our mystery-shopper program that will prohibit authorized retailers from selling JUUL products for at least one year if they incur three violations for either age-verification or bulk-purchasing non-compliance within a calendar year.
- Ceasing the promotion of JUUL products on social media and aggressively enforcing against third-party posts that inappropriately depict, or sell, JUUL products. In partnership with the social media platforms, we have removed close to 2000 inappropriate accounts reaching 1.5 million followers. We have also removed an additional 45,000 illegal social media listings for JUUL products.
- Suspending the advertising and promotion of JUUL products through broadcast media (e.g., television and radio), print publications, and digital channels.

While JLI has taken these actions, we strongly believe that category-wide regulation and enforcement is necessary. It will require a more comprehensive regulatory framework, and all parties working collaboratively with regulators, policymakers, and stakeholders to restrict underage access and use, while preserving the availability of ENDS products as an alternative for adult smokers.

In conclusion, JLI shares a common goal with policymakers, regulators, parents, school officials, and community stakeholders - **prevent the use of tobacco and ENDS products, including JUUL products, by America's youth.** We are committed to stopping underage access of JUUL products, and no young person or non-nicotine user should ever try JUUL. JLI strongly supports category wide restrictions that help to deter youth usage yet recognize the important role that ENDS products serve in off-ramping current smokers. We have and continue to conduct proactive enforcement in retail settings, are working with retailers to promote retail compliance, and have increased our own penalties on retailers that sell to underage or permit bulk sales.

Although we recognize there are disagreements within our industry, if a tax is to be enacted on the category, we believe, for the reasons set forth above, a low and specific rate based on volume of e-liquid is the appropriate approach. We are here to serve the tax committee members and staff to help inform you of the current trends and potential pitfalls in instituting a new tax on an ever-evolving product category.

Thank you. I look forward to engaging with you further on this issue.

Brandon K. Hatton
Sr. Regional Manager
JUUL Labs Inc.

¹ "Pilot Study of RACS Program Shows Dramatic Improvement in Retailer Compliance." *JUUL Newsroom*, JUUL Labs Inc, 10 Oct. 2019, newsroom.juul.com/pilot-study-of-racs-program-shows-dramatic-improvement-in-retailer-compliance/.

CAA_Oppose_sb3

Uploaded by: Lininger, Brett

Position: UNF

**Written Testimony from the
Cigar Association of America, Inc.
Senate Bill 3**

**Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation
and Regulation**

Position: Oppose

Dear Chairman Guzzone and Members of the Senate Budget & Taxation Committee,

We appreciate the opportunity to submit testimony in opposition to SB 3.

The Cigar Association of American, Inc. (CAA) is the national trade association of cigar manufacturers, importers, and distributors as well as major suppliers to the industry. Originally established in New York City in 1937 as Cigar Manufacturers of America, the CAA's roots date back to predecessor organizations prior to 1900.

We respectfully oppose the very significant tax increase imposed on premium cigars from the current 15% to 86%. The easiest way to demonstrate the detrimental impact such an increase would have on our industry and consumers of our products is using the example of someone purchasing a \$100 box of premium cigars. Under current law, the tax would be \$15 which is a significant amount of money added to the purchase. Under the proposed law, the tax would be \$86, making the purchase incredibly cost prohibitive.

We also oppose this legislation's proposed increase on pipe tobacco for the same reasons stated above. The current tax rate for pipe tobacco is 30% and the proposed is 86%. The logical thing for a Maryland consumer of our products to do is purchase the product in another state.

Our products represent a very small percentage of the tobacco tax revenue generated in Maryland. We believe that such a massive increase on both premium cigars and pipe tobacco would be a nominal increase in revenue assuming no change in purchasing habits by Maryland consumers of such products. In reality, however, we believe there would be a negative net revenue gain because Maryland consumers would go to other states for their products.

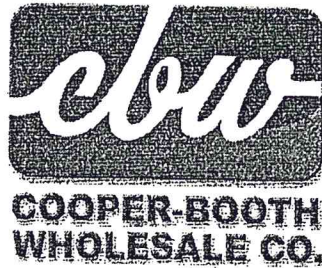
Sincerely,

Brett S. Lininger, Esq.

SB3_Cooper-BoothWholesale_UNF

Uploaded by: Margolis, Barry

Position: UNF



200 Lincoln West Drive • Mountville • Pennsylvania • 17554
Local: 717-285-8000 • Toll Free: 800-992-0592 • Fax: 717-285-8008
www.cooperbooth.com

My name is Barry Margolis and I am the president and owner of Cooper-Booth Wholesale. I would like to thank you for allowing me to address you regarding SB 3. Cooper-Booth Wholesale Company is a distributor serving convenience store retailers in 6 mid-atlantic states one of which is Maryland. We supply a variety of product categories to the retailers the largest being tobacco items such as cigaretttes, cigars, pipe tobacco, snuff and electronic cigarettes.

I am the third generation to operate our family business which employs 284 people. I have worked at our company for 30 years.

We oppose SB3 for a number of reasons:

- 1.Repealing the prohibition on county, municipal, special taxing districts or other political subdivisions will create a reporting and tracking nightmare for wholesalers and retailers.

Having a uniform tax approach across the state makes sense for the state and the business community by creating a level playing field for all businesses.

Having some municipalities with higher or lower taxes will cause the consumer to shift their buying behavior to minimize costs.

Tax inequalities between municipalities will likely increase criminal conduct as an opportunity will be created to acquire product from low tax areas and ship it to high tax areas for resale.

2. We oppose the dramatic increases on the taxes in SB3 for cigarettes, OTP and Electronic cigarettes for several reasons.

Increasing the tax rate on cigarettes, from \$2.00 per pack to \$4.00 per pack will make Maryland more expensive than neighboring states of PA at \$2.60, DE at \$2.10, VA .30 and WV. \$1.20.

Consumers are smart and will purchase cigarettes and other tobacco products where they are the least expensive which will be outside of Maryland. They will also purchase gas and other items on their trips hurting the sales of Maryland stores. Reduced sales reduce corresponding sales and income taxes. If there is less business, the stores will need less labor hours which mean job cuts. Our company will be hurt by the sales reduction in Maryland. Some stores close to the border may have to shut down if the losses are too severe. We have seen this scenario play out in other markets.

3. Increased tobacco taxes can result in less tax revenue for the state. As the taxes increase, the volume decreases as consumers find less expensive alternatives. Some states such as NJ were surprised when the last tobacco tax increase did not come close to the projected revenue and resulted in decreased collections. This same scenario will likely play out here in Maryland.

4. Increased tax rates on tobacco products is associated with increases in various crimes. It encourages cross-border and black markets for lower cost contraband product.

In many markets, our sales people report seeing product being delivered out of cars or white vans. These shadow distributors attempt to operate below the radar of authorities. Some are not properly licensed or registered to do business. They don't report their sales and remit the required taxes. They don't even have computers. The stores buy a few items from their legitimate wholesaler but the bulk is purchased from these undocumented shadow wholesalers that have lower prices on the untaxed products.

Tax enforcement resources are limited and prosecution of the cases is small relative to the size of the problem.

Cigarettes are one of the most stolen consumer products. Higher taxes on cigarettes and tobacco makes theft more attractive. The safety of our delivery drivers and retail clerks is put at risk when one carton of cigarettes has a value of \$95.00. We have had customer stores robbed where they took the cigarettes and vape product and left the cash register. Our cost of insurance against crime will likely increase.

In conclusion, we oppose SB3 since the it will negatively impact our business and the business of our retail customers.

Thank you for your time.

SB 3 unfav mccauley

Uploaded by: mccauley, kirk

Position: UNF



WMDA/CAR Service Station and Automotive Repair Association

January 29, 2020

Chairman: Guy Guzzone
Members of Senate Budget & Taxation Committee

RE: SB 3

Position: In opposition

A \$2.00 tax increase per pack of cigarettes would slow sales to record lows and severely affect the convenience store retailers. The customers would drive into Virginia, West Virginia and Delaware to buy their tobacco and buy their gas at the same time.

5 cartons legally bought in Virginia would turn in to contraband when sold in Maryland. Tax in Maryland on 5 cartons \$200.00 dollars – tax in VA. \$15.00 and say they make 4 trips a day. These people do not age verify, and Maryland makes nothing in tax revenue.

This bill while well meaning has unintended consequences for under the age of 21, contraband sales and criminal activity will be hard to contain. Maryland retailer and their many thousand employees will be hurt.

Please Give SB 3 an Unfavorable Report

Kirk McCauley
301-775-0221
kmccauley@wmda.net

SB3_CenturyDistributors_UNF

Uploaded by: Robbins, Debbie

Position: UNF



Century Distributors, Inc.
15710 Crabbs Branch Way
Rockville, MD 20855-2620
www.centurydist.com
Tel: 301-212-9100 • Fax 301-212-9681

Good Afternoon,

I am here to oppose several changes in Senate Bill 3. I am not here to speak about the effects of smoking and whether or not nicotine is an addictive substance.

Today I am here to tell you about a family business in Montgomery County that I am president of, Century Distributors. What makes us unique, is that we are the only wholesaler of our kind in Montgomery County, with the three owners living and educated in the County. Currently we have 200 employees, a fleet of 45 vehicles, and work out of 100,000 square feet of warehouse space. Most of our employees reside in Montgomery and Frederick Counties.

Century's product mix is 82% Tobacco and 18% other consumer goods to retail. Our revenue is dependent on tobacco and now included in that category is e-cigarettes and vapor. Without the tobacco revenue, I am certain Century would struggle to maintain our current level of viability as a business in Montgomery County and the State of Maryland.

In addition to the revenue Century derives from tobacco, we are the collecting agent for a significant portion of tax revenue for the State. Century is responsible for affixing the Maryland Tax stamp on each pack of cigarettes, currently at a price of \$2.00 per stamp. We also are responsible for reporting and payments for the tax on the "wholesale price" on all OTP plus the Montgomery county Vapor tax.

Today I would like to express my opposition to **repealing the prohibition on a county, a municipal corporation a special taxing district or any other political subdivision from imposing a tax on cigarettes or tobacco products.** By having the State of Maryland be in control of the OTP tax has allowed for an even playing field for all retailers in the State of Maryland. It's one reporting document with one payment from the wholesaler. By repealing this tax it will create disadvantages and confusion as any jurisdiction can impose a tax. In Montgomery County with the Vape tax we found that retailers are buying from wholesalers and manufacturers outside of the state and do not invoice the tax. The shipping agent is suggesting for the retailer to pay the tax-as we know they are not.

It is my understanding that the new tax will include nicotine, filters and rolling papers. We at wholesale will need clarification on these items such as Nicorette Gum, mints and rolling papers made without any tobacco products, such as hemp.

We are in favor of a reasonable, uniform Vape tax but not .86% as suggested in Senate Bill 3 and asking you all to repeal the Montgomery County tax and have the state be in control of all future taxes. Keeping the state in charge of collecting one uniform tax for all jurisdiction has been a positive process for both wholesalers and retailers. We are hoping the new revenue will be slated for educating our youths in Maryland not to start vaping and smoking and to help them to quit through cessation education workshops. We also need to educate our retail community to the importance of carding anyone who purchases tobacco or a nicotine product, and encouraging the retail community to require ID scanning technology and limit the quantities any type of tobacco products that anyone can purchase during a single transaction.

Century has already seen a drop in sales as each of the states and neighboring states have chosen to raise the age of smoking to 21. Flavor e-cigarettes in pod system will be off retailer shelves beginning February 5 at 11:59 pm. Just with the impending cutoff date, we at wholesale, have already seen a decline in sales on flavor pods.

My last point of opposition is if Maryland raises their cigarette tax from \$2.00 to \$4.00 this will only encourage more illegal trafficking of cigarettes from our bordering states. DC has experienced an enormous decline in tobacco sales while the bordering area's such as Loudoun, Fairfax, Arlington, Montgomery and Prince Georges counties have experienced an increase in sales. The volume has just shifted into neighboring jurisdictions. A moderate increase is expected but to double the tax is only going to shift Maryland cigarette sales into our bordering states that already have a significantly lower tax rate of .30 cents per pack in VA, \$1.20 West Virginia, \$2.60 Pennsylvania and \$2.10 in Delaware. Again, a moderate increase is acceptable to mirror our bordering states.

I thank you for allowing me to speak today.

Debbie Robins
President



Century Distributors, Inc.

www.centurydist.com

☎ (301) 212-9100

☎ (301) 212-9681

✉ drobins@centurydist.com

Certified Women-Owned - Since 1999



20-PCA one pager- NIH study-01-13-20

Uploaded by: Roddy, Pat

Position: UNF

SETTING THE RECORD STRAIGHT: NIH & FDA DATA ON PREMIUM CIGAR USE AND PUBLIC HEALTH IMPACT



Premium Cigar Association

513 Capitol Court NE Washington, DC 20002 | 202-621-8064 | www.cigaraction.org

Data from recent government-funded and government-led studies definitively prove that premium cigars are a unique product category that are almost exclusively enjoyed by older adults infrequently.

.02%

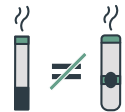
Only **.02%** reported smoking a premium cigar in the past 30 days



Over half (52%) of current premium cigar smokers (25 and older) have a **college degree**—compared to 32% across the US population



The average age of an individual's first premium cigar is **30 years old**—compared to 16.7 years old for cigarettes



There is **no meaningful correlation** between premium cigars and cigarette smoking



The average premium cigar consumer smokes **1.2 days out of every 30**—compared to 29.6 days out of 30 for cigarette smokers



97% of all premium cigar consumers do not smoke daily



No statistically significant increase in risk for smoking related diseases can be found between non-daily premium cigar smokers and non-smokers in general

THE STUDIES:

PATH Study: The Population Assessment of Tobacco and Health (PATH) study is a joint study by the FDA and the National Institutes of Health (NIH) that covers a multi-year cross section of youth and adult. PATH is one of the few government studies that effectively identified and analyzed data specific to premium cigars.

National Longitudinal Mortality (NLM) Study: An article published in the Journal of American Medicine (JAMA) analyzed the NLM study which tracked a population of 350,000 Americans for nearly 3 decades. The article, Association of Cigarette, Cigar, and Pipe Use with Mortality Risk in the US Population, examined the relationship between mortality, risk and use across a range of tobacco products over a population of over 350,00 individuals for nearly 3 decades.

Visit www.cigaraction.org to learn more.

20-SB3- tax-amendment-Maryland form-01-29-20

Uploaded by: Roddy, Pat

Position: UNF

BY: Premium Cigar Retailers Association of Maryland

AMENDMENT TO SENATE BILL 3
(First Reading File Bill)

AMENDMENT NO. 1

On Page 1, in line 12, strike from “repealing” down through and including “products” in line 14

AMENDMENT NO. 2

On page 3, after line 22 insert:

“(o) Pipe tobacco means any tobacco that, because of its appearance, type, packaging, or labeling, is suitable as tobacco to smoke in a pipe”

AMENDMENT NO. 3

On Page 8, in lines 10 and 11, strike the brackets

AMENDMENT NO. 4

On page 10, delete lines 4 through 12 and substitute:

“(b) (1) Except as provided in paragraph (2) of this subsection, the tobacco tax rate for other tobacco products is [30%] **86%** of the wholesale price of the tobacco products.”

(2) (i) In this paragraph, “premium cigars” **AND “PIPE TOBACCO”** [has] **HAVE** the [meaning] **MEANINGS** stated in §16-5-101 of the Business Regulation Article.

(ii) Except as provided in subparagraph (iii) **AND (IV)** of this paragraph, the tobacco tax rate for cigars is [70%] **86%** of the wholesale price of the cigars.

(iii) The tobacco tax rate for premium cigars is 15% of the wholesale price of the premium cigar.

(IV) THE TOBACCO TAX RATE FOR PIPE TOBACCO IS 30% OF THE WHOLESALE PRICE OF THE PIPE TOBACCO

PCRA Senate Bill 3_MD

Uploaded by: Roddy, Pat

Position: UNF

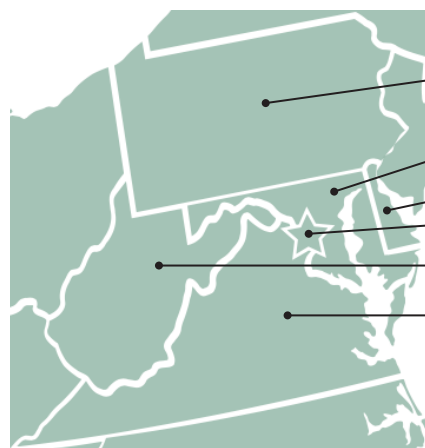
PREMIUM CIGAR RETAILERS OF MARYLAND AND THE PREMIUM CIGAR ASSOCIATION ON SENATE BILL 3



PREMIUM CIGAR RETAILERS OF MARYLAND & THE PREMIUM CIGAR ASSOCIATION ON SENATE BILL 3

The Premium Cigar Retailers of Maryland and the Premium Cigar Association oppose Senate Bill 3. This legislation will drastically increase the inventory wholesale taxes our members pay on premium cigars and pipe tobacco from 15% and 30%, respectively, to 86%. Our businesses are required to pay excise taxes on in-stock inventory up front before it is sold to the customer. It is a struggle for small businesses to pay the existing taxes on premium cigars and pipe tobacco. The state excise taxes we currently pay are on top of a 40% Federal Excise Tax (FET) + a 6% sales tax that is applied at the time of sale on top of both other taxes. **Raising the inventory wholesale tax to 86% will cripple Maryland cigar retailers**, as consumers will travel across state lines (in less than 30 minutes) to save money.

EXCISE TAX RATES IN NEIGHBORING STATES



- Pennsylvania -- 0%
- Maryland -- Proposed 86%**
- Delaware -- 30%
- Washington, DC -- Premium Cigars 0%, Pipe Tobacco 91%
- West Virginia -- 12%
- Virginia -- 10%

Online Businesses that do not meet the thresholds established in House Bill 1301 (2019) -- 0%

PERCENT INCREASE The chart below shows the tobacco tax percent increase for premium cigars and pipe tobacco as compared to mass market products and cigarettes. The tax increase proposed on premium cigars and pipe tobacco is drastically higher than the tax increases on machine made cigars and cigarettes.

Product	Current Excise Tax Rate	Proposed Excise Tax Rate	Percent Increase
Premium Cigars	15%	86%	473.30%
Pipe Tobacco	30%	86%	186.70%
Machine Made Cigars	70%	86%	22.90%
Cigarettes	\$2.00 / pack	\$4.00 / pack	100%

DATA Analyzed data in the NIH & FDA's PATH Study is specific to premium cigars. Other studies often lump in premium cigars with cigarettes, e-cigarettes, non-premium machine made cigars, flavored products, and products sold in C-stores. Data collected in this study demonstrates:



The average age of an individual's first premium cigar is **30 years old** – compared to 16.7 years old for cigarettes

.02%

Of all youth (17 & under) surveyed, **only .02%** reported smoking a premium cigar in the past 30 days



Over half (52%) of current premium cigar smokers (25 and older) **have a college degree** – compared to 32% across the US population

SB 3 - Slides - RWL - Premium Cigars

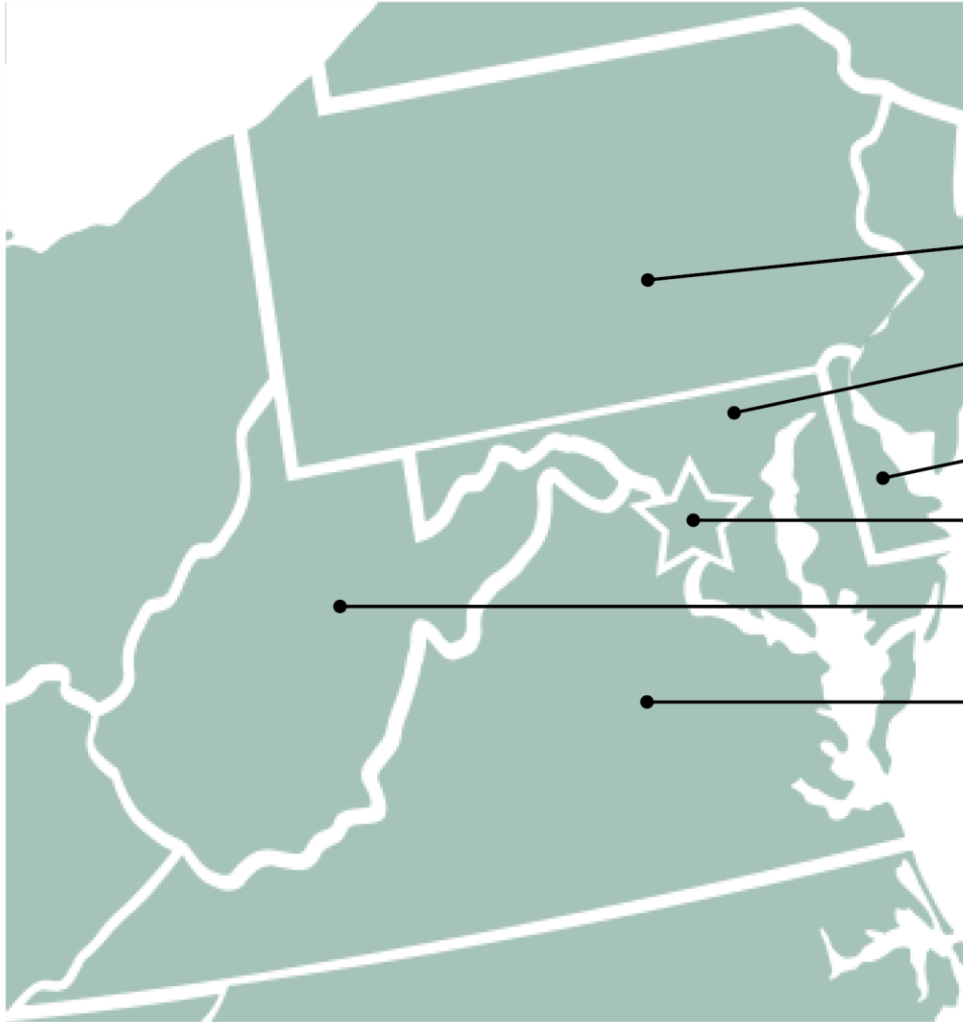
Uploaded by: Roddy, Pat

Position: UNF

Premium Cigar
Excise Tax Rates

Neighboring States and Maryland	Excise Tax Rates Today	Excise Tax Rates under SB 3
DC	0%	0%
Pennsylvania	0%	0%
Virginia	10%	10%
Delaware	30%	30%
West Virginia	7%	7%
Maryland	15%	86%

For more information contact Pat Roddy or Matt Bohle – RWL – 410.269.5066



EXCISE TAX RATES IN NEIGHBORING STATES

Pennsylvania -- 0%

Maryland -- Proposed 86%

Delaware -- 30%

Washington, DC -- Premium Cigars 0%, Pipe Tobacco 91%

West Virginia -- 12%

Virginia -- 10%

Online Businesses that do not meet the thresholds established in House Bill 1301 (2019) -- **0%**

RonWardSB3writtentestimony012920 SW1

Uploaded by: Ward, Ron

Position: UNF

Ronald A. Ward Jr., Esq.
Owner
The Vapers' Edge
8116-A Harford Road
Parkville, MD 21234
443-921-5190 (mobile)
443-725-5251 (work)
thevapersedge@gmail.com (e-mail)

Written Testimony

To: Maryland Senate Budget and Taxation Committee
From: Ronald A. Ward Jr., Esq.
Date: January 29, 2020
Re: Opposition to Maryland Senate Bill 3

I. Introduction

My name is Ronald Ward and I am a life-long resident of Maryland. I have been an electronic cigarette or “e-cigarette” user for over 10 years, a smoke free alternatives activist for over 9 years and have owned an electronic cigarette store in Baltimore County, MD for the past 6 years.

Senate Bill 3, as written, would most certainly, cause myself and many other Vape Shop owners (if not all) to lose our businesses and sink into debt due to the extreme burden of this proposed tax on the wholesale cost of Electronic Smoking Devices (hereinafter “ESDs”). I humbly ask that this Committee issue an unfavorable report for Senate Bill 3.

II. Proposed legislation

Senate Bill 3 imposes an insurmountable tax on ESDs that would, in essence, equal a prohibition of the sale of these products in Vape Shops across the State. 86% of the wholesale price of these products basically eliminates profit margins and would put most Vape Shops out of business.

The repercussions of this tax would also seriously affect the ability of adult (over the age of 21) former smokers to acquire these products from known reputable sources within the State. More importantly, if the Vape Shops in Maryland close, consumers (and the State) will lose a valuable means of restricting youth access to these products. To date, not a single Vape Shop in Maryland has sold to underage persons in FDA compliance check inspections of tobacco product retailers (stings). The continued existence of Vape Shops would ensure that the State receives its taxes and that youth are denied access to the products through compliance checks with various State and Federal agencies.

If this prohibitive tax were imposed, residents of Maryland would either purchase these products in neighboring states, buy the products illegally online (domestically and/or internationally), or purchase the products from an untaxed black market. This would only serve to deny the State of its sought after tax and give youth the ability to purchase these products “under the radar”. The State agencies would be completely ineffective, with their current enforcement power, in dealing with these “bad actors”, and such a high tax rate at the retail level would only worsen the existing problem of youth use of ESDs, as they quickly transition to cheaper black market products.

Furthermore, on page 9, lines 1-27, the bill allows for consumers in Maryland to purchase ESDs from outside of the State and transport them into the State without taxation.

This bill also calls for a “floor tax” on existing ESD inventory at Vape Shops. Page 18, lines 13 to 16 states “all electronic smoking devices used, possessed, or held in the State on or after July 1, 2020, by any person for sale or use in the State shall be subject to the tax on electronic smoking devices as enacted under this Act”. This tax would force retailers of ESDs to pay the State 86% of the cost of their existing inventory. Remarkably, this section also states that CONSUMERS would also bear this tax (“by any person for sale or use”). Vape shops are small cottage businesses whose equity is significantly tied up in their inventory. Also, Vape Shops, unlike convenience stores, gas stations, etc., have no other products for sale but ESDs. Personally, this would cause my business to suffer an irreparable financial burden.

V. Conclusion

I recommend that the Senate Budget and Taxation Committee issue an unfavorable report for Senate Bill 3. This bill would cause an undue and unreasonable burden on Vape Shops across the State and open up a dangerous black market. I would like to speak more at length with the Members of this Committee on this issue. If any Senator has any questions or concerns, please feel free to contact me.

Thank you for your time and attention to this matter.

SB3_Testimony_Scott_Webber_012920

Uploaded by: Webber, Scott

Position: UNF

Scott Webber

Scott@VAPESociety.org

Written Testimony Regarding

SENATE BILL 3

IN OPPOSITION

ORAL TESTIMONY

SUPPORTING EXHIBITS

1. New York Times Article, *What If A Vaping Tax Encouraged Smoking?*
2. Minnesota Study Showing 95% Vaping Tax Increased Smoking By 8.1%
3. Truth Initiative Fact Sheet – Minnesota
4. Truth Initiative Fact Sheet – Maryland
5. Tax Foundation Report On Vaping Taxes
6. New England Journal Of Medicine Article, *Differential Taxes*
7. Public Health England Study, E-Cigarettes Are About 95% Safer Than Smoking
8. Public Health England Study – Evidence Update 2019
9. 2nd Hand Vapor Analysis

SB3 Vaping Tax Hearing January 29, 2020

Good Afternoon Chairman Guzzone and fellow members of the Committee.

My name is Scott Webber, proud MD citizen since 1986, currently living in Bethesda.

I am the Founder, along with my son, of the Vaping Awareness Public Education [V.A.P.E.] Society, a Non-Profit research and political advocacy organization formed to address the scourge of smoking, focused on the benefits - and risks - of vaping.

On the topic of vaping, I do consider myself an expert. I have been intensely researching the vaping universe since 2013. I have read hundreds of articles, reports, and studies on the topic, compiling multiple thousands of hours of combined time in this space. I probably know as much about vaping as anybody in the entire State. I tell you this, not to brag, but rather, to simply convey that I know what I am talking about because I have done my homework.

Accordingly, I can comfortably say SB3, as currently written - most notably its draconian 86% tax rate, even on all existing vaping products - will have VERY bad outcomes for the State and its citizens, both from a public health perspective, and certainly from a fiscal perspective. It is based on extremely bad science, is flagrantly dishonest, will likely result in the closing of many dozens of small businesses, actually reducing State revenues by the millions of dollars, while simply moving vaping sales out-of-state, to the Internet, or most likely, to the black market. At the same time, current research shows that invoking tax parity among vaping and smoking products, as this bill proposes, actually leads to higher smoking rates, as cigarettes become both easier to obtain, and relatively less costly, and does nothing to curb youth vaping.

I have submitted supporting documentation in my testimony packet that highlights what happened in MN after they imposed a similar 95% vaping tax and decimated their vaping industry. Smoking rates ROSE more than 8%, and their youth vaping rate is 50% higher than in MD.

SB3 will create a situation, just like in MN, where you are intentionally destroying small business vape shops and forcing users to either go black market, or the internet. As a result, the State will lose the sales tax, employment tax, income tax, and real estate revenues, AND the ability to monitor, regulate, and enforce these laws because the Comptroller can't walk in on the internet to test compliance. There is NOTHING smart about this legislation, and everything destructive and counterproductive to the intended outcome.

As evidenced in my packet, Vaping is 95-99% less harmful than smoking, and to give the two parity, and tax them equally, is nothing short of misguided Legislative malpractice.

I'm not ignoring there are risks, but the benefits SOOO outweigh the risks, that no intelligent, or compassionate, or reasonable person - who has done their research - can logically deny the overwhelming superiority of vaping over smoking.

I would like to help put together a better bill, but one based on honesty, science, responsibility, fairness, and reality. I am offering myself as a resource to you and your staff to that end, but first, we need to stop this misguided legislation from inadvertently killing thousands of Maryland citizens while costing us millions of dollars.

Thank you.

1. New York Times Article,
*What If A Vaping Tax
Encouraged Smoking?*

What if a Vaping Tax Encouraged Cigarette Smoking?

Policies aimed at youth vaping may have negative effects on adult smokers.



By Margot Sanger-Katz

Jan. 6, 2020



Christian Bruna/EPA, via Shutterstock

The surging popularity of vaping among young Americans is driving lawmakers to use one of their favorite tools to discourage unwanted behavior: taxes.

In December, the Massachusetts legislature passed a 75 percent tax on all e-cigarettes. Twenty states have already done so, along with the District of Columbia, and several more are considering similar policies. The House Ways and Means Committee passed a bill last year that would make federal tobacco taxes apply equally to cigarettes and vaping products that deliver nicotine, the addictive drug in tobacco.

Taxes have proved effective in reducing cigarette smoking. But what if a vaping tax actually encouraged smoking instead of reducing it?

A new study suggests that these new taxes have the potential to do just that — by discouraging adult smokers from considering nicotine vaping, a safer way to ingest nicotine, or encouraging vapers to switch to cigarettes instead. The study, published by the National Bureau of Economic Research, examined what happened in Minnesota, one of the first states to impose a steep vaping

tax (95 percent). The effect was that declines in smoking there leveled off, while they continued to fall in similar states that hadn't imposed such taxes.

"By decreasing the extent to which people use e-cigarettes, you decrease quitting of conventional cigarettes," said W. Kip Viscusi, a professor of law, economics and management at Vanderbilt University, who was not involved in the research but has studied tobacco policy extensively.

The research was conducted by Henry Saffer, Michael Grossman, Daniel L. Dench and Dhaval M. Dave, who used data from a detailed census survey about tobacco use to measure what happened to the smoking rate. Their goal was to find out whether e-cigarettes helped adult smokers quit smoking cigarettes, which are linked to a wide range of illnesses and are estimated to contribute to one in five deaths in the United States.

It's possible, they figured, that vaping might encourage more people to smoke, by providing a new way to try nicotine for the first time. It might also cause people who might have quit to just keep smoking, by providing a second way to get nicotine where smoking is restricted. The natural experiment of the Minnesota tax helped them measure what some overall effects really were.

When Minnesota made vaping more expensive, they found, smokers kept smoking instead of switching to e-cigarettes. A longstanding decline in adult smoking in the state slowed way down, while smoking in states that hadn't imposed big vaping taxes continued to fall. The researchers concluded that making e-cigarettes more expensive discouraged Minnesota smokers from trying them and caused fewer of them to switch away from smoking. By measuring the difference in the trends, the researchers estimated that Minnesota caused around 32,000 more adults to keep smoking cigarettes.

The paper didn't include close measures of whether people who stopped smoking completely quit nicotine, the most healthful possible outcome for smokers. While it is clear that most vaping products are safer than cigarettes, it is not yet clear by how much. New research is emerging that vaping products may cause some long-term lung and heart disease. And a recent poisoning outbreak associated mainly with THC, in which 55 people died, suggests that there can be acute health risks for some users.

But in general, nearly all public health researchers agree that it's better to switch to regulated e-cigarettes than to continue smoking cigarettes. They tend to describe a move from smoking to vaping as a form of "harm reduction," a more safe choice, even if it is not totally safe.

Some tobacco opponents were skeptical of the study's findings. Matthew L. Myers, the president at the Campaign for Tobacco-Free Kids, which endorses high vaping taxes, said the Minnesota results could be explained by unmeasured differences between that state and the states the researchers used for comparison. He pointed to other research that shows that only a fraction of adult smokers who start vaping ever switch over entirely.

"One has to be skeptical that e-cigarette use, including taxes on e-cigarettes, have been powerful enough in Minnesota or anywhere to actually have a meaningful measurable effect on adult cessation rates," he said.

Mr. Myers supports high taxes on e-cigarettes primarily because he sees them as a good way to discourage young people from starting to use nicotine in the first place. Since vaping products have entered the market in the United States, youth use of them has increased rapidly, outpacing a simultaneous decline in cigarette smoking among young people. Federal officials have described the development as a public health crisis.

The result has been a flurry of policy action to regulate vaping. In December, Congress passed a law that raises the legal age to purchase any tobacco product to 21. On Thursday, the Food and Drug Administration said it would crack down on the manufacturers of a subset of nicotine vaping devices that are sold in flavors other than tobacco or menthol. These measures are also intended to prevent youth vaping.

Strong evidence from states suggests that raising the tobacco purchasing age reduces smoking among both young adults and younger teenagers, who are less likely to have friends who can buy them cigarettes. Flavored products are particularly popular among younger vapers, according to surveys.

But Mr. Saffer, one of the Minnesota paper's authors, says his results suggest that a tax may be a blunt tool that reduces youth vaping at the expense of decreasing the number of adults who quit smoking.

"The research shows that e-cigarette taxes would be bad for adult smokers," he said. "To stop youth use, we know there are other alternatives."

Teen vaping rates have risen sharply in Minnesota, too, despite the large tax on the products.

Abigail Friedman, an assistant professor of health policy at Yale, and an author of two studies on state Tobacco 21 laws, said policymakers needed to strike a delicate balance in regulating e-cigarettes. Regulations need to deter teen vaping, she said, but also do as much as possible to help adult smokers switch to safer alternatives.

"We need to make it attractive as an alternative, and we need to make it unattractive otherwise," she said.

After reading the Minnesota paper, she concluded that broad vaping taxes had failed the first test.

2. Minnesota Study Showing
95% Vaping Tax Increased
Smoking By 8.1%

NBER WORKING PAPER SERIES

E-CIGARETTES AND ADULT SMOKING:
EVIDENCE FROM MINNESOTA

Henry Saffer
Daniel L. Dench
Michael Grossman
Dhaval M. Dave

Working Paper 26589
<http://www.nber.org/papers/w26589>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
December 2019

This project was funded by grant number R01-DA039968 entitled “The Economics of Electronic Nicotine Delivery Systems: Advertising and Outcomes”, from the National Institute of Health to the National Bureau of Economic Research, Inc. This study employs data from the A.C. Nielsen Company, which was purchased from the Kilts Center of the University of the Chicago Booth School of Business. Results are calculated (or derived) based on data from The Nielsen Company (US), LLC and marketing databases provided by the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business. Information about the data and access are available at <http://research.chicagobooth.edu/nielsen/>. We are grateful to the A.C. Nielsen Company and the Kilts Center for providing the data and for instructions in its use. The conclusions drawn from the Nielsen data are those of the researchers and do not reflect the views of Nielsen. Nielsen is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein. Copyright © 2017. The Nielsen Company (US), LLC. All Rights Reserved. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2019 by Henry Saffer, Daniel L. Dench, Michael Grossman, and Dhaval M. Dave. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

E-Cigarettes and Adult Smoking: Evidence from Minnesota
Henry Saffer, Daniel L. Dench, Michael Grossman, and Dhaval M. Dave
NBER Working Paper No. 26589
December 2019
JEL No. I12,I18

ABSTRACT

E-cigarettes use a battery powered heater to turn a liquid containing nicotine into a vapor. The vapor is inhaled by the user and is generally considered to be less harmful than the smoke from combustible cigarettes because the vapor does not contain the toxins that are found in tobacco smoke. Because e-cigarettes provide an experience that is very similar to smoking, they may be effective in helping smokers to quit, and thus the availability of e-cigarettes could increase quit rates. Alternatively, e-cigarettes may provide smokers with a method of bypassing smoking restrictions and prolong the smoking habit. There is very little causal evidence to date on how e-cigarette use impacts smoking cessation among adults. Although there is no federal tax on e-cigarettes, a few states have recently imposed heavy taxes on them. We provide some of the first evidence on how e-cigarette taxes impact adult smokers, exploiting the large tax increase in Minnesota. That state was the first to impose a tax on e-cigarettes by extending the definition of tobacco products to include e-cigarettes. This tax, which is 95% of the wholesale price, provides a plausibly exogenous deterrent to e-cigarette use. We utilize data from the Current Population Survey Tobacco Use Supplements from 1992 to 2015, in conjunction with a synthetic control difference-in-differences approach. We assess how this large tax increase impacted smoking cessation among adult smokers. Estimates suggest that the e-cigarette tax increased adult smoking and reduced smoking cessation in Minnesota, relative to the control group, and imply a cross elasticity of current smoking participation with respect to e-cigarette prices of 0.13. Our results suggest that in the sample period about 32,400 additional adult smokers would have quit smoking in Minnesota in the absence of the tax. If this tax were imposed on a national level about 1.8 million smokers would be deterred from quitting in a ten year period. The taxation of e-cigarettes at the same rate as cigarettes could deter more than 2.75 million smokers nationally from quitting in the same period. The public health benefits of not taxing e-cigarettes, however, must be weighed against effects of this decision on efforts to reduce vaping by youth.

Henry Saffer
National Bureau of Economic Research
5 Hanover Square, 16th Floor
Suite 1602
New York, NY 10004-2630
hsaffer@gc.cuny.edu

Daniel L. Dench
The Graduate Center, CUNY
365 Fifth Avenue
New York, NY 10016
danieldench1@gmail.com

Michael Grossman
National Bureau of Economic Research
5 Hanover Square, 16th Floor
Suite 1602
New York, NY 10004-2630
and City University of New York
Graduate Center
and IZA
mgrossman@gc.cuny.edu

Dhaval M. Dave
Bentley University
Department of Economics
175 Forest Street, AAC 195
Waltham, MA 02452-4705
and IZA
and also NBER
ddave@bentley.edu

1. Introduction

A number of battery-powered devices on the market today deliver nicotine to the user in an aerosol or vapor form and are referred to as electronic cigarettes (e-cigs). Use of e-cigs is often called vaping in contrast to smoking conventional combustible cigarettes.¹ Because e-cigs are a relatively new product, there is no research on the long-term health effects of use. Nevertheless, e-cigs are generally considered to be less harmful than combustible cigarettes because the vapor produced by them does not contain the toxins and nitrosamines that are found in tobacco smoke (Goniewicz et al. 2013; Czogala et al. 2014). The U.S. National Institute on Drug Abuse states that because e-cigs deliver nicotine without burning tobacco, they appear to be a safer, less toxic alternative to conventional cigarettes.² Public Health England, a public health agency within the U.K.'s Department of Health and Social Care, has taken a more definitive position and stated that e-cigs are significantly less harmful to health and are about 95 percent safer than smoking (McNeil et al. 2015).

The public health debate surrounding the regulation of e-cigs has centered on harms to non-smoking adolescents and harm reduction for adults who smoke. For adolescents the concern is that e-cig use may have negative effects on cognitive development, result in long term nicotine addiction, and may lead to conventional cigarette use. For those adolescents who wish to experiment with nicotine, e-cigs may be a safer option than cigarettes and may have contributed to the decline in adolescent smoking. E-cigs may be effective in helping adult smokers to quit the habit. Currently between 14-19 percent of adults continue to use cigarettes (2017, National Health Interview Survey, NHIS and National Survey of Drug Use and Health, NSDUH), and interest in quitting smoking remains high. Almost two-thirds of current smokers report that they want to quit smoking completely, and among those who expressed such an intent about 60 percent follow-up with an actual cessation attempt (NHIS 2015). However, most

¹ All e-cigs have certain components in common, including a power source or battery that heats a liquid (usually propylene glycol) containing nicotine into an aerosol that is then inhaled by the user.

² See <https://www.drugabuse.gov/publications/drugfacts/electronic-cigarettes-e-cigs>.

attempts end in relapse, and less than one in ten smokers overall successfully quit in the past year (Babb et al. 2017).³ E-cigs may be an effective substitute for smoking, particularly for smokers who have had a difficult time quitting in the past through other methods. Thus, the accessibility of e-cigs might enhance smoking cessation rates. On the other hand, it is also possible, as some contend, that e-cig use may adversely impact smoking cessation by undermining smoking restrictions and providing smokers with an alternative nicotine source for situations where smoking is not permitted.

This paper focuses on the potential for harm reduction for adults. There is very little causal evidence to date on how e-cig use impacts smoking cessation among adults. Acknowledging the potential for e-cigs to help smokers quit along with limited empirical evidence on this issue, the Food and Drug Administration (FDA) has thus far refrained from regulating their access for adults. For instance, unlike conventional cigarettes, e-cig manufacturers continue to be able to advertise in broadcast media, and the FDA has resisted banning or restricting such advertising. The FDA has also postponed for now the requirement that e-cig manufacturers submit marketing applications, a condition which would otherwise have effectively banned all e-cig products from the market until the FDA reviewed and approved the applications.⁴

In contrast to the FDA's relatively more accommodative stance at least with respect to adult access, a growing number of state and local governments have taken steps to more forcefully regulate the sale, marketing, and use of e-cigs. Attorneys General for 29 states signed a letter in 2014 urging the FDA to regulate the sale of e-cigs and restrict its advertising and marketing.⁵ By the time the federal e-cig minimum legal sale age law of 18 went into effect in August of 2016, all states but two had a similar law in place. As of June 2019, 15 states

³ In general, less than one in four cessation attempts is successful. For the average smoker, the expected number of quit attempts before quitting smoking successfully has been estimated as ranging from 6 to 30 attempts (Chaiton et al. 2016).

⁴ While the FDA continues to make e-cigs available and accessible in the market for adults, it has taken a more aggressive approach towards regulating access for youth and educating them about the dangers of e-cigs.

⁵ See https://ag.ny.gov/pdfs/FINAL_AG_FDA_Comment_Re_Deeming_Regulations.pdf.

raised their e-cig minimum purchase age to 21. An increasing number of states are also requiring licenses for retail sales of e-cigs and are expanding their smoking bans and clean indoor air laws to include vaping. Several states have also banned sales of flavored e-cigs and Walmart has announced that it will end sales of all e-cigs.

There is no federal tax on e-cigs, unlike on cigarettes and other tobacco products. With e-cigs being relatively new, states have struggled to determine whether and how to tax them. As of the end of 2018, ten states (in addition to several cities and counties) had started to levy taxes on e-cigs or the liquid nicotine used with e-cigs. Nine additional states began to do so in 2019 and two more will follow suit in 2020 (Campaign for Tobacco-Free Kids 2019). Given that one aspect of tobacco taxes is to improve public health and reduce tobacco-related health expenditures, there exists a key knowledge gap in the literature to inform policymakers contemplating taxes on e-cigs. It remains unclear how e-cig taxes impact smoking cessation. If higher e-cig taxes dissuade adult smokers from shifting to vapor products and from quitting smoking in the process, the forgone harm reduction must be taken into account; this would provide justification for taxing e-cigs less than traditional tobacco products, if at all. Similarly, if e-cig taxes promote smoking cessation, by making it more difficult for smokers to circumvent smoking restrictions and by reducing the overall addictive stock of nicotine, then this would provide additional rationale for levying taxes on e-cigs at the federal and state levels.

Our study directly addresses this knowledge gap, and makes several contributions in the process. We provide some of the first rigorous evidence on how taxing e-cigs impacts smoking cessation among adults. The empirical analysis exploits the large e-cig tax hike in Minnesota (MN), the first state to tax e-cigs, in conjunction with a synthetic control difference-in-differences approach to identify plausibly causal effects of e-cig use on adult smoking. In addition to providing direct estimates of the cross-effects of e-cig taxation, we also add to the very limited evidence base on the substitution and complementarity between e-cigs and cigarettes. We find consistent evidence that higher e-cig taxes increase adult smoking rates and reduce quits, implying that e-cigs are a likely substitute for conventional cigarettes among current smokers.

The remainder of the paper proceeds as follows. The next section briefly provides some background on the previous literature. Section 3 details the data and the empirical methods that we apply to this question, following by a discussion of the results. The concluding section summarizes our findings and places them in context along with some policy implications.

2. Background

Much of the literature that has considered the relationship between e-cig use and smoking among adults has relied on correlational evidence and not addressed the endogeneity between both behaviors.⁶ The evidence from these sets of studies should be interpreted as descriptive and is fairly mixed. Several studies find that e-cig use is associated with reduced smoking. Zhu et al. (2017) analyze data from the Tobacco Use Supplements of the Current Population Surveys. They find that the population smoking cessation rate for 2014-2015 was significantly higher than for 2010-2011, coinciding with an increase in e-cig use. Exploiting information on e-cig use from the 2014-2015 wave, they also find that e-cig users were more likely than non-users to attempt to quit and more likely to succeed in quitting (defined as abstinence for 3 months or longer). Zhuang et al. (2016) conduct a two-year follow up of 2097 adult smokers, who were initially sampled using GfK's Knowledge Panel in 2012. Comparing short-term e-cig users (used in 2012 but not 2014) vs. long-term e-cig users (used e-cigs in both 2012 and 2014) vs. non-users, they find that long-term e-cig users had a higher quit attempt rate as well as a higher successful quit rate relative to both non-users and short-term e-cig users. A common pattern in tobacco consumption is dual cigarette and e-cig use, and there is some concern that prolonged dual use might impede or postpone the attempt to quit smoking. Zhuang et al. (2016) do not find, however, that dual use is associated with a lower smoking cessation rate.

⁶ In this case, the endogeneity can reflect both reverse causality with e-cig use affecting smoking and vice versa as well as selection on unobserved factors (for instance, a propensity for addictive behaviors, risk tolerance, time preference) that may affect participation in both behaviors.

Brown et al. (2014) assessed the effectiveness of e-cigs when used to aid smoking cessation, in comparison with nicotine replacement therapy (NRT) and with unaided quitting. They rely on a cross-sectional survey of the English population that includes 5863 adults who had smoked within the previous 12 months and made at least one quit attempt during that period with either e-cigs, NRT or no aid. Their results show that e-cig users were more likely to report smoking abstinence (defined as non-smoking status at time of survey) than either those who used NRT or no aid.

Grana, Benowitz, and Glantz (2014) contend that although e-cig use may reduce smoking, it also may inhibit complete smoking cessation. They note that while some smokers cite a desire to quit smoking through the use of e-cigs, other common reasons given by smokers who also vape are to circumvent smoke-free laws and to cut down on conventional cigarettes. This may reinforce dual use patterns and delay or deter quitting. Kalkhoran and Glantz (2016) provide a review of papers that attempt to assess the relationship between e-cig use and smoking cessation by adult smokers. The question they are interested in is whether cigarette smokers who report e-cig use have a higher or lower probability of quitting smoking. Summarizing evidence from 38 studies, and performing a meta-analysis of 20 studies with control groups (most of these are cross-sectional or cohort studies), they conclude that the odds of quitting cigarettes were about 28 percent lower among e-cig users compared with non-users. Weaver et al. (2018) conduct a prospective cohort study, recruiting 1284 U.S. adult smokers in mid-2015 and following up with them about one year later. The odds of quitting smoking were found to be significantly lower among smokers who used e-cigs at baseline compared to smokers who did not vape. Smokers who had used e-cigs at some point during the study period were also less likely to quit smoking (defined as abstinence for at least 30 days prior to follow-up) relative to non-users. These studies are correlational rather than causal and cannot account for unmeasured confounders.

Huang et al. (2014), Zheng et al. (2016, 2017), and Tuchman (2019) provide evidence of causal effects of e-cigarette use on cigarette smoking in a reduced form setting. They do so by

examining the impact of changes in the price of one good on the use of the other one. If, for example, the two goods are substitutes (a reduction in the price of one leads to a reduction in use of the other) that would suggest that an increase in e-cigarette use causes a reduction in smoking. All four studies employ Nielsen ScanTrack, which contains store scanner data at the point of sales, from 2009 or 2010 through 2012, 2013, or 2015 depending on the study. Except for Zheng et al. (2016), these studies find that the two goods are substitutes.

Several problems arise in this line of research. Price is computed by dividing sales revenue by sales in physical units. This introduces bias in the regression models because price and sales are not measured independently. Indeed, the own-price elasticity of demand for cigarettes in these studies usually is larger than one in absolute value, which is much larger than any of those in the previous literature reviewed by Cawley and Ruhm (2012). This problem aside, the demand functions may be subject to simultaneity bias due to the presence of an upward-sloping supply function in a competitive model or due to the behavior of firms in oligopolistic markets. Moreover, given that e-cigs are a new product, retailers may have incentives to begin to sell the product in areas where demand for it is expected to be substantial. Finally, e-cig sales in 2009, 2010, and 2011 were very limited. Consequently the price data for e-cigs in those years may be inaccurate.

Cotti, Nesson, and Teft (2018) overcome some of the issues just discussed by exploiting within-state variation in cigarette excise taxes to measure effects on e-cig and cigarette use from the Nielsen Homescan Panel, which contains actual purchases made by households, from 2011 through 2015. Cigarette taxes are not subject to measurement error and can reasonably be assumed to be exogenous in cigarette and e-cig demand functions. They find that higher cigarette taxes decrease both cigarette and e-cig purchases, suggesting that cigarettes and e-cigs are complements. Because e-cigs are a relatively new product, the sample period is short, which limits the identifying variation in cigarette taxes. This may have contributed to their finding of very large elasticity estimates (-1.9 to -2.6) of purchases of e-cig refills and starter kits with respect to the cigarette excise tax. Furthermore, because these are tax elasticities, the

implied elasticities with respect to cigarette price are higher in magnitude. This study does not directly consider effects of e-cig taxes.

Pesko, Courtemanche and Maclean (2019) extend the previous study by examining the effects of e-cigarette taxes as well as those of cigarette taxes on smoking and vaping participation by adults. They employ a dichotomous variable for the adoption of any type of tax on e-cigs, which conflates very different tax schemes (ad valorem vs. excise; very small and relatively large taxes). These different approaches to state e-cig taxation policy have resulted in a trivial effect on price in some states and a large effect on price in other states. Pesko et al. (2019) use data from the Behavioral Risk Factor Surveillance System and the National Health Interview Surveys between 2011 and 2017 in conjunction with a difference-in-differences model. This sample period excludes Minnesota, which had the largest e-cig tax, from the within-state identifying variation because the state had a tax on e-cig in place for the entire sample period. Moreover, it ignores the extremely large e-cig excise tax hike that occurred in that state in 2013 (see the next section for details). The study adds two more years to the data used by Cotti, Nesson, and Teft (2018). Unlike Cotti, Nesson, and Teft (2018), Pesko et al. (2019) find that higher cigarette taxes increase adult e-cig use but find no effects of their-cig tax measure.

Abouk et al. (2019) use US birth records 2013 to 2017 to examine the effect of e-cig taxes on pre-pregnancy smoking and prenatal smoking. They find that e-cig taxes increase pre-pregnancy and prenatal smoking, implying that e-cigs and traditional cigarettes are substitutes among pregnant women. The e-cigarette tax measures are more refined than those in the one by Pesko et al. (2019). Abouk et al. (2019) do not, however, capitalize on the potential evidence contained in the quasi-natural experiment contained in the Minnesota experience and focus on a small segment of the population.⁷

⁷ Abouk et al. (2019) exclude Minnesota from most of their analysis because it enacted an e-cigarette tax prior to the beginning of their sample year. When they start the study period in 2011 and include Minnesota, the state provides no within-state variation in one of their two wholesale tax measures: the presence of a tax. They do account for the Minnesota tax hike in 2013 (see the next section for details) but assume that Minnesota can be treated in the same manner as the seven other places (the District of

A few studies have conducted randomized control trials (RCT) to test the effectiveness of e-cigs vs. other modes in promoting smoking cessation. Bullen et al. (2013) conducted an RCT that included 657 smokers who wanted to quit. They were randomized into groups which were given e-cigs, placebo e-cigs (without any nicotine), and NRT. The trial lasted for 12 weeks, and the participants were also given limited counseling. Abstinence rates, verified chemically at six months, were 7.3% for the e-cig arm, 4.1% for the placebo e-cig arm, and 5.8% for the NRT arm. Thus, e-cigs resulted in a greater likelihood of quitting, and were more effective than both placebo e-cigs and NRT, though the differences were not statistically significant. For those who failed to quit, the median time to relapse was twice as long for participants using e-cigs relative to both placebo e-cigs and NRT. Hajek et al. (2019) conducted an RCT with 886 participants who had sought assistance from the National Health Service in the U.K. to quit smoking. The 1-year abstinence rate was 18.0% for the e-cig group, as compared with 9.9% in the nicotine-replacement group. They concluded that e-cigs were more effective for smoking cessation than nicotine replacement therapy, when both products were accompanied with behavioral support. While RCTs can provide more definitive causal evidence, they are limited in their capability of assessing population-level effects under patterns of real-world use and conditions. Furthermore, they do not provide any information on the effects of policies such as e-cig taxation.

Our study provides some of the first evidence of the effects of e-cig taxes on smoking cessation among adults. We also provide the first estimate of the price elasticity of smoking participation with respect to the price of e-cigs implied by the impact of the first imposition of and subsequent large increase in an excise tax on e-cigs in the U.S. in the literature. This estimate is an important input towards evaluating the costs and benefits of e-cig taxation and the harm reduction debate. In the process, we add to the limited literature on how e-cig use is impacting

Columbia; Montgomery County, Maryland; and five counties in Alaska) that imposed e-cigarette taxes as a percent of wholesale prices during their sample period. All of these places did so for the first time in 2015 or 2016, which was much later than Minnesota. Moreover, none of them is a state.

adult smokers, drawing on the Minnesota tax hike as a natural experiment to drive exogenous variation in e-cig use.

3. Approach

The objective of this study is to provide plausibly causal evidence of the effects of e-cig use on adult smoking. In the empirical work, e-cig taxes serve as a lever that affects e-cig use. E-cig prices are less suitable because of their potentially endogeneity with use. The policy chosen must also have sufficient statistical power to change e-cig use in order to be able to identify downstream effects on smoking. We therefore rely on the large e-cig tax imposed in Minnesota (MN). Nicotine taxes are arguably exogenous to use because they are typically employed by states to raise revenue from products that are seen as harmful and thus face less resistance than taxes on other consumer goods.

MN was the first state to impose a tax on e-cigs by expanding its definition of “tobacco products” to include electronic cigarettes. The taxation began on August 1st 2010 (Public Law Health Center) with a tax rate of 35 percent. This tax was raised by another 60 percentage points to a total tax rate of 95 percent of the wholesale price on July 1st 2013. This large tax hike on e-cigs had a substantial impact on prices. Based on retail sales from the Nielsen Scanner Data, e-cig retail prices of replacement pods in 2012 were \$3.25 in MN (Figure 1).⁸ Dave and Saffer (2013) and studies they cite indicate that tobacco product retailers apply a markup of approximately 1.33 to the wholesale price in setting the retail price. That estimate implies a 2012 wholesale price inclusive of tax of a replacement pod of about \$2.44 inclusive of tax and exclusive of tax about \$1.80. The 95 percent tax on \$1.80 would equal a wholesale price of \$3.52 and a retail price of \$4.69. The actual retail price in MN in 2015 was \$4.76, which suggests that our estimate is a close first-order approximation.⁹

⁸ E-cig sales in 2010 and 2011 were very limited and consequently the price data for e-cigs in these years may be inaccurate.

⁹ We assume that the retail market for e-cigarettes can be characterized by the pure version of the Cournot model of oligopoly (Tirole 1988; Scherer and Ross 1990). Hence the retail price of e-cigarettes

The timing of the MN e-cig tax is also important for our analysis. In 2010 e-cigs were virtually unknown and sales were still relatively low in 2013. A new product needs to be heavily advertised and moderately priced to attract potential consumers. Thus, the MN tax impacted e-cigs at a particularly vulnerable time and probably had a greater impact than a similar tax imposed on a mature product. The timing of the MN e-cig tax hike further permits a sufficient time window to be able to observe any changes in smoking rates. A period of two or more years following the tax increase may be necessary because the addictive nature of smoking can lead to dynamics in the consumer response to new incentives and new potential substitutes. In the presence of such lagged effects and given the delay in data availability on smoking, we are necessarily limited to analyzing tax changes that were enacted prior to 2016. The states that had levied taxes on e-cigs prior to 2016 are North Carolina (6/2015), Louisiana (7/2015) and Minnesota.¹⁰ The taxes in North Carolina and Louisiana are only five cents per milliliter of e-liquid. To put these taxes into perspective, a replacement pod which supplies roughly the nicotine equivalent of a pack of cigarettes cost about \$3.47 in a state with no tax in 2015. The five cents per milliliter tax adds about four cents to the retail price which is trivial, leaving the North Carolina and Louisiana taxes under-powered to detect changes in smoking rates and thus empirically irrelevant. After the tax hike in MN in 2013, which raised its total tax rate to 95

is given by $P = [\varepsilon/(\varepsilon - h)]C$, where ε is the market price elasticity of demand, h is the Herfindahl index, C is the sales-share weighted average of each retailer's average cost (assumed to be independent of pods sold) of selling e-cigarettes, and $\varepsilon > h$. Define m as $\varepsilon/\varepsilon - h$; assume that ε and h are constant; and note that $m > 1$. Average cost is given by $C = W^*(1 + r) + T$, where W^* is wholesale price exclusive of tax, r is the wholesale tax rate and T denotes other costs incurred by the retailer per unit of sales. Hence $P = m[W^*(1 + r) + T]$. Given these assumptions, the tax pass-through (the increase in P due to an increase in r with W^* held constant) exceeds one: $\partial P/\partial r W^* = m$. Let W be the wholesale price inclusive of tax. Then $P/W = k$, $k = m[1 + (mT/W)]$. We use a value of k of 1.33 in the computations above. We realize that T/W will change as W increases due to an increase in r , but assume that this effect is small enough to be ignored. Since our estimate of the retail price in Minnesota in 2015 differs from the actual price by only 7 cents, our assumption is very reasonable. Put differently, the tax pass-through to the retail price is approximately 1.33.

¹⁰ See <https://www.publichealthlawcenter.org/sites/default/files/States-with-Laws-Taxing-ECigarettes-September152019.pdf>. More recently Pennsylvania and California have enacted large e-cig taxes, which can be evaluated as additional waves of data become available. D.C. imposed a tax on e-cigs in late 2015 after the 2015 CPS-TUS data were collected. We limit our data to waves prior to 2018 to draw a sharp contrast between the first state to enact an e-cig tax and all other states and to have a long-enough post period for potential effects to develop.

percent of the wholesale price, the MN tax remains the highest tax on e-cigs imposed by any U.S. state.

Our aim in this paper is to evaluate the effect of the imposition of a large excise tax on electronic cigarettes by the state of Minnesota on responses by adult smokers ages 18 years and older. We do so by examining its impacts on participation in electronic cigarettes and combustible cigarettes in that state and in a comparison group of states. Few people begin to smoke after that age, causing variations in smoking participation to be governed by decisions to start smoking e-cigarettes and to quit smoking combustible cigarettes. As pointed out above, the imposition of the e-cig excise tax raised the price of e-cigs by a substantial amount. Below, we show that the price of e-cigs relative to that of combustible cigarettes also rose in MN, while it fell in the comparison states. Therefore, to get insights into their impacts on smoking participation, we focus on price effects in equations determining the probability of starting to vape and stopping to smoke.

Decisions to start vaping by current vapers depends on a comparison between the money price of vaping and its reservation price. The latter is defined as the monetary value of the marginal utility of vaping, at the point at which no e-cigarettes are purchased. A smoker will not vape if the reservation price is less than the money price, while she will begin to vape if the reverse holds. An increase in the money price will cause some smokers to decide not to begin to vape. Given that consumers who are just at the margin of beginning to vape at the initial price incur fixed costs in the decision-making process, this negative effect can be quite large. These include the cost of the starter kit if a rechargeable device is employed. They also include the need to allocate resources to the acquisition of information about a new product that in part can be characterized as an experience good in the sense that smokers need to try it to decide whether or not they like it. Given the fixed cost, the entry decision also involves comparing the level of utility from two different baskets: one in which no e-cigs are vaped and the other at which a positive number are vaped. There will be one unique relative price at which these two baskets are on the same indifference curve. Hence, the relative price that induces entry must

be smaller than the one that induces entry in the absence of fixed costs. If there are a large number of consumers with the same utility function, the demand function for starting to vape will be infinitely elastic at the relative price at which this occurs.

Another point to note is that under reasonable assumption about the utility function, vaping is less likely if its effect on the marginal utility of smoking is negative rather than positive. Moreover, the larger in absolute value is this cross-utility effect, the more elastic is the demand function for vaping. Smokers who do not vape at the initial money price are more likely to have a negative cross-utility term than those who do vape. The upshot is that fixed costs combined with negative cross-utility terms are likely to cause a significant number of current smokers to begin to vape and to cause some of them to quit smoking altogether when the price of e-cigs falls. The reverse occurs when the price rises.

For current vapers (dual users of e-cigs and combustible cigs) an increase in its price generates an income effect as well as a substitution effect. The latter involves more smoking and less vaping provided that the two goods are net (utility-constant) substitutes while both smoking and vaping fall if the goods are net complements. The income effect causes the consumption of both to fall provided each one has a positive income elasticity. If they are gross (money income-constant) substitutes, smoking will rise and vaping will fall, while both will fall if they are gross complements.

In summary, this analysis suggests that an increase in the price of vaping will reduce starts and quits and raise smoking participation. This prediction becomes somewhat ambiguous if cigs and e-cigs are gross complements. Moreover, it is possible that the price increase induces some smokers who began to vape because they wanted to quit but were not successful to resort to another method that results in successful quits.

The primary data come from the Current Population Survey Tobacco Use Supplements (CPS-TUS), which are sponsored by the National Cancer Institute and administered periodically as part of the Census Bureau's CPS since 1992. The CPS-TUS offers several advantages for our analyses, including large samples and consistent information on smoking behaviors over

time, and measures of smoking on the intensive margin. We use eight available waves of the CPS-TUS, which were fielded in 1992-1993, 1995-1996, 1998-1999, 2001-2002, 2003, 2006-2007, 2010-2011 and 2014-2015. The CPS-TUS is nationally-representative and contains information on about 240,000 individuals within a given wave; it provides a key source of national, state, and sub-state level data regarding smoking and the use of other tobacco products among adults ages 18 and older. This yields a sample of approximately two million adults drawn from repeated cross-sections spanning 1992 to 2015. We rely on aggregate data at the state-level from each wave, and use smoking participation and cigarette consumption as outcome measures.¹¹

The first e-cig tax (35 percent of wholesale price) went into effect in August 2010 in MN, and the subsequent tax hike (to 95 percent) went into effect in July 2013. We consider all waves up to 2010-2011 as the pre-treatment periods. Given that the prevalence of e-cig use in 2010 and 2011 remained quite low (less than 1 percent; see Dave et al. 2019) and given that it may take some time to change smoking habits, any effect of the e-cig tax in 2010 is unlikely to materialize until after 2010. In addition, the 2010-2011 TUS was conducted in May, 2010, August 2010, and January 2011. Data from the 2014-2015 wave of the CPS-TUS are considered the post-treatment period, allowing us to observe any potential effects on adult smokers that may have materialized 2-3 years post MN's e-cig tax.

We employ a difference-in-differences (DD) model to estimate how the e-cig tax hike in MN impacted adult smoking behaviors. The key assumption necessary for the DD estimate to signify an unbiased causal effect is that the control group of states represents a valid counterfactual for MN in the absence of the e-cig tax. Figure 4 plots the trend in the smoking rate in MN and the rest of the U.S. (excluding MA and IL as they substantially increased their cigarette excise in the post-treatment period). Smoking rates in MN and the rest of the U.S., while trending downward over the past two decades, do not appear to be doing so in a lockstep

¹¹ More information on the CPS-TUS can be found at: <https://cancercontrol.cancer.gov/brp/tcrb/tus-cps/questionnaires.html>.

parallel manner. Particularly, the difference in the pre-treatment smoking rate between the two groups is widening over most of the 1990s, then narrows until about 2007, before widening again. Hence, the rest of the U.S. may not be a good counterfactual for what would have happened in MN in the absence of the e-cig tax. Since any downstream effects from e-cig taxes to e-cig use to smoking cessation may be small, they risk being confounded from even relatively small deviations from pre-treatment parallel trends.

We therefore undertake a synthetic control design, following Abadie, Diamond, and Hainmueller (2010), to ensure that the treatment (MN) and control states share common pre-treatment trends in adult smoking outcomes. The algorithm underlying this method assigns weights to each donor state so that any pre-treatment differences in outcomes between MN and the synthetically matched “state” (SMN) are minimized. Hence, by expressly forcing the e-cig tax counterfactuals to have more similar pre-treatment trends, a synthetic control DD design raises the likelihood of satisfying the “parallel trends” assumption.¹²

One challenge in this framework relates to the computation of the correct standard errors, given that there is only a single treatment group and a single control group. Donald and Lang (2007) show that standard significance tests cannot be applied in this case. They refer to Moulton (1990) who shows that in regression models with individual data, the failure to account for the presence of common group errors results in standard errors that are biased downward and consequently overstate significance levels. Clustering the standard errors is not an option with only two groups or clusters. We follow the approach in Donald and Lang (2007), who suggest first computing group means to eliminate the common group error and then computing the difference between the treatment and control group for each period. We then estimate a regression of these differences on an indicator for the post-tax period.

The standard errors may still need to be adjusted for serial correlation of the group difference over time, which can be done by taking adjacent period differences in the outcome

¹² Lagged values of the dependent variable were used as matching variables.

difference between the treated and control groups for each period. This adjustment for serial correlation proposed by Donald and Lang (2007) assumes that the disturbance term follows a random walk. It also assumes time spacing between the data points, which is not the case with the CPS-TUS waves. One option is to drop the 2001-2002 wave, which creates a time series with two three-year gaps and four four-year gaps. In this case, the correlation in the error terms across three-year intervals and four-year intervals is assumed to be approximately similar. We refer to these data as *Wave Differences* in the presentation of the results and tables.

Changes in cigarette prices during the post-treatment period are relevant because they can affect smoking rates in the potential donor pool and in MN outside of any effects due to the e-cig tax. The post-treatment period spans 2011 through mid-2015 as the TUS in 2015 was last collected in May. Minnesota increased its cigarette excise tax by \$1.60 to \$2.83 in July 2013 and by another \$0.07 in January 2015. Massachusetts and Illinois both increased their cigarette excise tax by \$1.00 during the post-treatment period and were therefore dropped from the pool of potential donor states. They were the only states other than MN that enacted large cigarette tax hikes during this period. The range of small cigarette tax increases in the included states during the post-period is from \$0.10 in New Hampshire to \$0.40 in Connecticut.

To understand the effects of these tax changes on e-cig prices and cigarette prices, trends in both and in the relative price are presented in Figures 1-3 for MN and its synthetic control.¹³ Price measures from the Nielsen Retail Scanner data indicate that the average price of a pack of cigarettes in MN in 2011 was \$5.41 and fairly similar at \$5.89 in the synthetic control group (SMN). By 2015 these prices had increase in MN to \$7.83 and \$6.07 in SMN (Figure 2). Figure 3 shows the relative price of e-cigs versus cigarettes in MN and SMN. In 2012, relative prices for both MN and the control group were virtually the same, 0.55 and 0.56 respectively. By 2015, following the tax increase, the relative price in MN had risen to 0.61 and

¹³ SMN is the synthetic control group formed by applying the synthetic weights generated from the smoking participation model. We do not generate new weights specifically for matching prices, since we want to analyze the tax pass-through and effects of the tax on prices based on the same control group for which we analyze smoking outcomes.

fallen in SMN to 0.52. That is, in MN the price of e-cigs rose by 17 percent relative to cigarettes, when compared to SMN.

As predicted by the theory, this increase in the relative price of vaping would lead to a decrease in participation and use of e-cigs. Given the lack of information on e-cig consumption in the pre-treatment period, we focus on what happens to smoking participation. Our focus on cigarette use is also salient in that it directly addresses the harm reduction debate surrounding adult smokers. The increase in the price of e-cigs, and in the relative price of e-cigs is predicted to increase smoking rates given that smoking and vaping are substitutes. This conclusion depends on the relationship between e-cigs and cigarettes and is ultimately an empirical question.

4. Results

As a point of comparison, we start by presenting standard DD estimates utilizing the rest of the U.S. (excluding MN, and MA and IL) as a control group, in Table 1. An alternate specification, following Donald and Lang (2007), is estimated to generate appropriate standard errors that adjust for within-group correlated errors when there is only a single treatment and control group. The model denoted DL1 is based on the difference in the aggregated outcome across the treated group (MN) and the control group, which adjust for within-group and year correlated errors. The model denoted DL2 further corrects for serial correlation (thus adjusting for any correlated errors over time) by further differencing the DL1 data across adjacent waves. These estimates do not indicate any significant effects of the large e-cig tax in MN on smoking rates. The effects however may be biased due to differential pre-treatment trends between MN and the rest of the U.S. (Figure 4), and we therefore rely on the synthetic control approach to generate a more suitable counterfactual for MN.

Tables 2-4 present estimates from synthetic control DD models for three smoking outcomes. In Table 2, we report estimates of the effects on current smoking prevalence, which is the percentage of adults who reported ever smoking at least 100 cigarettes and who currently

smoke every day or some days. The corresponding event study graph comparing MN with synthetic MN is in Figure 5. It is evident from the figure that the control group here matches MN virtually lockstep with respect to changes in the smoking rate in all of the pre-treatment periods, with a divergence observed only after the imposition of the large e-cig tax. Estimates in Table 2 confirm the graphical evidence that the e-cig tax in MN is associated with a significant increase in the prevalence of smoking among adults. Estimates from the first two specifications indicate an increase in smoking prevalence by almost one percentage point (0.8 to 0.9 percentage points), representing about a 5.4 percent increase relative to the immediate pre-treatment mean in MN. Ideally the time-differenced data used in the DL2 model should be based on the same spacing between adjacent periods. However, given the staggered nature of the CPS-TUS surveys, the spacing is somewhat uneven.¹⁴

We alternately tested for statistical significance based on a permutation of placebo tests, in the spirit of Abadie, Diamond and Hainmueller (2010) as modified by Bedard and Kuhn (2012) and Stearns (2015). This placebo test alternatively assumes that each state is the treatment state and finds a synthetic control group for that placebo. Then we estimate the DL2 specification for all placebo states. This provides a p-value for the treatment effect for each placebo state, generating a distribution of p-values. Finally, we compare the actual treatment state's (MN) position in this distribution of p-values in order to gauge whether the results could be generated due to chance. For example, if 49 states are used and MN has the highest p-value of all states, then the test statistic would be $1/49 = 0.02$. This would be interpreted as a 2 percent probability that the outcome for MN was due to chance. This placebo p-value is presented in the graphs for each outcome.

For the model for current smoking prevalence, the placebo test found that MN had the second smallest p-value out of 49 states, implying about a 4 percent probability of a Type 1 error. Figure 5 and the treatment effects in Table 2 show that smoking increased in MN relative

¹⁴ Note that a relatively large t-statistic is needed to achieve statistical significance due to the small sample sizes with group-period aggregated data.

to the control group following the e-cigarette tax. Because the relative price of e-cigs increased in MN compared to SMN (Figure 3), these results imply that cigarettes and e-cigs are substitutes among current smokers.

For adults, any changes in smoking prevalence are very unlikely to reflect the initiation margin (given that most current smokers have initiated by age 19 or 20). Changes in smoking prevalence then reflects mostly the cessation margin or possibly the relapse margin from former to current smoking. In Figure 6, with corresponding DD estimates in Table 3, we report effects on smoking cessation, by defining the ratio of the number of individuals who smoked but recently quit (former smokers) divided by the number of ever smokers. Trends in this outcome are virtually identical between MN and the control group. The placebo test indicated that MN had the third smallest p-value out of 49 iterative state tests, implying about a 6% probability of a Type I error. Estimates in Table 3 indicate that the e-cig tax in MN led to a decrease in quitting by about 1.14 percentage points, which is the same order of magnitude as in the models for smoking prevalence. This suggests that virtually all of the increase in current smoking prevalence in MN, associated with the e-cig tax, is driven by a decrease in successful quits.

Finally, we also consider whether the e-cig tax led to any changes in cigarette consumption at the intensive margin. That is, even if smokers in MN may not have quit, did they reduce their consumption of combustible cigarettes? Cigarettes per day may decline, for instance, as smokers may be trying to cut down as a progressive step toward cessation. Figure 7, and the corresponding estimates in Table 4, indicate that this is not the case. Cigarettes per day are not reported for 2003 and thus, for this variable, the 2002 data are used. We do not find any significant change in the number of cigarettes consumed among current everyday smokers in MN relative to the control group following the e-cig tax.

As a robustness check, we also tested data on current smoking prevalence from the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a cross-sectional telephone survey that state health departments conduct by phone with a standardized questionnaire and technical assistance from CDC. The BRFSS is based on between 355,000 to

506,000 interviews each year between 2006 and 2017. The sample period begins in 2006 because in that year the CDC introduced a new weighting method to insure a representative sample at the state level. Another issue with the BRFSS is that it changed its survey design in 2011, which is also the first period of the treatment. The 2011 BRFSS data reflects a change in weighting methodology and the addition of cell phone only respondents. This change is evident in figure 8 as a jump in the smoking rate in 2011. However, because this change affected all states it should not lead to any systematic differential between MN and the control states. Again, MA and IL are dropped from the control pool because of large increases in the cigarette tax in the post-period. Figure 8 presents the graph comparing MN and its synthetic control group from the BRFSS. While the smoking rates in the BRFSS are noisier than those in the TUS, pre-treatment trends are well-balanced between the treatment and the control. There is a small apparent effect in 2011 which was not seen in the TUS data. The reason for this is likely because the 2011 TUS data is for 2010-2011 and primarily reflects 2010. The BRFSS effect size gets larger with the exception of 2013, which might be due to a transitory effect of the 2013 cigarette tax increase in MN. The placebo test resulted in a value of $p < .13$.

The DL1 results in table 5 suggest that smoking prevalence increased in MN following the e-cig tax relative to the control group. Effect magnitude for the entire post period is similar to the effect estimated from the TUS and suggests an increase in smoking prevalence of about 1 percentage point. The serial correlation adjustment used in DL2 is not useful with the BRFSS data because it measures only the effect in the first post period rather than the average effect over the entire post period (see the second regression in table 5). As an alternative we specify a model with lagged effects of the e-cig tax for each post-policy period, which is a post period event history study. All the post dummies are equal to 0 in 2006-2010. Then, $post_0 = 1$ in 2011 and equals 0 in all other post years. $post_1 = 0$ in 2011, equals 1 in 2012 and 0 in all other post years, etc. This is a model in level form. We then define the time difference specification to account for serial correlation. This regression provides the correct standard errors and 95 percent confidence intervals for each of the 7 post-year differences. These data are presented

in figure 9. The average effect over the seven years is 1.0084 with a standard error = 0.5488 and p-value < 0.14. This average value is slightly smaller than the value of 1.0404 in the level model (DL1). Also, the confidence intervals for all post periods includes the numeric value 1. Confidence in the conclusions are enhanced because both the BRFSS models and the TUS models predict about a 1 percentage point increase in smoking participation due to the tax.

5. Conclusions

The results presented in this study provide some of the first evidence on whether, and the extent to which, e-cig taxation affect adult smoking behaviors. We exploit the natural experiment provided by MN, the first state to impose a tax on e-cigs. Because the cross effects of a tax on e-cigs on smoking outcomes may be small, a large tax change is necessary to reliably detect such effects in population surveys. Also, because quitting smoking takes time, MN's early adoption of the large e-cig tax makes it possible to study effects on cessation that may take time to materialize. We find consistent and robust evidence that the e-cig tax in MN increased adult smoking relative to what it would have been in the absence of this tax. MN included e-cigs with other non-cigarette tobacco products when increasing the tax on these goods. This inclusion was based on the assumption that e-cigs are a hazard and not a cessation aid such as nicotine replacement products, which are not similarly taxed. It is not known at this time whether these results are generalizable to other states. Higher e-cig taxes are predicted to reduce e-cig consumption, and if the results from MN carry over to other states that have imposed taxes very recently, then they suggest that these taxes will also reduce quit rates in these states among adult smokers.

The results from the TUS and the BRFSS allow us to estimate the cross-price elasticity of current smoking participation with respect to e-cig prices. The e-cig price data prior to 2012 is based on a limited sample of observations, which may introduce bias. Thus, we estimate the changes in price using data from 2012 onward. As shown in figure 1, the price of e-cigs in MN and SMN were about the same in 2012. The e-cig tax increase of 60 percent (change from 35

percent to 95 percent) of the wholesale price in 2013 led to about a 50 percent increase in the price of e-cigs in MN in 2015 relative to the synthetic control. Given the large percentage increase in price, we estimate the arc price elasticity, which allows for the possibility that the elasticity may not be constant over the entire range of the smoking participation equation. The DD estimates indicate that this change is associated with about a 0.8 percentage point increase in current smoking prevalence, which is about a 5.4 percent increase in MN relative to its control. Division of the increase in price of \$1.61 by the average of the SMN and MN price in 2015 of \$3.96 yields a 40.7 percent increase in price and an arc cross-price elasticity of 0.13.

This estimate is a lower bound because the simultaneous increase in cigarette prices would have decreased smoking.¹⁵ It is notable that the much more modest 17 percent increase in the relative price of e-cigarettes was accompanied by an approximate 5 percent increase in smoking participation. That suggests that if states raise cigarette and e-cigarette taxes by substantial amounts at the same time, smoking will rise if the relative price of e-cigarettes rises.

In 2014 there were about 600,000 adult smokers in Minnesota. Our estimates indicate that the e-cig tax deterred about 32,400 adult smokers from quitting. Currently there are approximately 34 million adult smokers. If the Minnesota tax had been a national one, we estimate that it would have deterred around 1.83 million smokers from quitting.¹⁶ Some have suggested that e-cigs should be taxed at the same rate as cigarettes. Implementation of that policy would raise the price of e-cigs by approximately 62 percent, increase smoking participation by 8.1 percent, and deter approximately 2.75 million smokers from quitting.¹⁷

¹⁵ The simultaneous increase in other non-cigarette tobacco prices would probably have had a small positive effect on cigarette smoking offsetting some of the effects of higher cigarette taxes.

¹⁶ This figure is obtained by multiplying 600,000 by the percentage increase in smoking participation divided by 100 ($600,000 \times 0.054 = 32,400$). If MN data apply to the entire US, $0.054 \times 34 \text{ million} = 1.83 \text{ million}$.

¹⁷ A JUUL pod contains the nicotine equivalent of a pack of cigarettes and costs about \$4.00. The combined federal cigarette tax and state average cigarette tax is \$2.73 per pack. A tax of \$2.73 with a pass-through of 1.33 (see note 8) would raise the price by of e-cigs by \$3.63, which is an increase of 62 percent relative to an average of the initial and the final price. Divide that figure by 100 and then multiply the result by the arc cross-price elasticity of 0.13 to get an increase in smoking participation of 0.081 or 8.1 percent. Multiplication of the former number by 34 million gives 2.75 million.

While these increases may appear to be large, they are likely to be realized over a period as long as a decade. That is the short-run impact of the price hikes are likely to be much smaller than the long-run impacts. To put this in a somewhat different perspective, a projection of current trends in the number of smokers who quit over the next decade suggests that around 11 million smokers will quit by the end of that decade.¹⁸ Our computations imply a reduction in that number by around 25 percent.

Our study addresses how e-cig use impacts adult smoking, which represents one side of the policy debate surrounding e-cigs. For adolescents, nicotine addiction, the potential progression from vaping to smoking, and the growing percentage of using e-cigs are also important considerations in this policy debate. E-cigs are considered to be harmful to youth due to the effect of nicotine on the developing brain and due to the potential for vaping to lead to nicotine addiction (regardless of whether or not the youth transitions to smoking). While the results from this study indicate that e-cigs may help adult smokers to quit smoking and thus lead to a decrease in smoking-related harms, this needs to be balanced against the goal of reducing vaping and nicotine use among youth. Deterrents to adolescent use include raising the national minimum purchase age to 21, allocating resources to enforcing that law, enacting stiff fines for violating it, and banning flavors and marketing targeted at youth. The public health benefits of not taxing e-cigarettes must be weighed against effects of this decision on efforts to reduce vaping by youth.

¹⁸ Currently, approximately 1.3 million smokers quit each year, which implies a quit rate of 0.038 (3.8 percent). If there are no starters or relapsers, there would be $(0.962)^{10} \times 34$ million = 23 million remaining smokers ten years hence and 11 million quitters over that period. If the net percentage reduction in the number of smokers is less than 3.8 percent, we overestimate the number quitters.

References

- Abouk, Rahi Scott Adams, Bo Feng, Johanna Catherine Maclean, Michael F. Pesko. 2019. "The Effect of E-Cigarette Taxes on Pre-Pregnancy and Prenatal Smoking, and Birth Outcomes." National Bureau of Economic Research Working Paper No. 26126, July.
- Abadie, Alberto, Alexis Diamond, and Jens Hainmueller. 2010. "Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program." *Journal of the American Statistical Association* 105(490): 493-505.
- Babb, Stephen, Ann Malarcher, Gillian Schauer, Kat Asman, and Ahmed Jamal. 2017. "Quitting Smoking Among Adults — United States, 2000–2015." *MMWR Morb Mortal Wkly Rep* 65(52): 1457-1464. DOI: <http://dx.doi.org/10.15585/mmwr.mm6552a1external> icon
- Bedard, Kelly, and Peter Kuhn. 2015. "Micro-marketing Healthier Choices: Effects of Personalized Ordering Suggestions on Restaurant Purchases." *Journal of Health Economics* 39: 106-122.
- Bullen, Christopher, Colin Howe, Murray Laugesen, Hayden McRobbie, Varsha Parag, Jonathan Williman, and Natalie Walker. 2013. "Electronic Cigarettes for Smoking Cessation: A Randomised Controlled Trial." *The Lancet* 382(9905): 1629-1637.
- Brown, Jamie, Emma Beard, Daniel Kotz, Susan Michie, and Robert West. 2014. "Real-world Effectiveness of E-cigarettes When Used to Aid Smoking Cessation: A Cross-sectional Population Study." *Addiction* 109(9): 1531-1540.
- Campaign for Tobacco-Free Kids. 2019. "State Excise Tax Rates for Non-Cigarette Tobacco Products." <https://www.tobaccofreekids.org/assets/factsheets/0169.pdf>, last accessed December 10.
- Cawley, John, and Christopher J. Ruhm. 2012. "The Economics of Risky Behaviors." In *Handbook of Health Economics*, Volume 2, edited by Mark V. Pauly, Thomas G. McGuire, and Pedro Pita Barros. Amsterdam: North-Holland, Elsevier Science: 95-199.
- Chaiton, Michael, Lori Diemert, Joanna E. Cohen, Susan J. Bondy, Peter Selby, Anne Philipneri, and Robert Schwartz. 2016. "Estimating the Number of Quit Attempts It Takes to Quit Smoking Successfully in a Longitudinal Cohort of Smokers." *BMJ open* 6(6): e011045.
- Cotti, Chad, Erik Nesson, and Nathan Tefft. 2018. "The Relationship between Cigarettes and Electronic Cigarettes: Evidence from Household Panel Data." *Journal of Health Economics* 61(C): 205-219.
- Czogala, Jan, Maciej L. Goniewicz, Bartłomiej Fidelus, Wioleta Zielinska-Danch, Mark J. Travers, and Andrzej Sobczak. 2014. "Secondhand Exposure to Vapors from Electronic Cigarettes." *Nicotine & Tobacco Research* 16(6): 655-662.
- Dave, Dhaval, and Henry Saffer. 2013. "Demand for Smokeless Tobacco: Role of Advertising." *Journal of Health Economics* 32(4): 682-697.
- Dave, Dhaval, Daniel Dench, Michael Grossman, Donald S. Kenkel, and Henry Saffer. 2019. "Does E-cigarette Advertising Encourage Adult Smokers to Quit?" *Journal of Health Economics* 68(December). <https://doi.org/j.jhealeco.2019.10227>.

Donald, Stephen G., and Kevin Lang. 2007. "Inference with Difference-in-differences and Other Panel Data." *The Review of Economics and Statistics* 89(2): 221-233.

Goniewicz, Maciej Lukasz, Jakub Knysak, Michael Gawron, Leon Kosmider, Andrzej Sobczak, Jolanta Kurek, Adam Prokopowicz, Magdalena Jablonska-Czapla, Czesława Rosik-Dulewska, Christopher Havel, Peyton Jacob, 3rd, and Neal Benowitz. 2013. "Levels of Selected Carcinogens and Toxicants in Vapour from Electronic Cigarettes." *Tobacco Control* 23(2): 133-9.

Grana, Rachel, Neal Benowitz, and Stanton A. Glantz. 2014. "E-cigs." *Circulation* 129(19): 1972-1986.

Hajek, Peter, Anna Phillips-Waller, Dunja Przulj, Francesca Pesola, Katie Myers Smith, Natalie Bisal, Jinshuo Li et al. 2019. "A Randomized Trial of E-cigs Versus Nicotine-replacement Therapy." *New England Journal of Medicine* 380(7): 629-637.

Huang, Jidong, John Tauras, and Frank J. Chaloupka. 2014. "The Impact of Price and Control Policies on the Demand for Electronic Nicotine Delivery Systems." *Tobacco Control* 23(suppl 3): iii41-iii47.

Kalkhoran, Sara, and Stanton A. Glantz. 2016. "E-cigs and Smoking Cessation in Real-world and Clinical Settings: A Systematic Review and Meta-analysis." *The Lancet Respiratory Medicine* 4(2): 116-128.

McNeill, Ann, Leonie S. Brose, Robert Calder, Sara C. Hitchman, Peter Hajek, and Hayden McRobbie. 2015. "E-cigs: An Evidence Update." A report commissioned by Public Health England. *Public Health England*, 111.

Moulton, Brent R. 1990. "An Illustration of a Pitfall in Estimating the Effects of Aggregate Variables in Micro Units." *The Review of Economics and Statistics* 72(2): 334-338.

New York Times. <https://www.nytimes.com/2019/09/25/health/juul-vaping.html?searchResultPosition=1>.

Pesko, Michael F., Charles J. Courtemanche, and Johanna Catherine Maclean. 2019. "The Effects of Traditional Cigarette and E-Cigarette Taxes on Adult Tobacco Product Use." National Bureau of Economic Research Working Paper No. w26017.

Public Law Health Center. <https://www.publichealthlawcenter.org/sites/default/files/States-with-Laws-Taxing-ECigarettes-June152019.pdf>.

Scherer, F.M. and David Ross. 1990. *Industrial Market Structure and Economic Performance*, 3rd Ed. Boston: Houghton Mifflin Company,

Stearns, Jenna. 2015. "The Effects of Paid Maternity Leave: Evidence from Temporary Disability Insurance." *Journal of Health Economics* 43(September): 85-102.

Tirole, Jean. 1988. *The Theory of Industrial Organization*. Cambridge, MA: MIT Press.

Tuchman, Anna E. 2019. "Advertising and Demand for Addictive Goods: The Effects of E-cigarette Advertising." *Marketing Science* 38(6): 913-1084, ii-ii913.

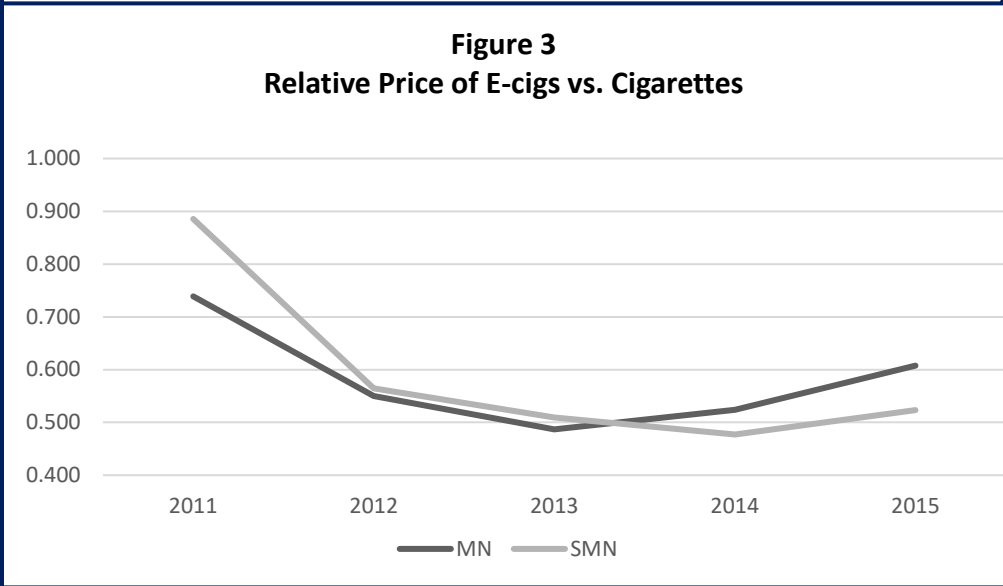
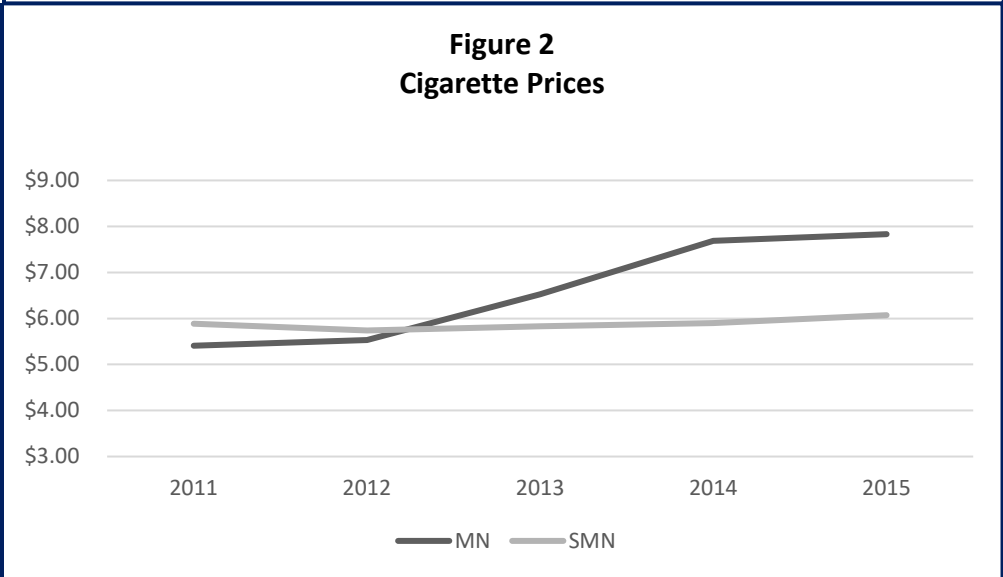
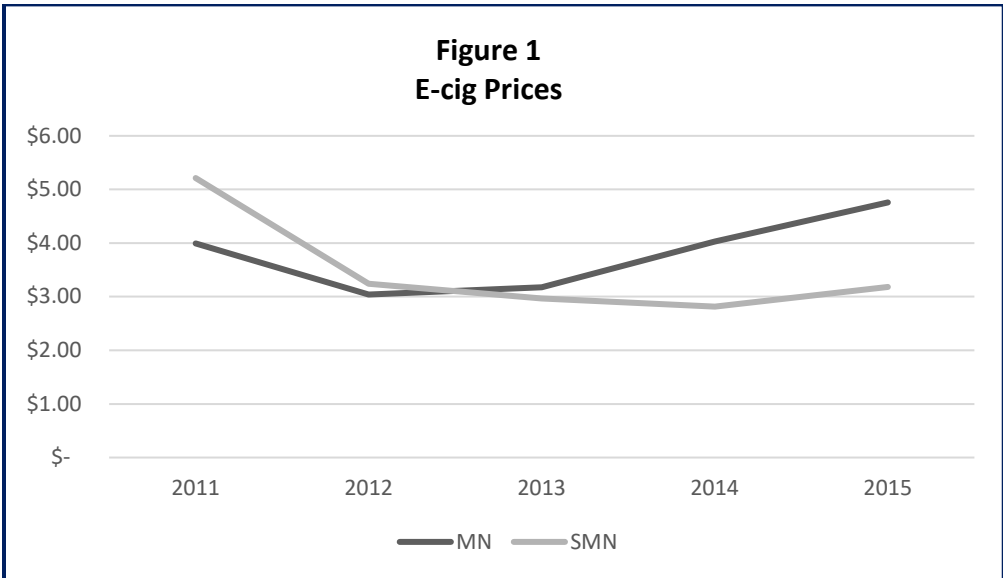
Weaver, Scott R., Jidong Huang, Terry F. Pechacek, John Wesley Heath, David L. Ashley, and Michael P. Eriksen. 2018. "Are Electronic Nicotine Delivery Systems Helping Cigarette Smokers Quit? Evidence from a Prospective Cohort Study of US Adult Smokers, 2015–2016." *PloS One* 13(7): e0198047.

Zheng, Yuqing, Chen Zhen, James M. Nonnemaker, and Daniel Dench. 2016. "Advertising, Habit Formation, and U.S. Tobacco Product Demand." *American Journal of Agricultural Economics* 98(4): 1038-1054.

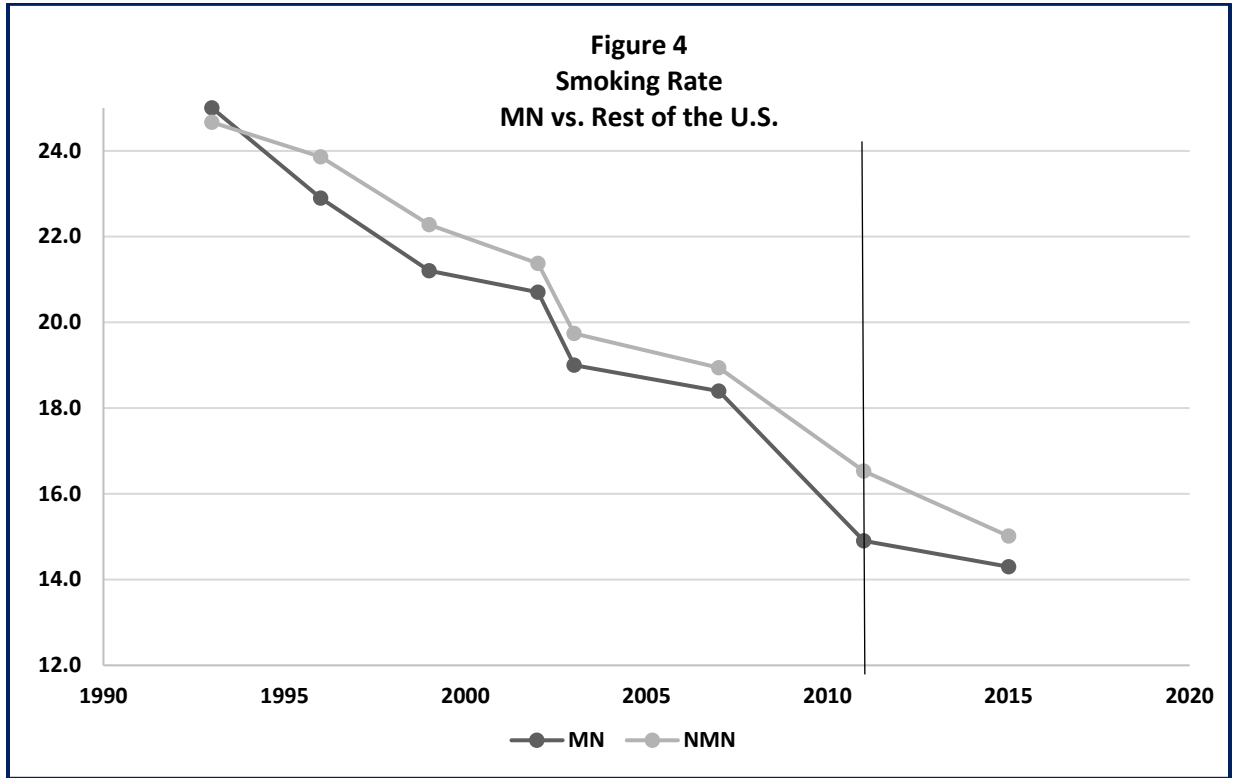
Zheng, Yuqing, Chen Zhen, Daniel Dench, and James M. Nonnemaker. 2017. "U.S. Demand for Tobacco Products in a System Framework." *Health Economics* 26(8): 1067-1086.

Zhu, Shu-Hong, Yue-Lin Zhuang, Shiushing Wong, Sharon E. Cummins, and Gary J. Tedeschi. 2017. "E-cig Use and Associated Changes in Population Smoking Cessation: Evidence from US Current Population Surveys." *BMJ* 358: j3262.

Zhuang, Yue-Lin, Sharon E. Cummins, Jessica Y. Sun, and Shu-Hong Zhu. 2016. "Long-term E-cig Use and Smoking Cessation: A Longitudinal Study with US Population." *Tobacco Control* 25(Suppl 1): i90-i95.



Note: Price computations are based on the Nielsen Scanner Data for MN and synthetic MN.



Note: NMN is the population-weighted average smoking rate for the rest of the U.S. excluding MN. IL and MA are excluded from the rest of the U.S. (see text).

Model type	Data	Treatment Effect	Standard Error	t-value	P-value
DL1	Levels	-0.0289	0.6416	-0.04	0.966
DL2	Wave Differences	0.9200	0.6320	1.46	0.196

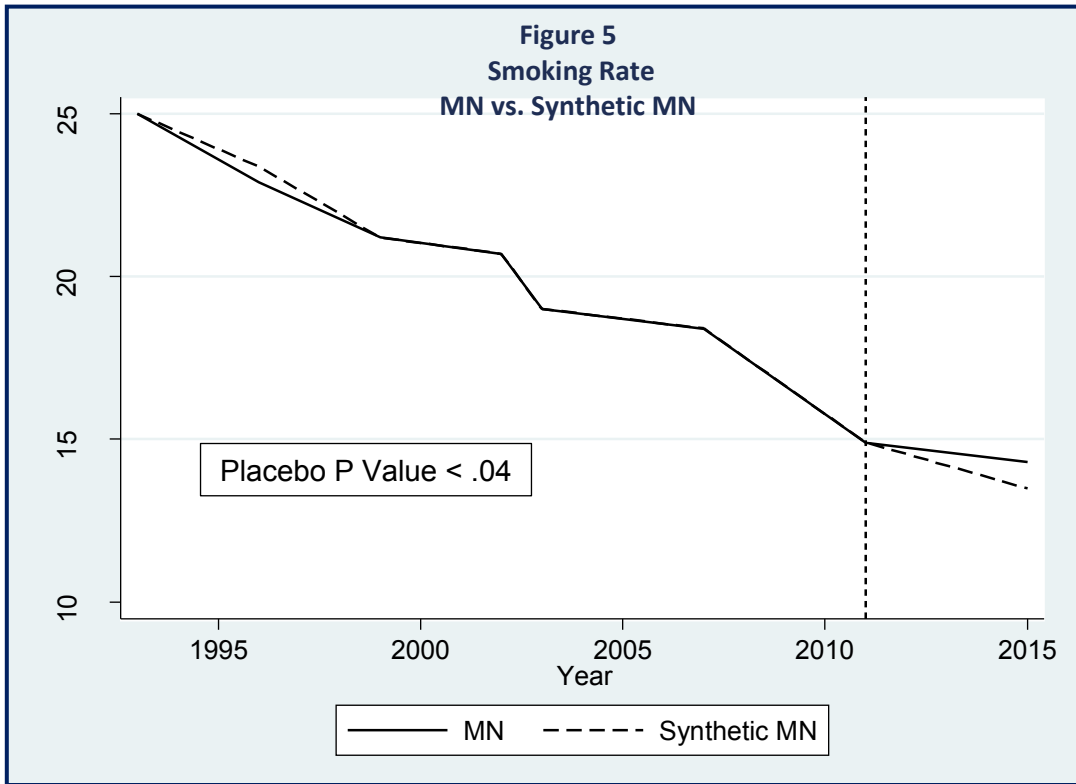


Table 2
Effect of the MN E-cigarette Tax on Smoking
DD: MN vs. Synthetic MN

Model type	Data	Coefficient of the treatment variable	Standard Error	t-value	P-value
DL1	Levels	0.9264***	0.2094	4.42	0.004
DL2	Wave Differences	0.8449**	0.3250	2.60	0.048

Note: 2002 data are not used in the model for Wave Differences. Asterisks denote significance as follows: *** p-value \leq 0.01, ** 0.01 < p-value \leq 0.05, * 0.05 < p-value \leq 0.10.

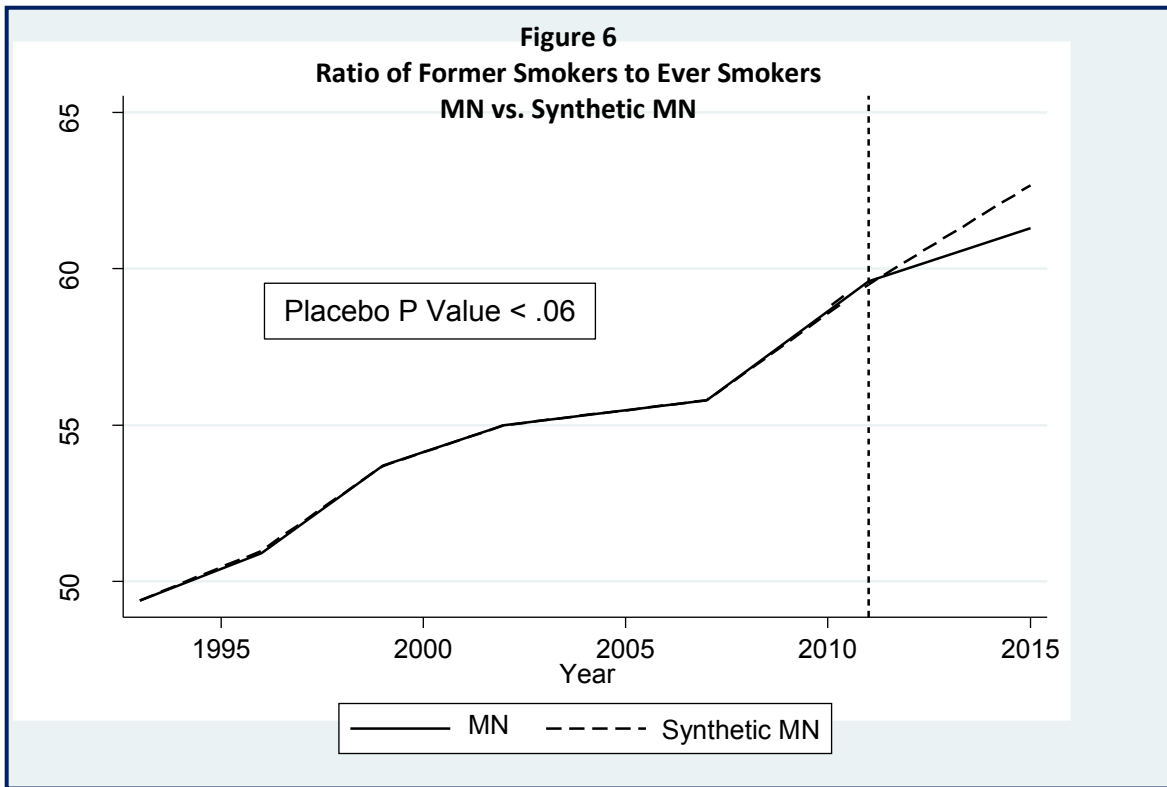


Table 3
Effect of the MN E-cigarette Tax on Ratio of Former Smokers
DD: MN vs. Synthetic MN

Model type	Data	Coefficient of the treatment variable	Standard Error	t-value	P-value
DL1	Levels	-0.9526***	0.1870	5.09	0.002
DL2	Wave Differences	-1.2326***	0.2425	5.08	0.004

Note: 2002 data are not used in the model for Wave Differences. Asterisks denote significance as follows: *** p-value \leq 0.01, ** 0.01 < p-value \leq 0.05, * 0.05 < p-value \leq 0.10.

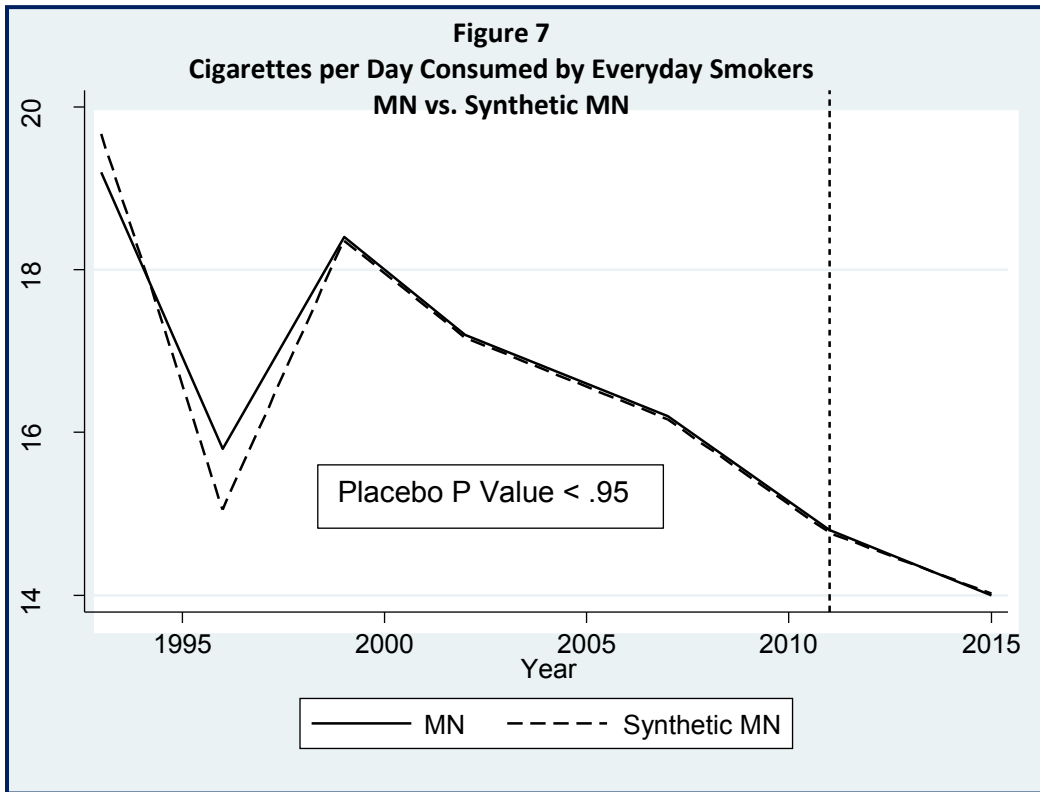
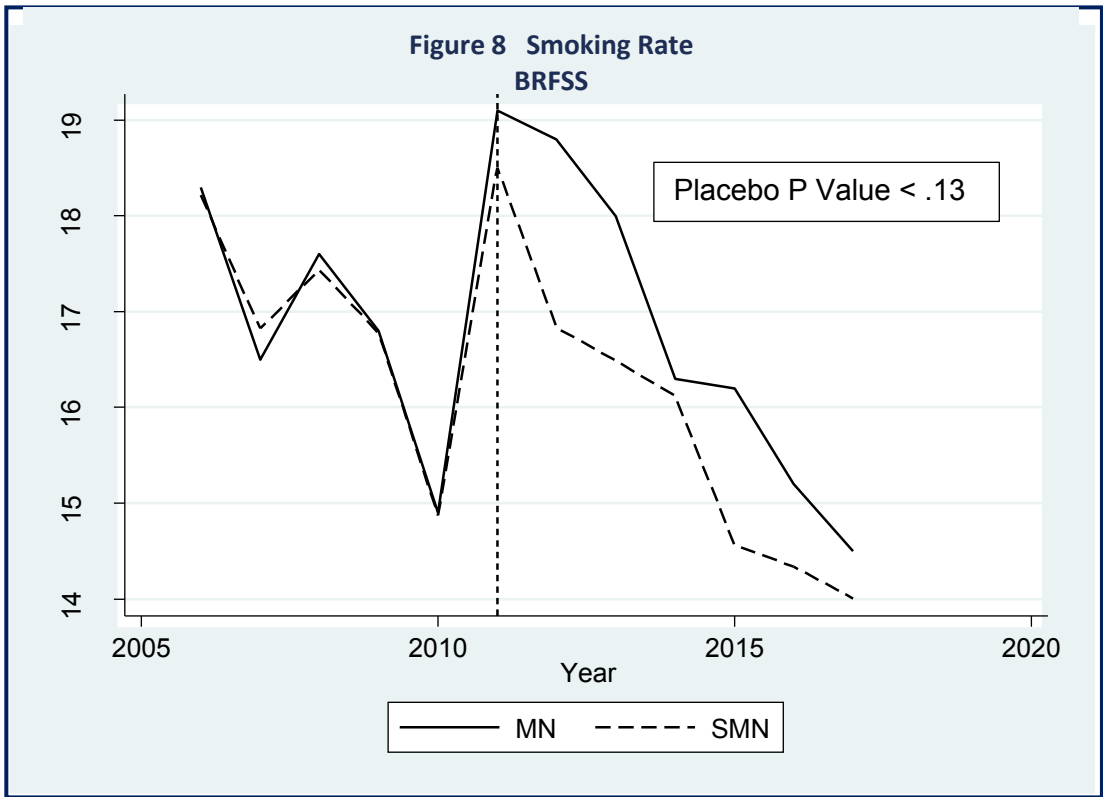


Table 4
Effect of the MN E-cigarette Tax on Daily Cigarette Consumption (Intensive Margin)
DD: MN vs. Synthetic MN

Model type	Data	Coefficient of the treatment variable	Standard Error	t-value	P-value
DL1	Levels	0.0885	0.4195	0.21	0.841
DL2	Wave Differences	0.0517	0.6298	0.08	0.938

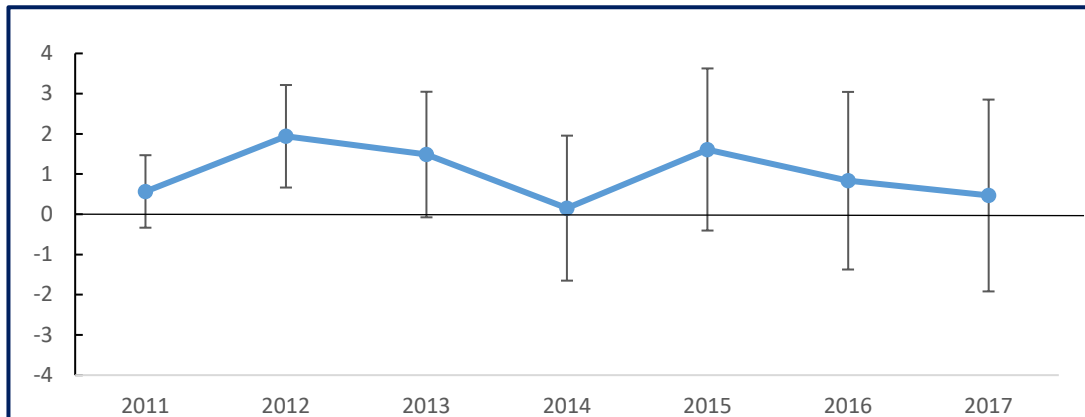
Note: Data on cigarettes consumed are not available for 2003. Asterisks denote significance as follows: *** p-value \leq 0.01, ** 0.01 < p-value \leq 0.05, * 0.05 < p-value \leq 0.10.



**Table 5
Effect of the MN E-cigarette Tax on Smoking Rate from the BRFSS
DD: MN vs. Synthetic MN**

Model type	Data	Coefficient of the treatment variable	Standard Error	t-value	P-value
DL1	Levels	1.0404***	0.3124	3.33	0.008
DL2	Year Differences	0.5677	0.8457	0.67	0.517

**Figure 9
BRFSS Effects of Lagged Treatment Variables with 95% confidence intervals**



3. Truth Initiative Fact Sheet – Minnesota

Tobacco use in Minnesota 2019

Jun. 28, 2019 | 3 min read

Cigarette use: Minnesota

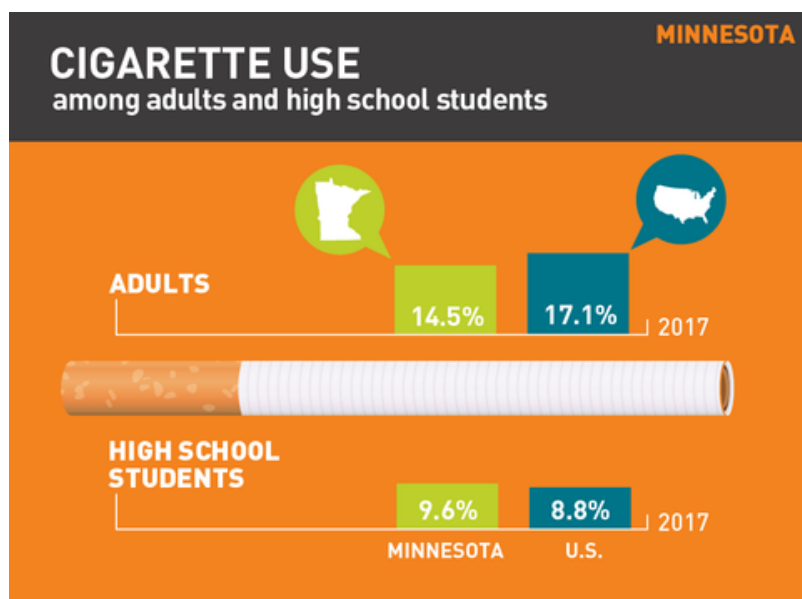
- In 2017, 14.5% of adults smoked. Nationally, the rate was 17.1%.¹
- In 2017, 9.6% of high school students in Minnesota smoked cigarettes on at least one day in the past 30 days. Nationally, the rate was 8.8%.^{2,3}

TOPIC

Smoking by
Region

SUBTOPIC

State Facts

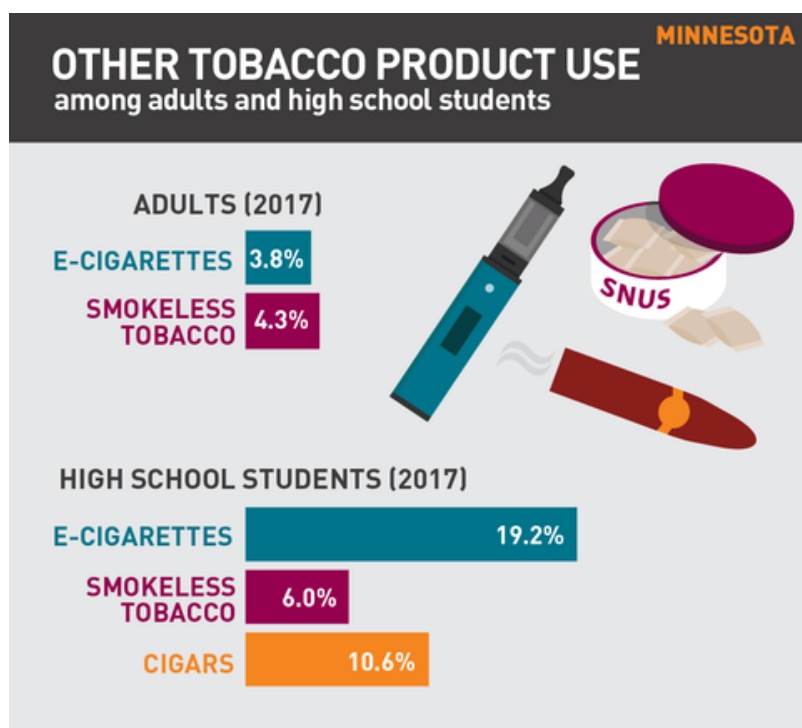


Other tobacco product use: Minnesota

- In 2017, 3.6% of adults used e-cigarettes and 4.8% used

smokeless tobacco.⁴

- In 2017, 19.2% of high school students in Minnesota used electronic vapor products on at least one day in the past 30 days.²
- In 2017, 6.0% of high school students in Minnesota used chewing tobacco, snuff or dip on at least one day in the past 30 days.²
- In 2017, 10.6% of high school students in Minnesota smoke cigars, cigarillos or little cigars on at least one day in the past 30 days.²



Economics of tobacco use and tobacco control

- Minnesota received \$703.6 million (estimated) in revenue from tobacco settlement payments and taxes in fiscal year 2019.³
- Of this, the state allocated \$17.3 million in state funds to tobacco prevention in fiscal year 2019, 32.7% of the Centers

for Disease Control and Prevention's annual spending target.³

- Smoking-caused health care costs: \$2.51 billion per year.⁵
- Smoking-caused losses in productivity: \$1.54 billion per year.⁶



Minnesota tobacco laws

Tobacco taxes

- Minnesota is ranked 8th in the U.S. for its cigarette tax of \$3.04 per pack (enacted January 2018), compared to the national average of \$1.81. (The District of Columbia has the highest tax at \$4.50 and Missouri has the lowest at 17 cents.)⁵⁻⁷
- Moist snuff containers weighing less than 1.2 ounces are taxed at the greater of 95% of the wholesale price or a minimum price equal to the cigarette tax at each container. Moist snuff containers weighing more than 1.2 ounces are taxed at the greater of 95% of the wholesale price or a minimum tax equal to the cigarette tax on each container multiplied by the number of ounces of moist snuff in the container, divided by 1.2 (container = smallest consumer-size can, package or other container that is marketed or packaged by an entity for separate sale to a retail

purchaser).

- Premium cigars are taxed at 95% of the wholesale or 50 cents per cigar, whichever is less.
- All other tobacco products, including e-cigarettes, are taxed at 95% of the wholesale sales price.^{7,8}

Clean indoor air ordinances

- Smoking is prohibited in all government workplaces (workplaces with two or fewer employees are exempt), private workplaces (workplaces with two or fewer employees are exempt), schools, childcare facilities, restaurants, bars, casinos/gaming establishments (tribal establishments are exempt), retail stores and recreational/cultural facilities.⁶
- The use of e-cigarettes is prohibited in day care and health facilities, government owned or operated buildings, facilities owned by Minnesota state colleges and universities, the University of Minnesota, facilities licensed by the commissioner of human services, and in public and charter schools and any facility or vehicle owned, rented or leased by a school district.⁹

Youth access laws

- The minimum age to purchase tobacco products in Minnesota is 21. In December 2019, the United States adopted a law raising the federal minimum age of sale of all tobacco products to 21, effective immediately.
- Minors are prohibited from buying nicotine delivery products, including e-cigarettes.⁵
- Self-service sales are prohibited, except in adult-only facilities.^{7,8}

Local tobacco laws

- Minneapolis and 33 other localities in the state raised their minimum age requirement for the purchase of tobacco products to 21.¹⁰

- In Minneapolis and St. Paul, the sale of flavored tobacco products is restricted to tobacco product shops. The sale of menthol flavored tobacco products is prohibited except in adult-only tobacco shops and liquor stores.^{11,12}
- In Duluth, Falcon Heights and Lauderdale, the sale of flavored tobacco products, including menthol, is prohibited except in adult-only tobacco stores.¹³⁻¹⁵
- In Mendota Heights, Robbinsdale, Shoreview and St. Louis Park, the sale of flavored tobacco products is prohibited except in adult-only tobacco stores. Menthol, mint and wintergreen flavors are exempt from the restriction.¹⁶⁻¹⁹
- In Arden Hills, the sale of all flavored tobacco products is prohibited.²⁰
- In Minneapolis, Robbinsdale and St. Paul, the minimum price for cigars (after coupons and discounts have been applied and before sales tax) is \$2.60 for a single cigar, \$5.20 for a 2-pack or “double” pack, \$7.80 for a 3-pack and \$10.40 for packs with four or more cigars.^{12,17,21}
- Rock County prohibits pharmacies from selling tobacco products.²²

Quitting statistics and benefits

- The CDC estimates 46% of daily adult smokers in Minnesota quit smoking for one or more days in 2017.⁴
- In 2014, the Affordable Care Act required that Medicaid programs cover all tobacco cessation medications.^{8**}
- Minnesota’s state quit line invests \$13.18 per smoker, compared to the national average of \$2.21.⁸
- Minnesota does not have a private insurance mandate provision for cessation.⁸

Notes and references

Updated April 2019

*National and state-level prevalence numbers reflect the most recent data available. This may differ across state fact sheets.

**The seven recommended cessation medications are NRT gum, NRT patch, NRT nasal spray, NRT inhaler, NRT lozenge, Varenicline (Chantix) and Bupropion (Zyban).

Fiore MC, et al. Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. Rockville, MD: US Department of Health and Human Services. Public Health Service: May 2008.

1. CDC, Behavioral Risk Factor Surveillance System, 2017.
2. Minnesota Youth Tobacco Survey, 2017.
3. CDC, Youth Risk Behavior Surveillance System, 2017.
4. CDC, Behavioral Risk Factor Surveillance System, State Tobacco Activities Tracking and Evaluation System, 2017.
5. Campaign for Tobacco-Free Kids, Broken Promises to Our Children: a State-by-State Look at the 1998 State Tobacco Settlement 20 Years Later FY2019, 2018.
6. Campaign for Tobacco-Free Kids, Toll of Tobacco in the United States.
7. American Lung Association, State Legislated Actions on Tobacco Issues (SLATI).
8. American Lung Association, State of Tobacco Control, 2019.
9. Public Health Law Center. U.S. E-Cigarette Regulation: 50-State Review.
<http://www.publichealthlawcenter.org/resources/us-e-cigarette-regulations-50-state-review>.
10. Campaign for Tobacco-Free Kids. States and Localities that have Raised the Minimum Legal Sales Age for Tobacco Products to 21.
https://www.tobaccofreekids.org/assets/content/what_we_do

[/state_local_issues/sales_21/states_localities_MLSA_21.pdf](#).

11. City of Minneapolis. An Ordinance of the City of Minneapolis by Yang and Gordon. Amending Title 13, Chapter 281 of the Minneapolis Code of Ordinances relating to Licenses and Business Regulations: Tobacco Dealers. 2015; <http://www.ci.minneapolis.mn.us/www/groups/public/@clerk/documents/webcontent/wcms1p-142066.pdf>. Accessed February 9, 2017.

12. St. Paul, Minnesota - Code of Ordinances. Title XXIX - Licenses, Chapter 324 - Tobacco, Section 324.07 - Sales prohibited. https://library.municode.com/mn/st._paul/codes/code_of_ordinances?nodeId=PTIILECO_TITXXIXLI_CH324TO_S324.07SAPR.

13. City of Duluth. Ordinance Amending Chapter 11 of the Duluth City Code to Restrict the Sale of Flavored Tobacco Products to Adult Only Smoke Shops. 2018; <https://duluth-mn.legistar.com/LegislationDetail.aspx?ID=3298582&GUID=16CC3F1B-71AE-4B96-98DA-F91C8838D506>.

14. Falcon Heights City Council. May 9, 2018 Meeting Agenda Packet. 2018; https://www.falconheights.org/vertical/sites/%7BA88B3088-FA03-4D5D-9D04-CCC9EF496399%7D/uploads/City_Council_Packet_5-09-18.pdf.

15. City of Lauderdale. Chapter 6: Tobacco, Tobacco Products, Tobacco-Related Devices, Nicotine or Lobelia Delivery Devices, and Electronic Delivery Devices. 2018.

16. City of Mendota Heights. Ordinance No. 522 Amending City Code Section 3-2 Tobacco Sales. 2018; <http://public.mendota-heights.com/weblink/0/doc/194968/Page1.aspx>.

17. City of Robbinsdale. Complying with Robbinsdale's Tobacco Product Requirements. <http://www.robbinsdalemn.com/home/showdocument?id=10101>.

18. The Association for Nonsmokers-Minnesota. Shoreview

votes to restrict flavored tobacco. November 29, 2016.

19. City of St. Louis Park. St. Louis Park City Council bans flavored tobacco sales in St. Louis Park. 2017;

<https://www.stlouispark.org/Home/Components/News/News/130/18>.

20. Campaign for Tobacco-Free Kids. States & Localities That Have Restricted the Sale of Flavored Tobacco Products.

<https://www.tobaccofreekids.org/assets/factsheets/0398.pdf>.

21. City of Minneapolis. Complying with Minneapolis' Tobacco Flavor and Pricing Requirements. 2016;

<http://www.ci.minneapolis.mn.us/www/groups/public/@regservices/documents/webcontent/wcms1p-150533.pdf>. Accessed February 9, 2017.

22. Americans Nonsmokers' Rights Foundation.

Municipalities with Tobacco-Free Pharmacy Laws. <http://no-smoke.org/pdf/pharmacies.pdf>.

4. Truth Initiative Fact Sheet – Maryland

Tobacco use in Maryland 2019

Jun. 28, 2019 | 3 min read

Cigarette use: Maryland

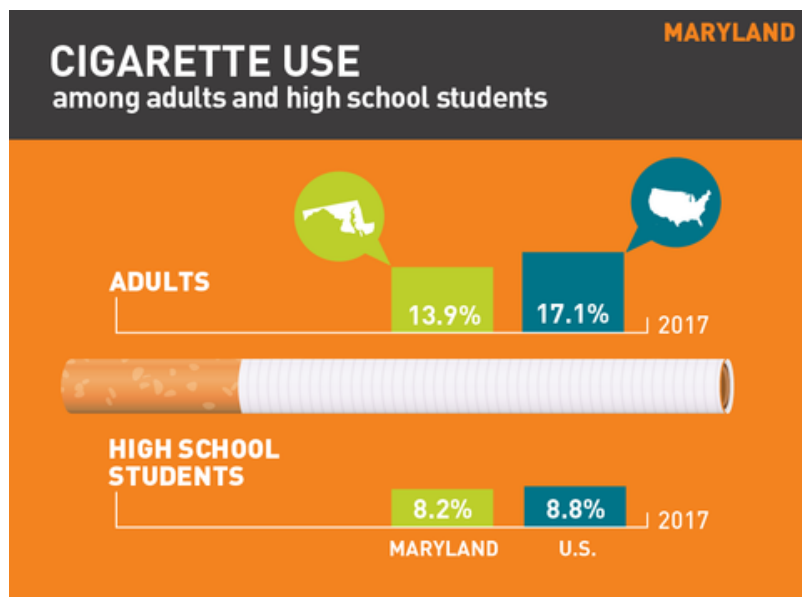
- In 2017, 13.9% of adults smoked. Nationally, the rate was 17.1%.¹
- In 2017, 8.2% of high school students in Maryland smoked cigarettes on at least one day in the past 30 days. Nationally, the rate was 8.8%.²

TOPIC

Smoking by
Region

SUBTOPIC

State Facts

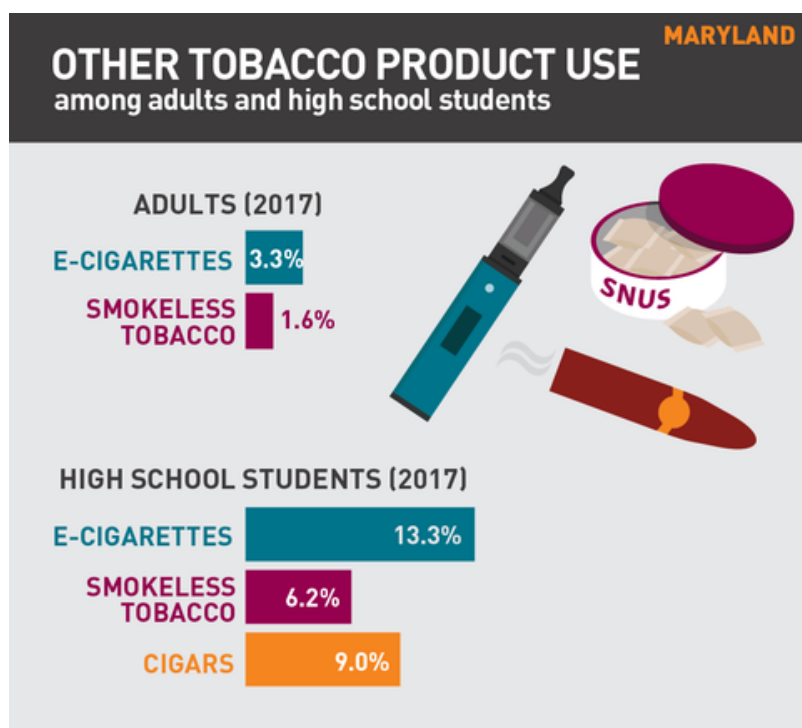


Other tobacco product use: Maryland

- In 2017, 3.3% of adults used e-cigarettes and 1.6% used

smokeless tobacco.³

- In 2017, 13.3% of high school students in Maryland used electronic vapor products on at least one day in the past 30 days. Nationally, the rate was 13.2%.²
- In 2017, 6.2% of high school students in Maryland used chewing tobacco, snuff or dip on at least one day in the past 30 days. Nationally, the rate was 5.5%.²
- In 2017, 9.0% of high school students in Maryland smoked cigars, cigarillos or little cigars on at least one day in the past 30 days. Nationally, the rate was 8.0%.²



Economics of tobacco use and tobacco control

- Maryland received \$525 million (estimated) in revenue from tobacco settlement payments and taxes in fiscal year 2019.⁴
- Of this, the state allocated \$10.5 million in state funds to tobacco prevention in fiscal year 2019, 21.8% of the Centers for Disease Control and Prevention's annual spending

target.⁴

- Smoking-related health care costs: \$2.71 billion per year.⁴
- Smoking-related losses in productivity: \$2.22 billion per year.⁵



Maryland tobacco laws

Tobacco taxes

- Maryland is ranked 17th in the U.S. for its cigarette tax of \$2 per pack (enacted January 2008), compared with the national average of \$1.81. (The District of Columbia has the highest tax at \$4.50 and Missouri has the lowest at 17 cents.)⁶⁻⁸
- Cigars are taxed at 70% of the wholesale price and premium cigars are taxed at 15% of the wholesale price. All other tobacco products are taxed at 30% of the manufacturer's list price.^{6,7}

Clean indoor air ordinances

- Smoking is prohibited in all government and private workplaces, schools, childcare facilities, restaurants, bars, casinos/gaming establishments, retail stores and recreational/cultural facilities.⁷

- No smoke-free restrictions exist for e-cigarette use.⁹

Youth access laws

- The minimum age to purchase tobacco products in Maryland is 21. In December 2019, the United States adopted a law raising the federal minimum age of sale of all tobacco products to 21, effective immediately.
- Minors are prohibited from buying electronic smoking devices, including e-cigarettes.^{6,7}

Quitting statistics and benefits

- The CDC estimates that 50.4% of daily adult smokers in Maryland quit smoking for one or more days in 2017.³
- In 2014, the Affordable Care Act required that Medicaid programs cover all quit medications.^{7**}
- Maryland's state quit line invests \$3.39 per smoker, compared with the national average investment per smoker of \$2.21.⁷
- Maryland does have a private insurance mandate provision for cessation.⁷

Notes and references

Updated April 2019

*National and state-level prevalence numbers reflect the most recent data available. This may differ across state fact sheets.

**The seven recommended quitting medications are NRT gum, NRT patch, NRT nasal spray, NRT inhaler, NRT lozenge, Varenicline (Chantix) and Bupropion (Zyban).

Fiore MC, et al. Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. Rockville, MD: US

Department of Health and Human Services. Public Health Service: May 2008.

1. CDC, Behavioral Risk Factor Surveillance System, 2017.
2. CDC, Youth Risk Behavior Surveillance System, 2017.
3. CDC, Behavioral Risk Factor Surveillance System, State Tobacco Activities Tracking and Evaluation System, 2017.
4. Campaign for Tobacco-Free Kids, Broken Promises to Our Children: a State-by-State Look at the 1998 State Tobacco Settlement 20 Years Later FY2019, 2018.
5. Campaign for Tobacco-Free Kids, Toll of Tobacco in the United States.
6. American Lung Association, State Legislated Actions on Tobacco Issues (SLATI).
7. American Lung Association, State of Tobacco Control, 2019.
8. Campaign for Tobacco-Free Kids. State Cigarette Excise Tax Rates & Rankings.
<https://www.tobaccofreekids.org/assets/factsheets/0097.pdf>.
9. Public Health Law Center. U.S. E-Cigarette Regulation: 50-State Review.
<http://www.publichealthlawcenter.org/resources/us-e-cigarette-regulations-50-state-review>.
10. Campaign for Tobacco-Free Kids. States and Localities that have Raised the Minimum Legal Sales Age for Tobacco Products to 21.
https://www.tobaccofreekids.org/assets/content/what_we_do/state_local_issues/sales_21/states_localities_MLSA_21.pdf.

5. Tax Foundation Report On Vaping Taxes



Vaping Taxes Should Be Carefully Designed

September 12, 2019

Ulrik Boesen

The incidence of increased vaping among teens as well as a recent uptick in lung disease has captured the attention of everyone from President Trump, who Wednesday called for a ban on flavored nicotine liquids used for vapor products, to Senate Finance Committee Ranking Member Ron Wyden (D-OR), who followed by proposing legislation to levy an excise tax on vapor products. Wyden's proposal suggests excise levels similar to that for traditional combustible tobacco products. Many states also are discussing whether and how to tax these vaping products.

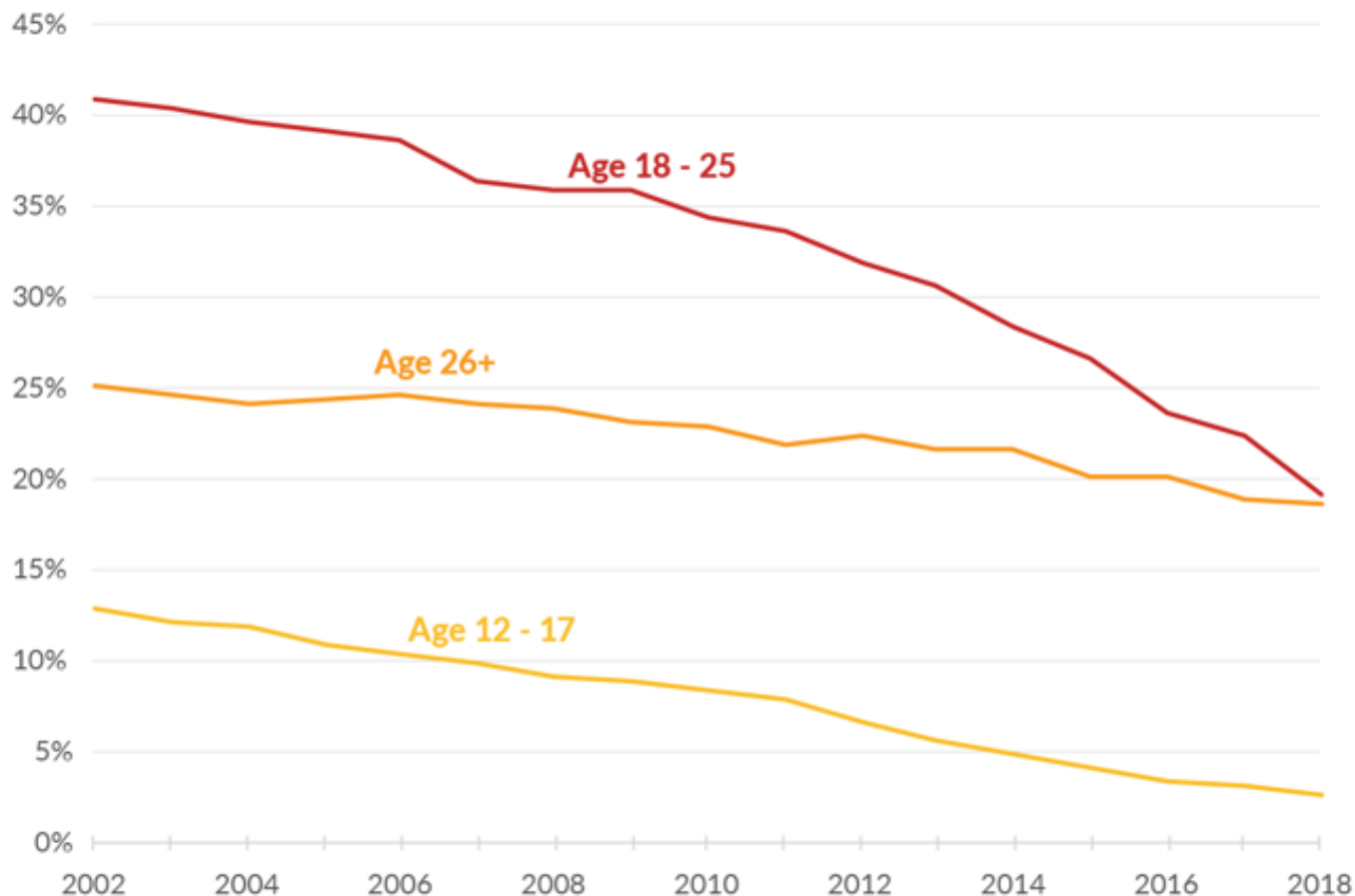
With all good intentions to reduce the underage use of a product designed for adults, the question remains: Is increasing excise taxes to punitive levels the best way to achieve this honorable target? Punitive excise levels not only impact minors but also limit the availability of vapor products to adults, who are trying to quit smoking.

It is a principle of good taxation policy that taxes remain as neutral as possible. That means taxes should neither encourage nor discourage personal or business decisions. Legislators should pass regulations rather than adopt taxes to achieve regulatory goals. Furthermore, they should make sure that current regulations are enforced. This is currently not the case for most states. For instance, 19.2 percent of high school students use vaping products in Minnesota, where minors are prohibited from purchasing them.

There is some debate over the societal health benefits of vaping, but generally it is believed beneficial for society every time a smoker becomes a vaper. Public Health England, an agency of the English Ministry for Health, recommends smokers switch to vaping, and the American Cancer Society concludes that, based on current available information, vaping is less harmful than smoking. In other words, vapor products could be a key tool in the fight against tobacco-related morbidity and mortality.

There seems to be some correlation among growth in the vapor market and a declining cigarette market. While vaping has been growing in many states, the decline in smoking has accelerated—among teens and adults.

Smoking Rates Have Been Declining Since 2002

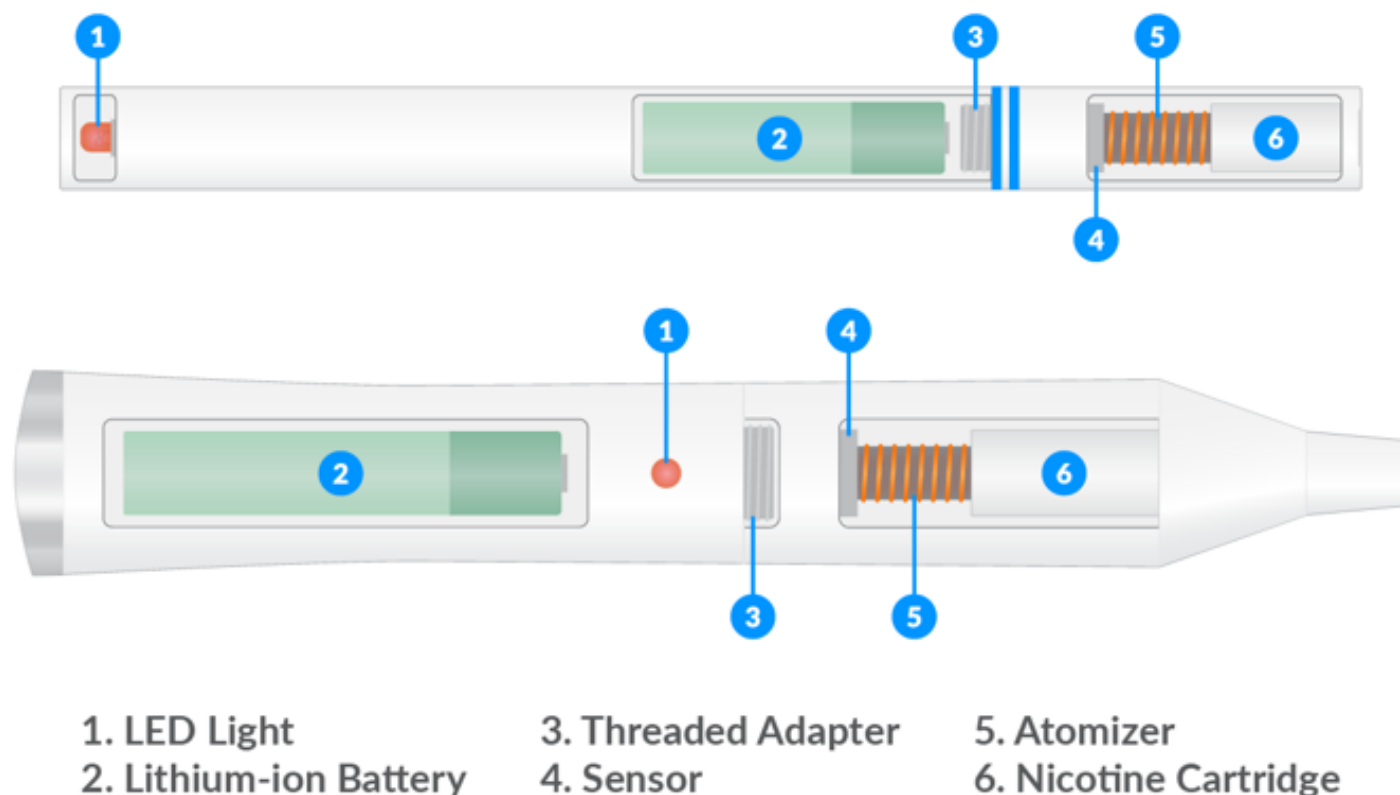


Note: The respondents are asked whether they have smoked a cigarette within the last 30 days.
 Source: Source: U.S. Department of Health & Human Services, Substance Abuse and Mental Health Services Administration, "2018 National Survey on Drug Use and Health." <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2018R2/NSDUHDetailedTabsSect2pe2018.htm> Table 2.1b

What Comprises an E-Cigarette?

E-cigarettes generally come in two varieties: an open system, where the nicotine liquid is filled manually, and closed systems, which are prefilled with nicotine liquid in cartridges. The systems offer different user experiences as they are designed to be consumed in different ways. Closed tank systems normally have higher nicotine levels per milliliter to allow for consuming the desired amount of nicotine in shorter sessions. Due to these design differences lawmakers might look into differentiated excise levels for open and closed systems to achieve a product-neutral outcome.

What Are The Components of An Electronic Cigarette?



TAX FOUNDATION

@TaxFoundation

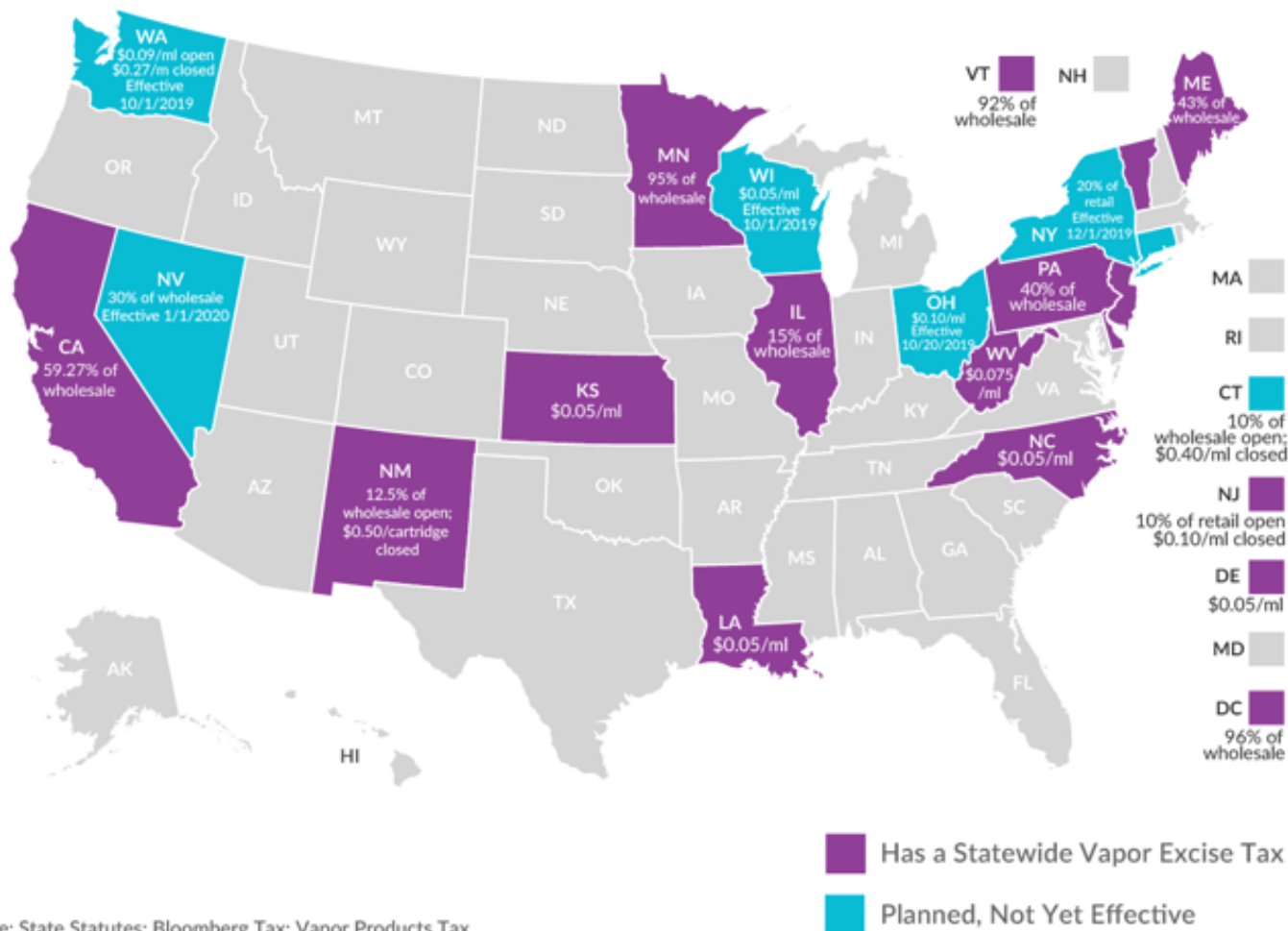
How Are They Currently Taxed?

Vapor products debuted in the United States in 2007, but states have generally been slow to act on taxation. Currently, 12 states and the District of Columbia tax vaping products. Seven other states have passed legislation to begin taxing. The current focus on vaping gives states an opportune chance to modernize their excise taxes to reflect the actual nicotine market. Virginia has already done this and passed amendments to its definitions to reflect market developments. The new definitions include heated tobacco products, alternative nicotine products, nicotine vapor products, and liquid nicotine.

This exercise can help states design correct and simple ways to levy excise taxes on these novel products.

How High are Vapor Taxes in Your State?

State Vapor Excise Tax Rates, as of September 2019



Source: State Statutes; Bloomberg Tax; Vapor Products Tax.

TAX FOUNDATION @TaxFoundation

Minnesota is the state with the longest-running tax regime for e-cigarettes. It taxes the product at 95 percent of the wholesale value as it considers it a non-cigarette smoking tobacco product. In 2016 Minnesota raised \$5.7 million from vapor products and expects to collect around \$600 million in total tobacco excise taxes in 2019.

North Carolina, another state with a history of taxing vapor products, collected \$4.5 million on vapor products and estimates \$260 million in total tobacco tax revenue in 2018.

How to Tax Vapor Products

To the extent that legislators choose to tax vapor products, they should design a principled excise regime. Legislators should focus on raising revenue in a simple, neutral, transparent, and stable manner. Levying taxes based on these principles limits the adverse effects on the economy and the individual.

The tax should be specific, based on quantity. In terms of vapor products, the obvious choice is to tax the liquid based on volume (e.g., a certain amount per ml). It is the administratively simplest and most straightforward way for governments to tax a good as it doesn't require valuation and as such doesn't require expensive tax administration. Volume-based taxation also avoids discriminating between disposable and reusable products. In Minnesota for instance, the tax is levied differently when the nicotine solution is mixed in-state versus products imported in their final consumable form. During the 2017 legislative session, a bill was proposed that would have modified the tobacco tax statute to standardize how e-cigarette products are taxed in Minnesota. However, the proposal did not advance.

Taxing the value of a good (*ad valorem*) hurts consumer choice and product quality as it incentivizes manufacturers and retailers to reduce prices to limit tax liability. It also incentivizes downtrading, which is when consumers move from premium products to cheaper alternatives. Downtrading effects do not reduce harm and have no relation to any externality the tax is seeking to capture. Taxing based on quantity rather than value makes it easier for governments to forecast revenue as it is not affected by changes in consumer brand preference or retail prices.

The level (dollar amount) of the excise should reflect the harm of vapor products relative to traditional tobacco products and should be equal regardless of price, as potential harm caused by a vapor product is theoretically equal regardless of the price of the brand. More research relating to the potential harm-reduction qualities of vapor products is needed, but there is certainly consensus that vapor products are significantly less harmful than traditional combustible tobacco products. Public Health England reports vapor products are 95 percent less harmful than cigarettes.

When determining tax levels, it is important to keep in mind that excise taxes are regressive in nature. As smoking is more common among low-income Americans, lawmakers should take care to protect this group's ability to switch from cigarettes to vapor products.

Revenue collected through excise taxes on vapor products should not be considered stable—excise revenues seldomly are—and the market is both young and volatile. Keep in mind that cigarette tax revenue is notoriously difficult to predict, and the cigarette market is, contrary to the vaping market, a mature market. Legislators and state revenue forecasters should be aware of this when calculating the revenue expectations and appropriating funds.

Given the regressivity of these taxes and their inherent instability, policymakers are well-advised to avoid relying on this revenue to fund broad-based government programs. The revenue should instead be used to cover the externalities associated with the excised good.

Finally, if a specific excise tax is set at a relatively low rate reflecting the relative harm-reduction compared to traditional combustible tobacco products, it may make sense to inflation-adjust the rate to avoid needing to do so later. Resistance to inflation-adjusting tobacco excise taxes has often centered around the concern that rates are already quite high, promoting smuggling and heavily taxing lower-income consumers; the argument is the result may be counterproductive. If policymakers get the rate right in the first place, though, as they have an opportunity to do with vapor products, inflation adjustments could form a part of a well-structured tax regime.

6. New England Journal Of
Medicine Article, *Differential
Taxes*

Differential Taxes for Differential Risks — Toward Reduced Harm from Nicotine-Yielding Products

Frank J. Chaloupka, Ph.D.,
David Sweanor, J.D.,
and Kenneth E. Warner, Ph.D.

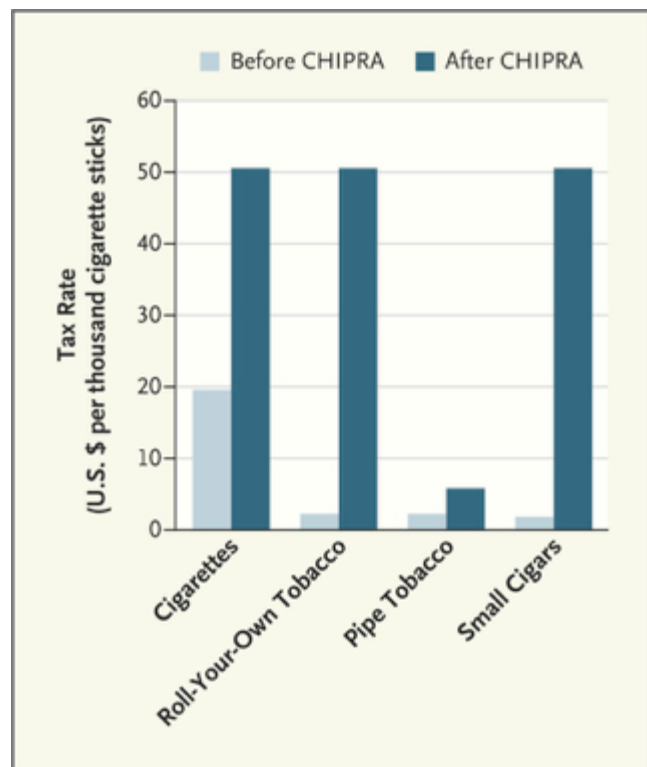
In a January 2014 report that marked the 50th anniversary of the first Surgeon General's Report on Smoking and Health, acting U.S. Surgeon General Boris Lushniak concluded that the enormous toll of tobacco-induced disease and death is overwhelmingly the result of combustible tobacco use, specifically cigarette smoking. He called for a rapid reduction in the use of combustible products to reduce the related burden of illness.¹ We believe this goal could be achieved by imposing differential taxes on nicotine products — including sharply increased taxes on combustible products.

Today's nicotine consumer has a remarkable array of options, ranging from extremely low-risk products (nicotine-replacement products approved by the Food and Drug Administration [FDA]) to extraordinarily risky ones (cigarettes, which kill half of long-term users). Elsewhere on the spectrum are other lower-risk products, including low-nitrosamine smokeless tobacco products and electronic nicotine-delivery systems (ENDS, which include e-cigarettes), and higher-risk products, including combustible tobacco products other than cigarettes (such as cigars, cigarillos, and hookah tobacco). Although no one has precisely characterized the relative risk associated with each of these products, research suggests that low-nitrosamine smokeless

tobacco products pose no more than one tenth the risk of cigarettes, whereas the risk associated with other combustible-tobacco products may approach that of cigarettes.¹ Because ENDS products are so new and varied, the risk associated with them remains to be established, although early evidence suggests they are substantially less harmful than combustibles.²

Extensive research demonstrates that higher tobacco taxes can help promote quitting among current users, deter initiation among potential users, and reduce tobacco use among continuing users.³ Studies have also shown that changes in the relative prices of tobacco products lead some tobacco users to switch to less expensive products.³ Given the belief that all tobacco products are seriously deleterious to health, conventional wisdom in the tobacco-control world has long been that all products should be taxed similarly. For example, the World Health Organization states that adopting “comparable taxes and tax increases on all tobacco products” is a best practice for tobacco taxation.⁴

To some extent, the 2009 U.S. federal tobacco-tax increases reflected this strategy: taxes on historically lower-taxed products were increased by much more than taxes on products that had previously been taxed at higher rates (see). Whereas the cigarette tax rose from \$0.39 to \$1.0067 per pack (a 158% increase), taxes on roll-your-own tobacco rose from \$1.0969 to \$24.78 per pound (a 2159% increase) and taxes on small cigars rose from \$1.828 to \$50.33 per 1000



Changes in Federal Excise Tax Rates for Tobacco

(a 2653% increase). The snuff tax rose by the same 158% as the cigarette tax. Many states have taken a similar approach, increasing taxes on noncigarette tobacco products by a greater amount than taxes on cigarettes in order to achieve greater parity between products.

Products as a Result of the Children's Health Insurance Program Reauthorization Act (CHIPRA) of 2009.

As sales of ENDS have skyrocketed, interest in taxing them has grown as well. As of early 2015, Minnesota and North Carolina were the only states that had adopted taxes on ENDS. Minnesota taxes ENDS as tobacco products, levying the same tax of 95% of wholesale price that it applies to snuff and chewing and smoking tobacco. In contrast, North Carolina created a new, very low, ENDS-specific tax of \$0.05 per milliliter of consumable solution. Several other states, counties, and cities are considering legislation to impose a tax on ENDS.

The rapid evolution of the nicotine-product marketplace suggests that it's time to rethink the idea that similar taxes are best practice. We believe that national, state, and local policymakers should consider an approach that differentially taxes nicotine products in order to maximize incentives for tobacco users to switch from the most harmful products to the least harmful ones. Sizable public health benefits could derive from current cigarette smokers' switching to ENDS and other noncombustible products, including nicotine-replacement therapies (as the one type of nicotine product demonstrated to be safe, nicotine-replacement therapy should not be subject to any excise tax).¹

Sweden, which has Europe's lowest tobacco-attributable mortality among men, provides a good example of how this approach can succeed. There, lower taxes on snus — a form of smokeless tobacco — contributed to many male cigarette smokers switching to snus. Women, however, did not switch to

the same extent, which illustrates that price differentials alone are not always sufficient to achieve public health goals.⁵

The manner in which a differential taxation system is implemented will determine how well it works as a harm-reduction strategy. To alleviate concerns that low prices on ENDS and lower-risk tobacco products might encourage uptake among young people, taxes on such products could be set high enough to discourage initiation. At the same time, taxes on combustible products could be further increased in order to raise their prices relative to less harmful noncombustible products. Such a strategy would maximize the likelihood of current smokers switching to lower-risk products while deterring users of lower-risk products from switching to more harmful ones. Higher prices for combustible products would have the added benefit of further reducing the likelihood that young people would take up smoking.

The current approach of imposing taxes on ENDS or raising taxes on cigarettes and other combustible products by the same amount as taxes on snus and other smokeless products has the opposite effect: it discourages tobacco users from switching to reduced-risk products, encourages dual use, and increases the likelihood that young people who initiate nicotine use will start with the most dangerous products.

A differential taxation strategy is not without potential problems. Decades ago, proposals were floated to tax cigarettes at different rates on the basis of tar and nicotine content. The United Kingdom and New York City adopted this approach, briefly levying special taxes on high-tar cigarettes. As evidence grew that cigarettes with lower tar and nicotine levels were no less dangerous, however, public health authorities realized that a differential taxation strategy was undesirable. Yet today the science supporting a difference in risk between combustible and noncombustible tobacco products is well established.

Given the FDA's regulatory authority over the manufacture, distribution, and marketing of tobacco products, a differential taxation strategy could be complemented by other policies, such as restrictions on ENDS marketing and strong product standards, to maximize public health benefit. Perhaps most important, as proposed in the FDA's recent “deeming” rule, the agency's authority over tobacco products could be extended to cover additional products including ENDS, opening up such items to new regulation. Policymakers could then make a product's eligibility for a lower tax rate dependent on the FDA's determination that it poses substantially reduced risk.

We believe that implementing differential taxes on nicotine-yielding products on the basis of degree of risk could substantially expedite the move away from cigarette smoking that has occurred during the past half-century, especially now that there are nicotine-yielding products that pose dramatically less danger than combustible tobacco products. Nearly a fifth of U.S. adults are cigarette smokers, and smoking accounts for one of every five deaths in the United States. Failure to seriously entertain a differential taxation approach may contribute to the prolongation of the epidemic of disease and death caused by smoking.

[Disclosure forms](#) provided by the authors are available with the full text of this article at NEJM.org.

Author Affiliations

From the University of Illinois at Chicago, Chicago (F.J.C.); the University of Ottawa, Ottawa (D.S.); the University of Nottingham, Nottingham, United Kingdom (D.S.); and the University of Michigan, Ann Arbor (K.E.W.).

Supplementary Material

References (5)

1. **1.** The health consequences of smoking — 50 years of progress: a report of the Surgeon General. Atlanta: Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.

[Google Scholar](#)

2. **2.** Nutt DJ, Phillips LD, Balfour D, et al. Estimating the harms of nicotine-containing products using the MCDA approach. *Eur Addict Res* 2014;20:218-225

[Crossref](#)

[Web of Science](#)

[Medline](#)

[Google Scholar](#)

3. **3.** Effectiveness of tax and price policies for tobacco control: IARC handbook of cancer prevention. Vol. 14. Lyon, France: International Agency for Research on Cancer, 2011.

[Google Scholar](#)

4. **4.** WHO technical manual on tobacco tax administration. Geneva: World Health Organization, 2011.

[Google Scholar](#)

5. **5.** Ramstrom L, Wikmans T. Mortality attributable to tobacco among men in Sweden and other European countries: an analysis of data in a WHO report. *Tob Induc Dis* 2014;12:14-14

[Crossref](#)

[Web of Science](#)

[Medline](#)

[Google Scholar](#)

Free Exclusive Collection

Notable Articles of 2019

ACCESS NOW →

The NEW ENGLAND JOURNAL of MEDICINE

7. Public Health England Study,
E-Cigarettes Are About 95%
Safer Than Smoking

E-cigarettes around 95% less harmful than tobacco estimates landmark review

Expert independent review concludes that e-cigarettes have potential to help smokers quit.

[Public Health England](#)

An [expert independent evidence review](#) published today by Public Health England (PHE) concludes that e-cigarettes are significantly less harmful to health than tobacco and have the potential to help smokers quit smoking.

Key findings of the review include:

- the current best estimate is that e-cigarettes are around 95% less harmful than smoking
- nearly half the population (44.8%) don't realise e-cigarettes are much less harmful than smoking
- there is no evidence so far that e-cigarettes are acting as a route into smoking for children or non-smokers

The review, commissioned by PHE and led by Professor Ann McNeill (King's College London) and Professor Peter Hajek (Queen Mary University of London), suggests that e-cigarettes may be contributing to falling smoking rates among adults and young people. Following the review PHE has published a paper on the [implications of the evidence for policy and practice](#).

The comprehensive review of the evidence finds that almost all of the 2.6 million adults using e-cigarettes in Great Britain are current or ex-smokers,

most of whom are using the devices to help them quit smoking or to prevent them going back to cigarettes. It also provides reassurance that very few adults and young people who have never smoked are becoming regular e-cigarette users (less than 1% in each group).

However, the review raises concerns that increasing numbers of people think e-cigarettes are equally or more harmful than smoking (22.1% in 2015, up from 8.1% in 2013: ASH Smokefree GB survey) or don't know (22.7% in 2015, ASH Smokefree GB survey).

Despite this trend all current evidence finds that e-cigarettes carry a fraction of the risk of smoking.

Emerging evidence suggests some of the highest successful quit rates are now seen among smokers who use an e-cigarette and also receive additional support from their local stop smoking services.

Professor Kevin Fenton, Director of Health and Wellbeing at Public Health England said:

Smoking remains England's number one killer and the best thing a smoker can do is to quit completely, now and forever.

E-cigarettes are not completely risk free but when compared to smoking, evidence shows they carry just a fraction of the harm. The problem is people increasingly think they are at least as harmful and this may be keeping millions of smokers from quitting. Local stop smoking services should look to support e-cigarette users in their journey to quitting completely.

Professor Ann McNeill, King's College London and independent author of the review, said:

There is no evidence that e-cigarettes are undermining England's falling smoking rates. Instead the evidence consistently finds that e-cigarettes are another tool for stopping smoking and in my view smokers should try vaping and vapers should stop smoking entirely.

E-cigarettes could be a game changer in public health in particular by reducing the enormous health inequalities caused by smoking.

Professor Peter Hajek, Queen Mary University London and independent author of the review said:

My reading of the evidence is that smokers who switch to vaping remove almost all the risks smoking poses to their health. Smokers differ in their needs and I would advise them not to give up on e-cigarettes if they do not like the first one they try. It may take some experimentation with different products and e-liquids to find the right one.

Professor Linda Bauld, Cancer Research UK's expert in cancer prevention, said:

Fears that e-cigarettes have made smoking seem normal again or even led to people taking up tobacco smoking are not so far being realised based on the evidence assessed by this important independent review. In fact, the overall evidence points to e-cigarettes actually helping people to give up smoking tobacco.

Free Stop Smoking Services remain the most effective way for people to quit but we recognise the potential benefits for e-cigarettes in helping large numbers of people move away from tobacco.

Cancer Research UK is funding more research to deal with the unanswered questions around these products including the longer-term

impact.

Lisa Surtees, acting director at Fresh Smoke Free North East, the first region where all local stop smoking services are actively promoted as e-cigarette friendly, said:

Despite making great strides to reduce smoking, tobacco is still our biggest killer. Our region has always kept an open mind towards using electronic cigarettes as we can see the massive potential health benefits from switching.

All of our local NHS Stop Smoking Services now proactively welcome anyone who wants to use these devices as part of their quit attempt and increase their chance of success.

Background

PHE's remit letter for 2014 to 2015 requested an update of the evidence around e-cigarettes. PHE commissioned Professors Ann McNeill and Peter Hajek to review the available evidence. The review builds on previous evidence summaries published by PHE in 2014.

The full list of authors of the report are:

- McNeill A, Brose LS, Calder R, Hitchman SC: Institute of Psychiatry, Psychology & Neuroscience, National Addiction Centre, King's College London and UK Centre for Tobacco & Alcohol Studies
- Hajek P, McRobbie H (Chapters 9 and 10): Wolfson Institute of Preventive Medicine, Barts and The London School of Medicine and Dentistry Queen Mary, University of London and UK Centre for Tobacco & Alcohol Studies

Implications of the evidence for policy and practice: Based on the findings of the evidence review PHE advises that:

- e-cigarettes have the potential to help smokers quit smoking, and the evidence indicates they carry a fraction of the risk of smoking cigarettes but are not risk free
- e-cigarettes potentially offer a wide reach, low-cost intervention to reduce smoking in more deprived groups in society where smoking is elevated, and we want to see this potential fully realised
- there is an opportunity for e-cigarettes to help tackle the high smoking rates among people with mental health problems, particularly in the context of creating smokefree mental health units
- the potential of e-cigarettes to help improve public health depends on the extent to which they can act as a route out of smoking for the country's eight million tobacco users, without providing a route into smoking for children and non-smokers. Appropriate and proportionate regulation is essential if this goal is to be achieved
- local stop smoking services provide smokers with the best chance of quitting successfully and we want to see them engaging actively with smokers who want to quit with the help of e-cigarettes
- we want to see all health and social care professionals providing accurate advice on the relative risks of smoking and e-cigarette use, and providing effective referral routes into stop smoking services
- the best thing smokers can do for their health is to quit smoking completely and to quit for good. PHE is committed to ensure that smokers have a range of evidence-based, effective tools to help them to

quit. We encourage smokers who want to use e-cigarettes as an aid to quit smoking to seek the support of local stop smoking services

- given the potential benefits as quitting aids, PHE looks forward to the arrival on the market of a choice of medicinally regulated products that can be made available to smokers by the NHS on prescription. This will provide assurance on the safety, quality and effectiveness to consumers who want to use these products as quitting aids
- the latest evidence will be considered in the development of the next Tobacco Control Plan for England with a view to maximising the potential of e-cigarettes as a route out of smoking and minimising the risk of their acting as a route into smoking

From October this year it will be an offence to sell e-cigarettes to anyone under the age of 18 or to buy e-cigarettes for them. The government is [consulting on a comprehensive array of regulations](#) under the European Tobacco Products Directive.

Photo by [pixelblume](#), used under [Flickr Creative Commons](#)

Please contact PHE press office for:

- the full review [E-cigarettes: an evidence update - A report commissioned by Public Health England](#)
- interviews with PHE spokespeople or the review's independent authors
- case studies of stop smoking services who work with e-cigarette users and smokers who have quit completely with a combination of e-cigarettes and attending a service



Underpinning evidence for the estimate that e-cigarette use is around 95% safer than smoking: authors' note

The estimate that e-cigarette use is around 95% safer than smoking is based on the facts that:

- the constituents of cigarette smoke that harm health – including carcinogens – are either absent in e-cigarette vapour or, if present, they are mostly at levels much below 5% of smoking doses (mostly below 1% and far below safety limits for occupational exposure)
- the main chemicals present in e-cigarettes only have not been associated with any serious risk

Our review¹ aimed to assess whether studies that have recently been widely reported as raising new alarming concerns on the risks of e-cigarettes changed the conclusions of the previous independent review ([Britton and Bogdanovica, 2014](#)) and other reassuring reviews.

We concluded that these new studies do not in fact demonstrate substantial new risks and that the previous estimate by an international expert panel ([Nutt et al, 2014](#)) endorsed in an expert review ([West et al, 2014](#)) that e-cigarette use is around 95% safer than smoking, remains valid as the current best estimate based on the peer-reviewed literature.

Some flavourings and constituents in e-cigarettes may pose risks over the long term. We consider the 5% residual risk to be a cautious estimate allowing for this uncertainty.

Ongoing monitoring is needed to ensure that if any new risks emerge, recommendations to smokers and regulatory requirements are revised accordingly.

On current evidence, there is no doubt that smokers who switch to vaping reduce the risks to their health dramatically.

Professor Ann McNeill
Institute of Psychiatry, Psychology & Neuroscience, National Addiction Centre, King's College London



Public Health England

Protecting and improving the nation's health

Professor Peter Hajek
Wolfson Institute of Preventive Medicine, Barts and The London School of Medicine and
Dentistry Queen Mary, University of London

ⁱ McNeill et al, [E-cigarettes: an evidence update – A report commissioned by Public Health England](#), Public Health England, August 2015

8. Public Health England Study – Evidence Update 2019



1. Home (<https://www.gov.uk/>)
 2. Vaping in England: an evidence update February 2019 (<https://www.gov.uk/government/publications/vaping-in-england-an-evidence-update-february-2019>)
1. Public Health
England (<https://www.gov.uk/government/organisations/public-health-england>)

Research and analysis

Vaping in England: evidence update summary

February 2019

Published 27 February 2019

Contents

1. Introduction
2. Recent policy and guidance developments
3. Methods
4. Vaping in young people
5. Vaping in adults
6. Use of e-cigarettes in English stop smoking services
7. Authors and citation



© Crown copyright 2019

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit nationalarchives.gov.uk/doc/open-government-licence/version/3 (<https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3>) or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

This publication is available at <https://www.gov.uk/government/publications/vaping-in-england-an-evidence-update-february-2019/vaping-in-england-evidence-update-summary-february-2019>

1. Introduction

This report was commissioned by Public Health England to summarise evidence to underpin policy and

regulation of electronic cigarettes in England. It focuses mainly on the latest evidence on prevalence and characteristics of electronic cigarette use in young people and adults in England.

The context for the report is that smoking remains the leading preventable cause of illness and premature death and is one of the largest causes of health inequalities. So alternative nicotine delivery systems, such as electronic cigarettes or e-cigarettes, could play a major role in improving public health.

Terminology

E-cigarette is a term that was commonly used when the first devices became available. These devices resembled tobacco cigarettes, but there has since been a rapid evolution of the technology and products. The shape of the products now varies enormously.

This variation means that the term e-cigarettes is no longer appropriate, and we are aware of discussions going on in the UK and internationally to develop common terminology. For this report, we continue to use the term e-cigarettes (EC) but we hope to replace this terminology in future reports, when a consensus has been reached.

2. Recent policy and guidance developments

2.1 Main changes

The National Institute for Health and Care Excellence (NICE) published guidance for health and social care workers on how to have an informed discussion about EC (<https://www.nice.org.uk/guidance/ng92>). The House of Commons Science and Technology Committee published a report on EC (<https://publications.parliament.uk/pa/cm201719/cmselect/cmsctech/505/50502.htm>) which included recommendations about harm reduction, smoking cessation, EC in mental health settings and regulation.

The Government responded with a command paper (<https://www.gov.uk/government/publications/government-response-to-the-science-and-technology-select-committees-report-on-e-cigarettes>) which broadly accepted the Science and Technology Committee's recommendations. The response said the government is firmly committed to more research in this area and to a proportionate regulation system.

Following a consultation, the Committee of Advertising Practice (CAP) and the Broadcast Committee of Advertising Practice (BCAP) announced that they were lifting the blanket ban on making health claims in non-broadcast advertising for EC (<https://www.asa.org.uk/news/can-e-cigarettes-claim-to-be-healthy.html>). It is currently unclear how the new guidance will be applied in practice.

New NHS guidance (<https://www.health-ni.gov.uk/publications/niaic-estates-and-facilities-alerts-publications>) has followed recommendations on fire risks from our previous evidence reviews and placed EC in the same category as mobile phones.

The NHS Long Term Plan for England (<https://www.england.nhs.uk/long-term-plan/>) recommended a new universal smoking cessation offer for long-term users of specialist mental health and learning disability services. This will include the option for smokers to switch to e-cigarettes while in inpatient settings.

Individual countries have amended their policies on EC to either further restrict their use or, in the case of Canada and New Zealand, promote their use as less harmful alternatives to tobacco smoking.

The US Food and Drug Administration announced actions

(<https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm620184.htm>) to restrict the sale and marketing of EC to young people.

2.2 Implications

Overall, England continues to take small progressive steps towards ensuring vaping remains an accessible and appealing alternative to smoking.

If the House of Commons Science and Technology Committee's recommendations are fully carried out by government, they have the potential to broaden this accessibility and appeal further, particularly in mental health settings, where smoking rates are high.

However, there is still no medicinally licensed EC in England, or anywhere else in the world. It is possible that more smokers may be attracted to vaping if a licensed EC was made available. Barriers to licensing and the commercialising of licensed products need further exploration.

3. Methods

We have used data from several surveys in the UK which assessed young people and adult vaping prevalence. We also drew on peer-reviewed publications of these surveys including any awaiting publication, for which we are co-authors.

We reviewed the international literature on vaping prevalence from 1 January 2017 to 5 November 2018 and examined data collected from local authorities on stop smoking services by NHS Digital from 1 April 2017 to 30 June 2018.

4. Vaping in young people

4.1 Main findings

In England and in Great Britain as a whole, experimentation with EC has steadily increased in recent years. However, regular use remains low, with 1.7% of 11 to 18 year olds in Great Britain reporting at least weekly use in 2018 (it was 0.4% among 11 year olds and 2.6% among 18 year olds).

Vaping continues to be associated with smoking. The proportion of young people who have never smoked who use EC at least weekly remains very low (0.2% of 11 to 18 year olds in 2018).

The latest smoking data used for measuring progress in reaching the goals of the Tobacco Control Plan for England (<https://www.gov.uk/government/publications/towards-a-smoke-free-generation-tobacco-control-plan-for-england>)

are from 2016. The data indicated that 7% of 15 year olds were regular (at least weekly) smokers in 2016 (8% in 2014). The 2018 data is not yet available.

The proportion who haven't smoked but have tried vaping is increasing. The extent to which these young people would have tried smoking if vaping had not been available is unclear.

The proportion of 13 and 15 year olds who have ever smoked declined steadily between 1998 and 2015, including after the introduction of EC. In this period, young people's attitudes became more negative towards smoking. Further analyses of the period beyond 2015 are underway.

Studies from outside of the UK suggest a similar picture, with increasing experimentation and use of EC over time among youth. There is evidence from the US that increasing vaping is happening against a backdrop of reducing cigarette smoking.

4.2 Implications

Trends in smoking and vaping should continue to be monitored, particularly in the light of concerns in North America about youth smoking and vaping.

Surveillance is needed on purchase sources of EC by young people, as recommended in our previous evidence review (<https://www.gov.uk/government/publications/e-cigarettes-and-heated-tobacco-products-evidence-review>).

More research is also needed on how young people move from EC to smoking and vice versa.

5. Vaping in adults

5.1 Main findings

Data from several representative surveys suggest that vaping prevalence among all adults in Great Britain has remained stable since 2015. In 2017 to 2018, estimates for prevalence were:

- 5.4% to 6.2% for all adults
- 14.9% to 18.5% for current smokers
- 0.4% to 0.8% for people who had never smoked

- 10.3% to 11.3% for ex-smokers (vaping prevalence declined as the time since they had stopped smoking increased)

Smoking prevalence ranged from 13.7% to 17.3% for the adult population but was substantially higher in lower socio-economic groups (for example, 35% in people living in social housing smoked).

Just over a third of all current smokers had never tried EC.

Use of EC in quit attempts is similar across socio-economic groups. Among long-term ex-smokers, EC use is higher in those from lower socio-economic groups. This suggests that those from higher socio-economic groups are using EC to quit smoking and then stop use, while those from more disadvantaged groups continue to use EC.

Continuing to use EC.

Overall, we found no clear association among past and current vapers between how long people use EC, the devices they used and socio-economic status.

There are possible associations between lower socio-economic groups and higher strength of nicotine, amount of liquid used and a greater variety of EC flavours used.

Over time, most vapers report either continuing to use the same nicotine strength (44.7% of participants in one survey, 54.4% in another) or reducing the nicotine strength (40.1% and 49.2% respectively in the same surveys).

One survey indicated that over time most vapers tend to stick to a single flavour type (tobacco, fruit, menthol were the most popular types).

Quitting smoking remains the main reason for vaping in all socio-economic groups. People from higher socio-economic groups were possibly more likely to vape for enjoyment than those from lower groups, who may be more likely to vape for financial reasons than those from higher groups.

Internationally, the US appears to have similar adult vaping prevalence as Great Britain. In other countries where information is available, prevalence is lower.

5.2 Implications

More research is needed to explore the use of EC by different social grades.

Trends need to be monitored, particularly of EC use by never smokers, use alongside smoking and in long-term ex-smokers.

Given the importance of stopping smoking completely, smokers using EC should be advised to quit smoking as soon as possible.

Smokers should be advised to stop smoking as soon as possible and explore all available options for support, including EC.

6. Use of e-cigarettes in English stop smoking services

6.1 Main findings

Monitoring data from stop smoking services have limitations, but such data suggest that using an EC as part of quit attempt continues to be helpful for people attending stop smoking services in England.

In stop smoking services, the proportion of quit attempts using an EC remains very small (4.1% of all quit attempts in stop smoking services).

There is inconclusive evidence to support suggestions that EC have contributed to the decline in demand for stop smoking services in England.

6.2 Implications

Combining EC (the most popular source of support used by smokers in the general population), with stop smoking service support (the most effective type of support), should be a recommended option available to all smokers. This proposal from our previous evidence review (<https://www.gov.uk/government/publications/e-cigarettes-and-heated-tobacco-products-evidence-review>) is still valid.

Stop smoking practitioners and health professionals should provide behavioural support to smokers who want to use an EC to help them quit smoking.

Stop smoking practitioners and health professionals supporting smokers to quit should receive education and training on using EC in quit attempts. Online training is available from the National Centre for Smoking Cessation and Training (NCSCT) (<http://www.ncsct.co.uk/>).

Local authorities should continue to fund and provide stop smoking services, in line with the evidence base.

7. Authors and citation

7.1 Suggested citation

McNeill A, Brose LS, Calder R, Bauld L & Robson D (2019). Vaping in England, an evidence update, February 2019. A report commissioned by Public Health England. London: Public Health England.

7.2 Authors

- Ann McNeill (King's College London)
- Leonie S Brose (King's College London)
- Robert Calder (King's College London)
- Linda Bauld (University of Edinburgh, Cancer Research UK)
- Debbie Robson (King's College London)

9. 2nd Hand Vapor Analysis

Article

An Assessment of Indoor Air Quality before, during and after Unrestricted Use of E-Cigarettes in a Small Room

Grant O’Connell¹, **Stéphane Colard**², **Xavier Cahours**² and **John D. Pritchard**^{3,*}

¹ Fontem Ventures B.V., Barbara Strozilaan 101 12th Floor, HN Amsterdam 1083, The Netherlands;
E-Mail: grant.oconnell@fontemventures.com

² SEITA–Imperial Tobacco Group, 48 rue Danton, Fleury-les-Aubrais 45404, France;
E-Mails: stephane.colard@fr.imptob.com (S.C.); xavier.cahours@fr.imptob.com (X.C.)

³ Imperial Tobacco Limited, 121 Winterstoke Road, Bristol BS3 2LL, UK

* Author to whom correspondence should be addressed; E-Mail: john.pritchard@uk.imptob.com;
Tel.: +44-(0)-117-933-7556.

Academic Editor: Paul B. Tchounwou

Received: 18 March 2015 / Accepted: 28 April 2015 / Published: 6 May 2015

Abstract: Airborne chemicals in the indoor environment arise from a wide variety of sources such as burning fuels and cooking, construction materials and furniture, environmental tobacco smoke as well as outdoor sources. To understand the contribution of exhaled e-cigarette aerosol to the pre-existing chemicals in the ambient air, an indoor air quality study was conducted to measure volatile organic compounds (including nicotine and low molecular weight carbonyls), polycyclic aromatic hydrocarbons, tobacco-specific nitrosamines and trace metal levels in the air before, during and after e-cigarette use in a typical small office meeting room. Measurements were compared with human Health Criteria Values, such as indoor air quality guidelines or workplace exposure limits where established, to provide a context for potential bystander exposures. In this study, the data suggest that any additional chemicals present in indoor air from the exhaled e-cigarette aerosol, are unlikely to present an air quality issue to bystanders at the levels measured when compared to the regulatory standards that are used for workplaces or general indoor air quality.

Keywords: e-cigarette; indoor air quality; bystander exposure; exhaled aerosol; ambient air

1. Introduction

In recent years, the use of electronic cigarettes (also termed “vaping”) has increased significantly worldwide with such products gaining acceptance with consumers as an alternative to traditional tobacco products. A report published in July 2014 by Action on Smoking and Health estimated as many as 2.1 million adults in the UK currently use electronic cigarettes (e-cigarettes) [1]. E-cigarettes are battery-powered devices that deliver vaporized nicotine, propylene glycol and/or glycerol and flavorings to users from an “e-liquid” [2,3]. They do not contain tobacco or require combustion [2,3]. E-cigarettes are available in many different configurations; the two principal distinctions being “open” systems which can be refilled by the consumer (e.g., tank systems) or “closed” systems (e.g., replaceable cartridges pre-filled by manufacturers) [3]. When the user takes a puff on the product, a heating element is activated converting the e-liquid in the cartridge into an aerosol that the user holds in the mouth or inhales.

With the increasing prevalence of e-cigarettes, there is growing discussion amongst public health organizations and the scientific community as to whether the aerosol exhaled following use of such products has implications for the quality of air breathed by bystanders through so-called “passive vaping”, akin to that reported for environmental tobacco smoke from combusted tobacco products [2–6]. In recent years, there has been conflicting and, at times, confusing information presented to the public regarding the potential risks to bystanders from exhaled e-cigarette aerosol [5,7]. There are calls, including by some government bodies, to prohibit the use of e-cigarettes in workplaces and enclosed public spaces [5,7]. Equally, other organizations and researchers have stated that any regulation on using such products in enclosed public spaces requires an established evidence base, which is limited at this time [2,8].

Airborne chemicals in the ambient air which can impact indoor air quality arise from a wide variety of sources such as those infiltrating from outdoor sources (e.g., vehicle fumes), cooking, burning fuels and tobacco, and (scented) candles [9]. Other sources include emissions from construction materials and furniture, use of air fresheners and cleaning products as well as other consumer goods products like personal care products [9]. To date, there is limited data on the impact of exhaled e-cigarette aerosol on indoor air quality.

Of the few studies that have been undertaken to investigate the impact of e-cigarette emissions on indoor air quality, it has been reported that nicotine, propylene glycol, glycerol (the components of e-liquids), amongst other chemical compounds including volatile organic compounds, low molecular weight carbonyls, polycyclic aromatic hydrocarbons and trace metals, may be released into the air during use of e-cigarettes [10–15]. As no validated, standardized protocol is available for measuring exhaled e-cigarette emissions, the limited number of analytical investigations published above differ in environmental conditions and experimental set-up making it difficult to compare their findings and to determine the impact of e-cigarette use on the indoor ambient air. It is also questionable to compare results from smoking machine generated aerosol released into a room [12] with aerosol generated from human subjects [13] due to the changed chemistry and physical properties of the aerosol upon exhalation. Other factors include differences in the type of e-cigarette device used (“closed” vs. “open” system), the e-liquid composition, and the e-cigarette consumers’ individual puffing topography, *i.e.*, number of puffs, interval between puffs, puff duration, inhalation volume and depth of inhalation.

It has been reported there is wide variations in the quality of e-cigarettes which may also impact measured emission values [16]. Taken as a whole, there is a clear need for studies evaluating indoor air quality before, during and after e-cigarette use to provide important information on the impact of e-cigarettes on indoor air quality and therefore bystander exposures under real-life conditions [17].

In this study, we performed an assessment of indoor air quality before, during and after *ad libitum* use of a disposable ‘closed’ system e-cigarette (Puritane™; manufacturer, Fontem Ventures B.V., Amsterdam, The Netherlands) by human subjects in a naturally ventilated meeting room. Within this study, we analyzed the airborne concentrations of volatile organic compounds (VOCs) including nicotine and low molecular weight carbonyls, polycyclic aromatic hydrocarbons (PAHs), tobacco-specific nitrosamines (TSNAs) and trace metals. To assess indoor air quality and to provide a context for potential bystander exposures, we compared these findings with Human Criteria Values including UK and other general indoor air quality guidelines or workplace exposure limits (WELs), where available. The experimental approach presented here may also be useful to compare the chemicals released into the ambient air from different e-cigarettes used in different indoor environments.

2. Experimental Section

2.1. Study Design

To assess indoor air quality in a real-life environment, a business meeting was conducted in a small meeting room (12.8 m²) with five male adult volunteers (three experienced, regular e-cigarette users and two non-users) who had provided written, informed consent. The purpose of this was to create a realistic environment to encourage normal behavior by volunteers, without undue focus on vaping behavior. Smoking or vaping had not occurred in the room previously which was under natural ventilation conditions (*i.e.*, no air conditioning and all windows/doors were kept closed during the study). The air exchange rate of the office was confirmed using a standard tracer gas method as described previously by Upton and Kukadia [18]. The internal volume of the room was 38.5 m³ and was furnished with a central table and five chairs; a video camera was placed in one corner of the room to record the study and number of puffs taken by the volunteers. Filter assemblies and sampling lines were suspended above the meeting table using metal struts; this served to reduce interference with volunteer behavior. To mitigate potential confounding from operators entering the test space, air samples were drawn using sampling lines into an adjacent room for collection onto tubes or sorbent cartridges specific for the respective chemical parameter being monitored. Samples for metals analysis were taken within the office using filter arrangements. A schematic representation of the room layout, with details of the two independent sampling locations and the positions of the e-cigarette users and non-users is shown in Figure 1. To investigate potential changes in indoor air quality, the ambient air was analyzed before, during and after a 165 min vaping session. Sampling times are shown in Figure 2. During the vaping session, three of the five participants used Puritane™ 16 mg/g disposable Original flavored e-cigarettes (“closed” system; battery capacity, 240 mAh) purchased over-the-counter from a number of UK retail outlets. The base e-liquid (1 mL) used in the product consists of mixture of propylene glycol (67% (w/w)) and glycerol (30% (w/w)) in which pharmaceutical grade nicotine (1.6% (w/w); 16 mg/g per product) and small amounts of flavorings are dissolved; a typical

e-liquid conformation in the UK. Products were consumed *ad libitum* (i.e., with no restrictions on how to consume the product during the study period) with multiple products available to enable continual vaping during the study period as required; two participants did not use an e-cigarette during the meeting. The study was developed in collaboration with and conducted by an independent, leading UKAS accredited laboratory in the UK with expertise in indoor air quality.

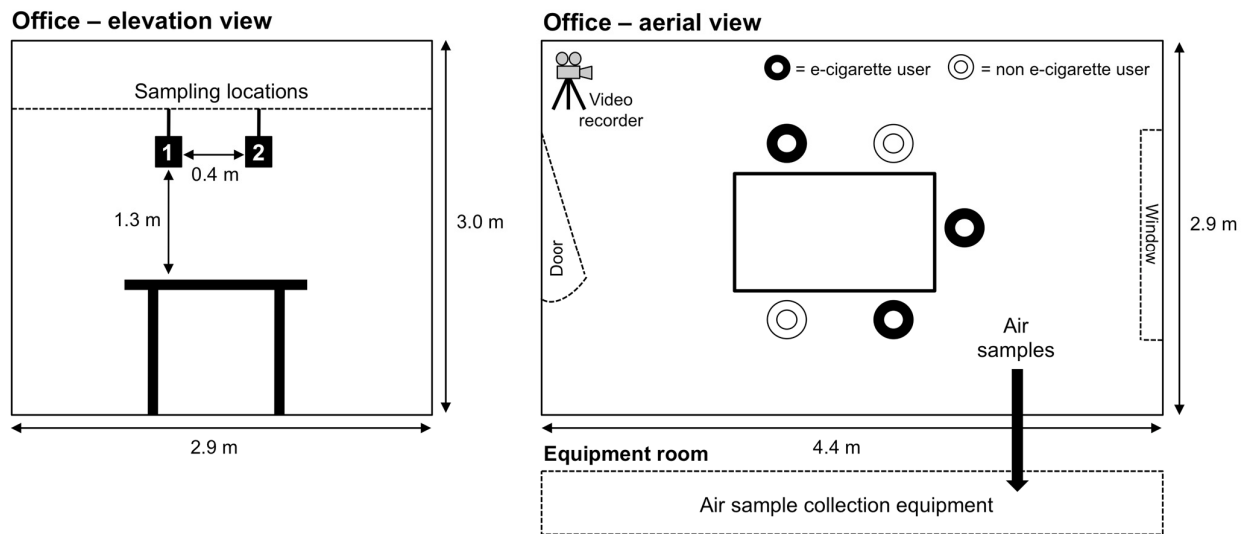


Figure 1. The layout of the meeting room used in this study (not drawn to scale). Sampling locations and positions of the e-cigarette users and non-users during the meeting are highlighted.

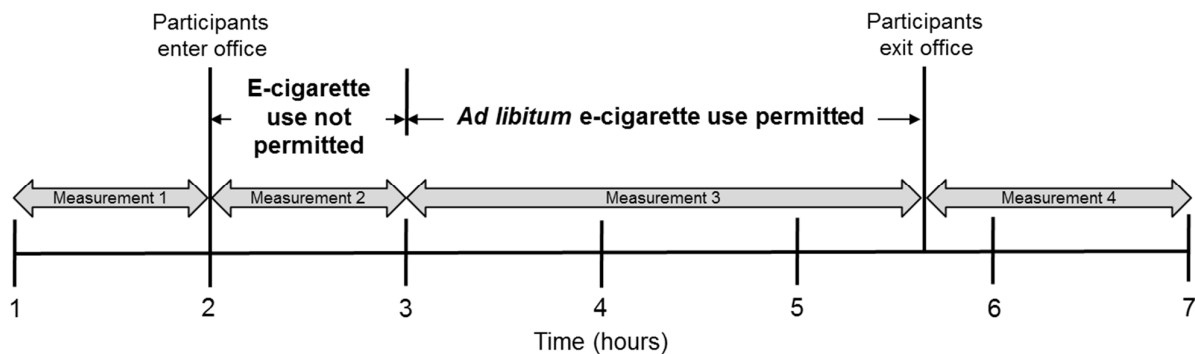


Figure 2. Timeline illustrating when participants entered and exited the office, when e-cigarettes were used and sampling times.

2.2. Analysis of Indoor Air Parameters

2.2.1. Indoor Climate

Carbon dioxide was measured continuously using a non-dispersive infrared detector (Q-Trak IAQ monitor, TSI Inc., Shoreview, MN, USA; limit of detection, 9 mg/m³). Carbon monoxide was

measured continuously using an electro-chemical sensor (Q-Trak IAQ monitor, TSI Inc.; LOD, 1.2 mg/m³). Ozone was measured continuously using a UV based photometric analyzer (Ozone Analyzer Model 49C; LOD, 0.002 mg/m³ Thermo Environmental Systems, Franklin, MA, USA). Nitric oxide and nitrogen dioxide were measured continuously using a NO_x Analyzer (Thermo Environmental Systems Model 42C; LOD, 1.25 mg/m³ for nitric oxide and 1.9 mg/m³ for nitrogen dioxide). Indoor humidity and temperature were continuously monitored (Q-Trak IAQ monitor, TSI Inc.).

2.2.2. Nicotine

Nicotine was measured in the air by pump sampling maintained at a flow rate of 1 L/min throughout the sampling period through PTFE tubing into XAD2 sorbent tubes (Ref. 226-30-06, SKC Ltd, Dorset, UK). Analysis of exposed tubes was performed by solvent extraction and GC-MS. The LOD for nicotine in air was 7.0 µg/m³. Travel blanks were also collected and analyzed.

2.2.3. Volatile Organic Compounds (VOCs)

Sampling and analysis of VOCs was carried out according to the ISO 16000-6 international standard [19]. Pump sampling was maintained at a flow rate of 0.15 L/min throughout the sampling period through PTFE tubing. Travel blanks were also collected and analyzed. The total volatile organic compounds (TVOC) concentration, as used in many indoor air quality guidelines, was calculated as the area of all compounds eluting between, and including, hexane and hexadecane. This is quantified as toluene equivalents, and so the TVOC concentration may be less or more than the sum of the individual VOCs reported. The LODs for each individual VOC were in the range 0.5–1.0 µg/m³.

2.2.4. Glycerol

Glycerol was measured in the air by pump sampling maintained at a flow rate of 1 L/min throughout the sampling period through PTFE tubing into XAD7 sorbent tubes (SKC Ltd Ref. 226-57). Analysis of exposed tubes was performed using a thermodesorption unit coupled to by solvent extraction and GC-MS. The LOD for glycerol in air was 150–350 µg/m³; this range represents differences in sample durations and therefore sampling volumes. Travel blanks were also collected and analyzed.

2.2.5. Low Molecular Weight Carbonyls

Formaldehyde (methanal), acetaldehyde (ethanal) and acrolein (propenal) were measured in the air by pump sampling maintained at a flow rate of 1.5 L/min throughout the sampling period through PTFE tubing into commercially available purpose-built tubes which contained silica coated with 2,4-dinitrophenyl hydrazine (DNPH). Sampling and analysis of exposed tubes was performed according to ISO 16000-3 international standard [20]. The LOD for carbonyls in air was 2.0 µg/m³. Travel blanks were also collected and analyzed.

2.2.6. Polycyclic Aromatic Hydrocarbons (PAHs)

The US Environmental Protection Agency (US EPA) ‘priority list’ of 16 PAHs [21] were measured in the air by pump sampling maintained at a flow rate of 2 L/min throughout the sampling period

through PTFE tubing into XAD2 sorbent tubes (SKC Ltd Ref. 226-30-06). Analysis of exposed tubes was performed by solvent extraction and high resolution GC-MS. The LOD for each PAH in air was $1.25 \mu\text{g}/\text{m}^3$. Travel blanks were also collected and analyzed.

2.2.7. Trace Metals

The US EPA “Method 29” metals [22], aluminium and phosphorus were measured in the air by pump sampling operating maintained at a flow rate of 6.5 L/min throughout the sampling period into pre-prepared 25 mm filter assemblies (using mixed cellulose ester “MCE” membrane filters). The filters were acid-extracted by digestion in boiling *aqua regia* and the extract analyzed by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES). The LOD for each metal in air ranged from 1.0 to $2.0 \mu\text{g}/\text{m}^3$, depending on the metal analyzed. Travel blanks were also collected and analyzed.

2.2.8. Tobacco-Specific Nitrosamines (TSNAs)

TSNAs were measured in the air by pump sampling maintained at a flow rate of 1.5 L/min throughout the sampling period through PTFE tubing into Cambridge filter pads (44 mm diameter) impregnated with potassium bisulphate. Analysis of exposed tubes was performed by solvent extraction and HPLC-MS. The LOD for each TSNA in air was $0.5 \mu\text{g}/\text{m}^3$. Travel blanks were also collected and analyzed.

2.3. Analysis of Outdoor Air Parameters

Temperature, relative humidity, and levels of ozone and NO_x were also monitored outside the building.

3. Results and Discussion

Across Europe and North America, consumer interest in electronic vapour (e-vapour) products, including e-cigarettes, continues to grow [1]. While there are some parallels between e-vapour products and conventional tobacco products in terms of product conformation and consumer behaviors, the products themselves are radically different in their design, composition, and the resultant inhaled and exhaled aerosol. As such, product standards and other regulatory measures must take account of this although as a comparatively recent product category, the evidence base on which to establish such regulation is still developing. While e-cigarettes do not combust or generate side-stream emissions, there is currently a debate on whether exhaled e-cigarette aerosols pose a potential exposure risk to bystanders akin to that reported for environmental tobacco smoke from conventional tobacco products [2–6]. In designing the present study, the key aims were to conduct a study under realistic conditions and to examine findings reported previously by other researchers.

3.1. Product Use: Puff Rate

From the video footage, the average puff rate across the three e-cigarette users during the 165 min vaping session was calculated to be 3.2 puffs per minute.

3.2. Indoor Climate Parameters

The measured room ventilation rate showed a low level of natural ventilation for the size of the office and number of occupants, with an average air exchange rate of 0.8 air changes per hour. The UK Chartered Institute of Building Services Engineers (CIBSE) recommends a ventilation rate of 1.0 air change per hour [23]. However, this level of ventilation is comparable to that previously reported for living rooms in residential properties [24].

The temperature and relative humidity (RH) in the office over the course of the study were in the ranges 22–28 °C and 43%–57% respectively, with both parameters showing a marked increase as a consequence of the room occupation, as would be expected in a small space with limited natural ventilation and no recourse to cooling. The temperature and RH nevertheless remained within the UK Health and Safety Executive (HSE) ranges for acceptable human comfort in an office space [25].

Carbon monoxide was not detected during any of the test periods (vaping or non-vaping). Carbon dioxide (CO₂) levels increased to a mean level of 5813 mg/m³ from a background level of 969 mg/m³ during the non-vaping session, with the concentration peaking at nearly 6800 mg/m³ during the vaping session. With the windows and door closed, and continuous occupation by five people, this rise in CO₂ concentrations is to be expected from normal respiration. There were small differences in the concentrations of nitric oxide (NO), nitrogen dioxide (NO₂) and ozone (O₃) during the periods of vaping and non-vaping in the meeting room (data not shown). The small variations in the concentrations of these gases were considered to be as a result of the usual changes that occur in the outside atmosphere, which migrate into the building through infiltration.

3.3. Volatile Organic Compounds (VOCs; Including Nicotine, Propylene Glycol and Glycerol) and Low Molecular Weight Carbonyls

Table 1 summarizes the results for VOCs, including nicotine, propylene glycol and glycerol (the three principal components of e-cigarette base liquid) and low molecular weight carbonyls. Nicotine is present in most e-liquids and e-cigarettes, and several studies have investigated its presence in the ambient air following product use. After the generation and release of e-cigarette aerosol using a smoking machine into an exposure chamber, McAuley *et al.* [11] reported airborne nicotine concentrations ranging from 0.725 to 8.77 µg/m³ following use of rechargeable e-cigarettes with refillable cartomisers containing 24 mg/mL or 26 mg/mL nicotine. Similarly, Czogala *et al.* [12] used three different e-cigarette products containing 16 mg/mL or 18 mg/mL nicotine and found airborne concentrations in an exposure chamber ranging from 0.82 to 6.23 µg/m³. Both these studies (and others) used a machine approach to simulate the use of e-cigarettes for estimating potential bystander exposures to exhaled e-cigarette aerosol [11,12,26]. Such an approach does not account for consumer behavior nor the retention of nicotine by the e-cigarette user and so is likely to overestimate airborne nicotine concentrations and potential bystander exposures. In a volunteer study conducted by Schober *et al.* [13], it was found that the nicotine concentration in the ambient air ranged from 0.6 to 4.6 µg/m³ during a 2 h vaping session using a rechargeable e-cigarette with refillable tank (“open” system).

Table 1. Average indoor air concentrations of VOCs (including nicotine, propylene glycol and glycerol (principle components of the e-liquid)) and low molecular weight carbonyls ($\mu\text{g}/\text{m}^3$) measured before, during and after use of e-cigarettes from two independent sampling sites.

Chemical Compound	Background (before Participants Enter Room)	Room Occupied (No Vaping)	Room Occupied (Vaping Permitted)	Room Unoccupied (after Participants Leave Room)	Air Quality Guidelines or UK Workplace Exposure Limit as Published (WEL; 8 h Average) (mg/m^3)	Air Quality Guidelines or UK Workplace Exposure Limit * (WEL; 8 h Average) ($\mu\text{g}/\text{m}^3$)
	Measurement 1 ($\mu\text{g}/\text{m}^3$)	Measurement 2 ($\mu\text{g}/\text{m}^3$)	Measurement 3 ($\mu\text{g}/\text{m}^3$)	Measurement 4 ($\mu\text{g}/\text{m}^3$)		
Propylene glycol	<0.5	<0.5	203.6	10.2	UK WEL: 474	474,000
Glycerol	<150	<225	<250	<200	UK WEL: 10	10,000
Nicotine	<7.0	<7.0	<7.0	<7.0	UK WEL: 0.5	500
Isoprene	<0.5	6.2	9.5	<0.5	Not established	Not established
Acetone	1.3	9.2	10.7	1.2	UK WEL: 1210	1,210,000
Propan-2-ol	55.3	13.6	8.0	29.2	UK WEL: 999	999,000
Hexamethylenecyclotri- -siloxane	5.3	29.1	13.3	4.4	Not established	Not established
Octamethylcyclotetra- -siloxane	<0.5	14.2	3.6	0.9	Not established	Not established
Limonene	2.2	2.1	2.9	1.5	Not established	Not established
Octanal	2.1	3.5	5.4	4.6	Not established	Not established
Decamethylcyclo- -pentanesiloxane	6.3	307	460.8	107.5	Not established	Not established
Nonanal	6.3	7.9	10.6	11.0	Not established	Not established
Decanal	2.8	5.7	9.5	11.6	Not established	Not established
2,2,4-Trimethyl-1,3- -pentanediol monoisobutyrate	7.7	16.1	17.3	18.0	Not established	Not established

Table 1. Cont.

Chemical Compound	Background (before Participants Enter Room)	Room Occupied (No Vaping)	Room Occupied (Vaping Permitted)	Room Unoccupied (after Participants Leave Room)	Air Quality Guidelines or UK Workplace Exposure Limit as Published (WEL; 8 h Average) (mg/m ³)	Air Quality Guidelines or UK Workplace Exposure Limit * (WEL; 8 h Average) (µg/m ³)
	Measurement 1 (µg/m ³)	Measurement 2 (µg/m ³)	Measurement 3 (µg/m ³)	Measurement 4 (µg/m ³)		
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	<0.5	<0.5	1.5	2.2	Not established	Not established
Di-isobutyl phthalate	3.5	4.4	2.3	2.8	UK WEL: 5	5000
Formaldehyde	32.0	31.0	37.6	21.0	WHO: 0.1	100
Acetaldehyde	9.0	6.5	12.4	6.0	EU Indoor Air Quality: 0.2	200
Acrolein	<2.0	<2.0	<2.0	<2.0	UK WEL: 0.23	230
Total VOC	65.0	237.0	379.8	129.0	UK Building Regulations: 0.3 (8 h average)	300

* converted to µg/m³ to facilitate comparison with analytical findings in this study.

These levels are in general agreement with the theoretical maximum level determined in a recent publication which used a mathematical model to assess the concentration of nicotine in the indoor air following e-cigarette use [27]. However in our volunteer study presented here, there was no measurable increase in nicotine airborne concentrations with vaping when compared with either the no vaping control session or background measurements *i.e.*, all measurements were found to be $<7.0 \mu\text{g}/\text{m}^3$. By way of context, the published UK WEL for nicotine is $500 \mu\text{g}/\text{m}^3$ [28]. The low level measured in this study may be attributable to the high retention rate of nicotine in the body, which has previously been reported following inhalation of tobacco smoke [29], as well as some potential loss by deposition [30]. Further research in these areas will be informative.

Propylene glycol and glycerol are principal components of e-liquids and their presence in exhaled e-cigarette aerosol is expected. Concentrations of propylene glycol in the range of $110\text{--}215 \mu\text{g}/\text{m}^3$ and glycerol in the range of $59\text{--}81 \mu\text{g}/\text{m}^3$ in the gas phase of emissions have been reported previously [13]. In other studies, McAuley *et al.* [11] observed airborne concentrations of propylene glycol that ranged from 2.25 to $120 \mu\text{g}/\text{m}^3$ and Romagna *et al.* [15] reported airborne glycerol concentrations of $72 \mu\text{g}/\text{m}^3$.

In our study, during *ad libitum* use of the ‘closed’ system e-cigarettes, propylene glycol in the air of the meeting room increased from $<0.5 \mu\text{g}/\text{m}^3$ during the no vaping control session to $203.6 \mu\text{g}/\text{m}^3$ during vaping. At the end of the vaping session, there was a substantial and rapid decrease in the levels detected (down to $10.2 \mu\text{g}/\text{m}^3$). The levels of propylene glycol determined within our study design were below the UK WEL of $474,000 \mu\text{g}/\text{m}^3$ set for this chemical [28]. Glycerol, while also expected to be present in the indoor air during the vaping session, could not be detected with satisfactory precision due to the limit of detection (LOD) for this compound ($<350 \mu\text{g}/\text{m}^3$). Further methodological refinement is required in future work. Nonetheless, it can be established that glycerol in the indoor air did not exceed $350 \mu\text{g}/\text{m}^3$ during consumption of the e-cigarettes which is below the UK WEL of $10,000 \mu\text{g}/\text{m}^3$ set for this chemical [28].

Total volatile organic compounds (TVOCs) is an analytically based classification for a range of organic chemical compounds present in ambient air or emissions and is used for reporting purposes. In evaluating TVOCs, consideration of the individual compounds is also necessary (Table 1). The background concentration of TVOCs observed in the meeting room ambient air in our study rose from $65 \mu\text{g}/\text{m}^3$ to $237 \mu\text{g}/\text{m}^3$ upon occupation of the room. While not components of e-liquids, this increase was likely due to the contribution of siloxane compounds arising from the five volunteers. It is well known that siloxanes are widely used in toiletries, deodorants and other personal care products [31]; with increasing room temperature during the study session, release of these and other cosmetic components would likely to have increased. A number of other commonly used aroma compounds (e.g., octanal, nonanal) were also detected at lower levels during the study period. During the vaping phase the TVOC concentrations rose to $379.8 \mu\text{g}/\text{m}^3$, conceivably due to further release of siloxanes and exhalation of propylene glycol from the active consumption of the e-cigarettes (see above). Following participant exit from the office, the TVOC concentrations returned to pre-vaping levels. While a WEL has not been established, UK Building Regulations recommend an 8 h average TVOC level of $300 \mu\text{g}/\text{m}^3$ [32].

Previous studies have detected the presence of the low molecular weight carbonyls formaldehyde and acetaldehyde in exhaled e-cigarette aerosols [10,13]. It has been reported that potential sources of

these compounds in e-cigarette aerosol may arise from the heating or pyrolysis of propylene glycol [33].

Schripp *et al.* [10] evaluated emissions from e-cigarettes after asking a volunteer user to consume three different refillable “open” e-cigarette devices in a closed 8 m³ chamber. The authors reported formaldehyde and acetaldehyde in the air of the chamber albeit at significantly lower levels than emissions from a conventional cigarette. Schripp *et al.* [10] concluded that the presence of formaldehyde in the ambient air may be explained by human contamination and not from e-cigarette emissions; it has been previously reported that low amounts of both formaldehyde and acetaldehyde of endogenous origin can be detected in exhaled breath [34]. In addition, it is widely reported that formaldehyde is released from some furniture and fittings, an effect which increases with room temperature and humidity [35]. Taken as a whole, this highlights the importance of appropriate control sampling during air quality studies.

In our study, using a 38.5 m³ environment, we observed slight changes in formaldehyde levels from an empty meeting room background value of 32.0 µg/m³, to 31.0 µg/m³ with occupancy, to 37.6 µg/m³ during e-cigarette use. The level fell rapidly to 21.0 µg/m³ following vacation of the office by study participants. The WHO has established a guideline indoor air value of 100 µg/m³ for formaldehyde [36]. While indicated as a short-term (30 min) guideline to prevent sensitivity or sensitization in both adults and children, WHO has stated that this value is sufficient to prevent long-term health effects, including cancer, since two distinct long term risk assessment models in the review arrived at proposed guideline values of around 210 and 250 µg/m³ [36]. The levels of formaldehyde determined within our study design were below WHO Indoor Air Quality guideline value of 100 µg/m³ set for this chemical and comparable to range of values typically found in domestic or public spaces [36,37]. Schripp *et al.* [10] and Schober *et al.* [13] both reported formaldehyde levels below the WHO Indoor Air Quality Guideline.

When compared with the non-vaping session, we found acetaldehyde levels changed from a background of 9.0 µg/m³ to 6.5 µg/m³ after occupation to 12.4 µg/m³ during the vaping session. These values and those reported by Schripp *et al.* [10] and Schober *et al.* [13] were well within the EU Indoor Air Quality guideline for acetaldehyde which is set at 200 µg/m³ [38].

A further finding in our study was the absence of a measurable increase in acrolein, the pyrolysis product of glycerol [33], in the office air with use of e-cigarettes when compared to control measurements (<2.0 µg/m³). This finding is consistent with those findings from Romagna *et al.* [15], who did not detect acrolein in air quality measurements in a 60 m³ room during *ad libitum* use of e-cigarettes.

By way of context, it has been reported by the US Environmental Protection Agency (EPA) and others that the burning of candles indoors resulted in a measureable increase of benzene, toluene, formaldehyde, acetaldehyde and acrolein [39]. In air quality measurement studies following their use, formaldehyde levels in the air ranged from 1.0–323.5 µg/m³ and acetaldehyde from 1.0 to 74.95 µg/m³; reported levels of these two carbonyls measured in our study were substantially less than the maximal values in these studies [9].

For acetone and isoprene, both exhaled breath components [40], there was an increase from baseline during the occupied non-vaping session and active vaping sessions. Isoprene increased from a baseline measurement of <0.5 µg/m³ to 6.2 µg/m³ during room occupation to 9.5 µg/m³ during active vaping.

Acetone increased from a baseline measurement of 1.3 $\mu\text{g}/\text{m}^3$ to 9.2 $\mu\text{g}/\text{m}^3$ during room occupation to 10.7 $\mu\text{g}/\text{m}^3$ during active vaping. Following participant exit from the room, the concentrations of both compounds returned to background levels. This indicates that the occupants were the primary source of isoprene and acetone. A UK WEL has not been established for isoprene; acetone levels in all measurements were substantially lower than the UK WEL which is currently 1,210,000 $\mu\text{g}/\text{m}^3$ [28].

3.4. Polycyclic Aromatic Hydrocarbons (PAHs)

Table 2 summarizes the results for the PAHs. Schober *et al.* [13] recently reported airborne concentrations of PAHs increased following e-cigarette use by volunteers, but were still substantially lower than the USA Occupational Safety and Health Administration's (OSHA) Permissible Exposure Level (PEL) for PAHs in the workplace of 200 $\mu\text{g}/\text{m}^3$ [41]. In a commentary on this work, Farsalinos and Voudris [42] noted several study limitations including measuring baseline values on different days from the vaping sessions thus changes in airborne PAHs levels may reflect variations in environmental PAH levels and not e-cigarette use. In our study, there was no measurable increase in the airborne concentration of any of the US EPA 'priority list' of 16 PAHs during the vaping period (all <1.25 $\mu\text{g}/\text{m}^3$), which includes seven PAHs classified as probable carcinogens by International Agency for Research on Cancer (IARC) [43,44]. Differences between the current work presented here and the low levels detected by Schober *et al.* [13] may reflect differences in the sensitivity of the methodologies employed, study design and/or differences between products used in the respective studies.

Table 2. Average indoor air concentrations of US EPA "priority list" of 16 PAHs ($\mu\text{g}/\text{m}^3$) measured before, during and after use of e-cigarettes from two independent sampling sites.

Chemical Compound	Background (before Participants Enter Room)	Room Occupied (No Vaping)	Room Occupied (Vaping Permitted)	Room Unoccupied (after Participants Leave Room)
	Measurement 1	Measurement 2	Measurement 3	Measurement 4
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)
Acenaphthene	<1.25	<1.25	<1.25	<1.25
Acenaphthylene	<1.25	<1.25	<1.25	<1.25
Anthracene	<1.25	<1.25	<1.25	<1.25
Benz[a]anthracene	<1.25	<1.25	<1.25	<1.25
Benzo[b]fluoranthene	<1.25	<1.25	<1.25	<1.25
Benzo[k]fluoranthene	<1.25	<1.25	<1.25	<1.25
Benzo[ghi]perylene	<1.25	<1.25	<1.25	<1.25
Benzo[a]pyrene	<1.25	<1.25	<1.25	<1.25
Chrysene	<1.25	<1.25	<1.25	<1.25
Dibenz[ah]anthracene	<1.25	<1.25	<1.25	<1.25
Fluoranthene	<1.25	<1.25	<1.25	<1.25
Fluorene	<1.25	<1.25	<1.25	<1.25
Indeno[1,2,3-cd]pyrene	<1.25	<1.25	<1.25	<1.25
Naphthalene	<1.25	<1.25	<1.25	<1.25
Phenanthrene	<1.25	<1.25	<1.25	<1.25
Pyrene	<1.25	<1.25	<1.25	<1.25

3.5. Trace Metals

Table 3 summarizes the results for trace metals. It has been previously reported in the literature that e-cigarette use may result in the release of metal particles into the ambient air [13,45]. Schober *et al.* [13] reported that levels of aluminium in the ambient air increased 2.4-fold following e-cigarette use. Under the conditions employed in our study, there was no measurable increase in any of the USA “EPA Method 29” metals [22] as well as aluminium and phosphorus during the vaping period compared with the no-vaping control session and background levels. Measurements were all $<1.0 \mu\text{g}/\text{m}^3$ for antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium and zinc; $<2.0 \mu\text{g}/\text{m}^3$ for aluminium, beryllium, silver and thallium, and $<10 \mu\text{g}/\text{m}^3$ for phosphorus. Where established for those metals analyzed, all were below UK WELs as shown in Table 4 [28]. Again, the differences in these findings compared to the Schober *et al.* [13] study may be due to differences in the methods employed and/or the design and manufacture processes of the e-cigarette devices used in the respective studies.

Table 3. Average indoor air concentrations of US “EPA Method 29” metals (plus aluminium and phosphorous) ($\mu\text{g}/\text{m}^3$) measured before, during and after use of e-cigarettes from two independent sampling sites.

Chemical Compound	Background	Room	Room occupied	Room unoccupied	UK Workplace	
	(before Participants Enter Room)	Occupied (No Vaping)	(Vaping Permitted)	(after Participants Leave Room)	Exposure Limit as Published (WEL; 8 h Average)	UK Workplace Exposure Limit * (WEL; 8 h Average)
	Measurement 1 ($\mu\text{g}/\text{m}^3$)	Measurement 2 ($\mu\text{g}/\text{m}^3$)	Measurement 3 ($\mu\text{g}/\text{m}^3$)	Measurement 4 ($\mu\text{g}/\text{m}^3$)	(mg/m ³)	($\mu\text{g}/\text{m}^3$)
Aluminium	<2.0	<2.0	<2.0	<2.0	10	10,000
Antimony	<1.0	<1.0	<1.0	<1.0	0.5	500
Arsenic	<1.0	<1.0	<1.0	<1.0	0.1	100
Barium	<1.0	<1.0	<1.0	<1.0	0.5	500
Beryllium	<2.0	<2.0	<2.0	<2.0	0.002	2.0
Cadmium	<1.0	<1.0	<1.0	<1.0	0.025	25
Chromium	<1.0	<1.0	<1.0	<1.0	0.5	500
Cobalt	<1.0	<1.0	<1.0	<1.0	0.1	100
Copper	<1.0	<1.0	<1.0	<1.0	1	1000
Lead	<1.0	<1.0	<1.0	<1.0	Not established	Not established
Manganese	<1.0	<1.0	<1.0	<1.0	0.5	500
Mercury	<1.0	<1.0	<1.0	<1.0	0.02	20
Nickel	<1.0	<1.0	<1.0	<1.0	0.1	100
Phosphorus	<10.0	<10.0	<10.0	<10.0	Not established	Not established
Selenium	<1.0	<1.0	<1.0	<1.0	0.1	100
Silver	<2.0	<2.0	<2.0	<2.0	0.1	100
Thallium	<2.0	<2.0	<2.0	<2.0	0.1	100
Zinc	<1.0	<1.0	<1.0	<1.0	Not established	Not established

* converted to $\mu\text{g}/\text{m}^3$ to facilitate comparison with analytical findings in this study.

3.6. Tobacco-Specific Nitrosamines (TSNAs)

Table 4 summarizes the results for TSNAs. Previous studies have reported the presence of TSNAs in the e-liquid or mainstream e-cigarette aerosols [46]. In our study, we sampled the ambient air for the presence of *N*'-nitrosonornicotine (NNN), 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK), *N*'-nitrosoanatabine (NAT) and *N*'-nitrosoanabasine (NAB). There was no measurable increase in the airborne concentrations of the four TSNAs analysed during active consumption of e-cigarettes when compared to control measurements (all < 0.5 µg/m³).

Table 4. Average indoor air concentrations of TSNAs (µg/m³) measured before, during and after use of e-cigarettes from two independent sampling sites.

Chemical Compound	Background (before Participants Enter Room)	Room Occupied (No Vaping)	Room Occupied (Vaping Permitted)	Room Unoccupied (after Participants Leave Room)
	Measurement 1	Measurement 2	Measurement 3	Measurement 4
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
<i>N</i> '-Nitrosonornicotine (NNN)	<0.5	<0.5	<0.5	<0.5
4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)	<0.5	<0.5	<0.5	<0.5
<i>N</i> '-Nitrosoanatabine (NAT)	<0.5	<0.5	<0.5	<0.5
<i>N</i> '-Nitrosoanabasine (NAB)	<0.5	<0.5	<0.5	<0.5

3.7. Study Limitations and Strengths

The key aim of our study design was to replicate a real-life scenario with unrestricted use of a disposable “closed” system product by the vaping volunteers. In doing so, overhead sampling of the ambient air was chosen rather than personal dosimetry approaches to reduce potential confounding of vaping behaviors from intrusive sampling.

Our use of volunteers in conditions designed to replicate those in a real-world situation limited the sample duration and therefore the sensitivity of the some of the methods employed, which were not as sensitive as in some other studies which used a machine generated aerosol. Arguably, if the presence of certain chemicals can only be detected by employment of artificial or atypical conditions, it is reasonable to question the appropriateness of such data. The use of consumers within the study removed many of the issues associated with the use of smoking machine generated aerosols, for example questions around the potential retention of chemicals in the body or that of different machine protocols not replicating product consumption profiles. With regards to the method to measure glycerol in our study, sensitivity was not as low as anticipated. While there could be some scope for reducing the LODs for these and other chemicals further by increasing sampling duration, this would be difficult without introducing other potential confounding factors such as opening and closing meeting doors for refreshment breaks. By excluding opening and closing doors in this study, and by limiting the air exchange to natural room ventilations, the levels reported in our study are likely to represent an overestimate of normal conditions. The measurement of air exchange and other environmental parameter measurements in the methodology are supportive of this.

Another limitation in this study was the use of a single product; as noted above, other research groups have reported findings that were not replicated in this present study. Such studies used different products which may reflect variations in e-liquid or device quality, sufficient details of which are often not reported. Additionally, given the focus on ambient air, the primary emissions of the analyzed product were not determined in this study, which may be of interest in future work focusing on consumer rather than bystander exposures. Further air quality studies could also investigate other product types as well as different settings and volunteer groups.

The potential issue of cross contamination with cigarette smoke has been noted previously [2]. Given the sensitivity of the methods employed in this study, potential confounding from recent tobacco smoking was minimized. A strength of this study was that the rooms used here had never been smoked in nor were they used for any prior tobacco research.

4. Conclusions

The present study offers an indoor air quality assessment by an independent, UKAS accredited laboratory following use of a disposable ‘closed’ system e-cigarette in a real life setting. Since this was not a long-term repeated exposure study; in providing a context, findings were related to indoor air quality guidelines, where available. Our data indicate that exposure of bystanders to the chemicals in the exhaled e-cigarette aerosol, at the levels measured within our study, are below current regulatory standards that are used for workplaces or general indoor air quality. This finding supports the conclusions of other researchers that have stated there is no apparent risk to bystanders from exhaled e-cigarette aerosols [6,11,47].

There has been conflicting and at times confusing information reported regarding the potential risks of bystanders and non-e-cigarette users to exhaled e-cigarette aerosol. The regulatory outlook from a public health perspective currently remains undetermined; there is a clear need for further research in this area to support the development of appropriate product standards and other science-based regulatory measures.

Acknowledgments

We would like to thank the external laboratory team for their specialist knowledge in developing and conducting this study. We would also like to thank Steve Stotesbury, Vaclav Borkovec and Eberhard Steinbach (Imperial Tobacco Group) for their assistance with this work.

Author Contributions

All authors conceived and designed the experiment. All authors analyzed and interpreted the data. Grant O’Connell and John D. Pritchard wrote the manuscript. All authors contributed to the manuscript and approved the final version.

Conflicts of Interest

All authors are employees of Imperial Tobacco Group. The work in this manuscript was supported by Imperial Tobacco Group. Imperial Tobacco Group is the parent company of Fontem Ventures B.V., the manufacturer of the e-cigarette products used in this study.

References

1. ASH. *Use of electronic cigarettes in Great Britain*. Available online: http://www.ash.org.uk/files/documents/ASH_891.pdf (accessed on 17 August 2014).
2. Farsalinos, K.E.; Polosa, R. Safety evaluation and risk assessment of electronic cigarettes as tobacco cigarette substitutes: A systematic review. *Ther. Adv. Drug Saf.* **2014**, *5*, 67–86.
3. Grana, R.; Benowitz, N.; Glantz, S.A. E-cigarettes: A scientific review. *Circulation* **2014**, *129*, 1972–1986.
4. Riker, C.A.; Lee, K.; Darville, A.; Hahn, E.J. E-cigarettes: Promise or peril? *Nurs. Clin. N. Am.* **2012**, *47*, 159–171.
5. WHO. World Health Organisation Framework Convention on Tobacco Control. Available online: http://apps.who.int/gb/fctc/PDF/cop6/FCTC_COP6_10-en.pdf?ua=1 (accessed on 17 August 2014).
6. Burstyn, I. Peering through the mist: Systematic review of what the chemistry of contaminants in electronic cigarettes tells us about health risks. *BMC Public Health* **2014**, *14*, doi:10.1186/1471-2458-14-18.
7. BMA. BMA Calls for Stronger Regulation of E-Cigarettes. Available online: file:///C:/Users/ukbhgco/Downloads/tobaccoecigarettespublicplaces_jan2013.pdf (accessed on 20 November 2014).
8. ASH. E-Cigarettes. Available online: http://www.scottish.parliament.uk/S4_HealthandSport/Committee/Meeting%20Papers/Papers_for_Meeting-18_November_2014.pdf (accessed on 20 November 2014).
9. Petry, T.; Vitale, D.; Joachim, F.J.; Smith, B.; Cruse, L.; Mascarenhas, R.; Schneider, S.; Singal, M. Human health risk evaluation of selected VOC, SVOC and particulate emissions from scented candles. *Regul. Toxicol. Pharmacol.* **2014**, *69*, 55–70.
10. Schripp, T.; Markewitz, D.; Uhde, E.; Salthammer, T. Does e-cigarette consumption cause passive vaping? *Indoor Air* **2013**, *23*, 25–31.
11. McAuley, T.R.; Hopke, P.K.; Zhao, J.; Babaian, S. Comparison of the effects of e-cigarette vapor and cigarette smoke on indoor air quality. *Inhal. Toxicol.* **2012**, *24*, 850–857.
12. Czogala, J.; Goniewicz, M.L.; Fidelus, B.; Zielinska-Danch, W.; Travers, M.J.; Sobczak, A. Secondhand exposure to vapors from electronic cigarettes. *Nicotine Tob. Res. Off. J. Soc. Res. Nicotine Tob.* **2014**, *16*, 655–662.
13. Schober, W.; Szendrei, K.; Matzen, W.; Osiander-Fuchs, H.; Heitmann, D.; Schettgen, T.; Jorres, R.A.; Fromme, H. Use of electronic cigarettes (e-cigarettes) impairs indoor air quality and increases feno levels of e-cigarette consumers. *Int. J. Hyg. Environ. Health* **2014**, *217*, 628–637.

14. Long, G.A. Comparison of select analytes in exhaled aerosol from e-cigarettes with exhaled smoke from a conventional cigarette and exhaled breaths. *Int. J. Environ. Res. Public Health* **2014**, *11*, 11177–11191.
15. Romagna, G.; Zabarini, L.; Barbiero, L.; Bocchietto, E.; Todeschi, S.; Caravati, E.; Voster, D.; Farsalinos, K. Characterization of Chemicals Released to the Environment by Electronic Cigarettes Use (Clearstream-Air Project): Is Passive Vaping a Reality. Available online: http://clearstream.flavourart.it/site/wp-content/uploads/2012/09/CSA_ItaEng.pdf (accessed on 18 March 2015).
16. Goniewicz, M.L.; Knysak, J.; Gawron, M.; Kosmider, L.; Sobczak, A.; Kurek, J.; Prokopowicz, A.; Jablonska-Czapla, M.; Rosik-Dulewska, C.; Havel, C.; *et al.* Levels of selected carcinogens and toxicants in vapour from electronic cigarettes. *Tob. Control* **2014**, *23*, 133–139.
17. Chang, H. Research gaps related to the environmental impacts of electronic cigarettes. *Tob. Control* **2014**, *23*, ii54–ii58.
18. Upton, S.; Kukadia, V. *Ventilation Rate Measurement: New Tracer Gases and Techniques for Healthy Indoor Environments*; BRE: Bracknell, UK, 2011.
19. ISO. *ISO 16000–6:2011 Indoor Air—Part 6: Determination of Volatile Organic Compounds in Indoor and Test Chamber Air by Active Sampling on Tenax ta Sorbent, Thermal Desorption and Gas Chromatography Using MS or MS-FID*; ISO: Geneva, Switzerland, 2011.
20. ISO. *ISO 16000–3:2011 Indoor Air—Part 3: Determination of Formaldehyde and Other Carbonyl Compounds in Indoor Air and Test Chamber Air—Active Sampling Method*; ISO: Geneva, Switzerland, 2011.
21. USEPA. Office of the Federal Registration (OFR) Appendix A: Priority Pollutants. Available online: law.cornell.edu/cfr/text/40/part-423/appendix-A (accessed 18 March 2015).
22. USEPA. Method 29-Metals Emissions from Stationary Sources. Available online: <http://www.epa.gov/ttn/emc/promgate/m-29.pdf> (accessed on 4 June 2014).
23. CIBSE. *Guide B: Heating, Ventilating, Air Conditioning and Refrigeration*; Chartered Institute of Building Services Engineers: London, UK, 2005.
24. General Fact Sheet: Limiting Conditions and Reliability, Ventilation, Room Size, Body Surface Area. Available online: http://www.rivm.nl/en/Documents_and_publications/Scientific/Reports/2006/augustus/General_fact_sheet_Limiting_conditions_and_reliability_ventilation_room_size_body_surface_area_Updated_version_for_ConsExpo_4 (accessed on 18 March 2015).
25. HSE. The Six Basic Factors. Available online: <http://www.hse.gov.uk/temperature/thermal/factors.htm> (accessed on 6 November 2014).
26. McGrath-Morrow, S.A.; Hayashi, M.; Aherrera, A.; Lopez, A.; Malinina, A.; Collaco, J.M.; Neptune, E.; Klein, J.D.; Winickoff, J.P.; Breyse, P.; *et al.* The effects of electronic cigarette emissions on systemic cotinine levels, weight and postnatal lung growth in neonatal mice. *PLoS ONE* **2015**, *10*, doi:10.1371/journal.pone.0118344.
27. Colard, S.; O’Connell, G.; Verron, T.; Cahours, X.; Pritchard, J.D. Electronic cigarettes and indoor air quality: A simple approach to modeling potential bystander exposures to nicotine. *Int. J. Environ. Res. Public Health* **2015**, *12*, 282–299.

28. HSE. *Environmental Hygiene Guidance Note eh40/2005 Workplace Exposure Limits: Containing the List of Workplace Exposure Limits for Use with the Control of Substances Hazardous to Health Regulations (as Amended)*, 2nd ed.; HSE: Liverpool, UK, 2011.
29. Armitage, A.K.; Dixon, M.; Frost, B.E.; Mariner, D.C.; Sinclair, N.M. The effect of tobacco blend additives on the retention of nicotine and solanesol in the human respiratory tract and on subsequent plasma nicotine concentrations during cigarette smoking. *Chem. Res. Toxicol.* **2004**, *17*, 537–544.
30. Goniewicz, M.L.; Lee, L. Electronic cigarettes are a source of thirdhand exposure to nicotine. *Nicotine Tob. Res. Off. J. Soc. Res. Nicotine Tob.* **2014**, *8*, doi:10.1093/ntr/ntu152.
31. Tran, T.M.; Kannan, K. Occurrence of cyclic and linear siloxanes in indoor air from Albany, New York, USA, and its implications for inhalation exposure. *Sci. Total Environ.* **2015**, *511*, 138–144.
32. HM Government. *The Building Regulations 2010: Ventilation Document F*; HM Government: London, UK, 2010.
33. Bekki, K.; Uchiyama, S.; Ohta, K.; Inaba, Y.; Nakagome, H.; Kunugita, N. Carbonyl compounds generated from electronic cigarettes. *Int. J. Environ. Res. Public Health* **2014**, *11*, 11192–11200.
34. Riess, U.; Tegtbur, U.; Fauck, C.; Fuhrmann, F.; Markewitz, D.; Salthammer, T. Experimental setup and analytical methods for the non-invasive determination of volatile organic compounds, formaldehyde and NO_x in exhaled human breath. *Anal. Chim. Acta* **2010**, *669*, 53–62.
35. CPSC. The U.S. Consumer Product Safety Commission: An Update on Formaldehyde. Available online: <http://www.cpsc.gov/PageFiles/121919/AN%20UPDATE%20ON%20FORMALDEHYDE%20final%200113.pdf> (accessed on 18 March 2015).
36. WHO. *Who Guidelines for Indoor Air Quality: Selected Pollutants*; WHO: Copenhagen, Denmark, 2010.
37. Salthammer, T.; Mentese, S.; Marutzky, R. Formaldehyde in the indoor environment. *Chem. Rev.* **2010**, *110*, 2536–2572.
38. EU. The Index Project, Critical Appraisal of the Setting and Implementation of Indoor Exposure Limits in the EU. Available online: http://ec.europa.eu/health/ph_projects/2002/pollution/fp_pollution_2002_frep_02.pdf (accessed on 11 November 2014).
39. EPA. Candles and Incense as Potential Sources of Indoor Air Pollution: Market Analysis and Literature Review. Available online: <http://nepis.epa.gov/Adobe/PDF/P1009BZL.pdf> (accessed on 13 November 2014).
40. King, J.; Kupferthaler, A.; Frauscher, B.; Hackner, H.; Unterkofler, K.; Teschl, G.; Hinterhuber, H.; Amann, A.; Hogg, B. Measurement of endogenous acetone and isoprene in exhaled breath during sleep. *Physiol. Meas.* **2012**, *33*, 413–428.
41. ATSDR. Toxicity of Polycyclic Aromatic Hydrocarbons (PAHs). Available online: <http://www.atsdr.cdc.gov/csem/pah/docs/pah.pdf> (accessed on 9 November 2014).
42. Farsalinos, K.E.; Voudris, V. E-cigarette use and indoor air quality: Methodological limitations: Response to W. Schober *et al.*'s “use of electronic cigarettes (e-cigarettes) impairs indoor air quality and increases feno levels of e-cigarette consumers”. *Int. J. Hyg. Environ. Health* **2014**, *217*, 705–706.

43. IARC. Some traditional herbal medicines, some mycotoxins, naphthalene and styrene. *IARC Monogr. Eval. Carcinog. Risks Hum.* **2002**, *82*, 1–556.
44. IARC. Air pollution, part 1, some non-heterocyclic polycyclic aromatic hydrocarbons and some related industrial exposures. *IARC Monogr. Eval. Carcinog. Risks Hum.* **2010**, *82*, 1–556.
45. Lerner, C.A.; Sundar, I.K.; Watson, R.M.; Elder, A.; Jones, R.; Done, D.; Kurtzman, R.; Ossip, D.J.; Robinson, R.; McIntosh, S.; *et al.* Environmental health hazards of e-cigarettes and their components: Oxidants and copper in e-cigarette aerosols. *Environ. Pollut.* **2015**, *198*, 100–107.
46. Cheng, T. Chemical evaluation of electronic cigarettes. *Tob. Control* **2014**, *23*, ii11–ii17.
47. McNeill, A.; Etter, J.F.; Farsalinos, K.; Hajek, P.; le Houezec, J.; McRobbie, H. A critique of a WHO-commissioned report and associated article on electronic cigarettes. *Addiction* **2014**, *12*, 2128–2134.

© 2015 by the authors; licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).



January 2018

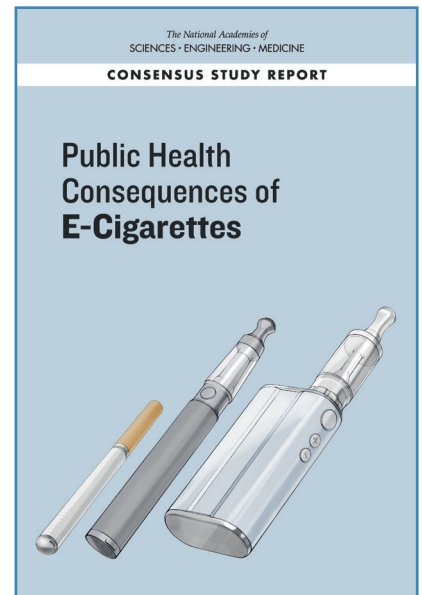
Public Health Consequences of E-Cigarettes

Millions of Americans use electronic cigarettes (e-cigarettes). Young people especially, age 17 and under, have quickly taken up their use: Substantially more young people use e-cigarettes than any other tobacco product, including traditional combustible tobacco cigarettes.

Despite their popularity, little is known about the health effects of e-cigarettes. Perceptions of potential risks and benefits of e-cigarette use vary widely among the public, users of the products, health care providers, and the public health community.

With support from the Center for Tobacco Products of the Food and Drug Administration (FDA), the National Academies of Sciences, Engineering, and Medicine convened an expert committee to conduct a critical, objective review of the scientific evidence about e-cigarettes and health. The resulting report, *Public Health Consequences of E-Cigarettes*, provides an overview of the evidence, recommends ways to improve the research, and highlights gaps that are priority focus areas for future work.

As part of its work, the committee conducted a comprehensive, in-depth review of the scientific literature around e-cigarettes, including key constituents in e-cigarettes, human health effects, initiation and cessation of combustible tobacco cigarette use, and harm reduction. The committee considered the quality of individual studies and the totality of the evidence to provide 47 structured, consistent conclusions on the strength of the evidence (categorized as conclusive, substantial, moderate, limited, insufficient, and no evidence—all defined on the next page).



CONSTITUENTS OF E-CIGARETTES

E-cigarettes contain liquids (called e-liquids), which typically contain nicotine, flavorings, and humectants (to retain moisture).

With respect to nicotine, conclusive evidence shows that exposure to nicotine from e-cigarettes is highly variable. It depends on characteristics of the products, including those of the device and e-liquids, as well as how the device is operated. Substantial evidence also shows that among experienced adult e-cigarette users, exposure to nicotine can be comparable to that from combustible tobacco cigarettes.

Most of the flavorings used in e-cigarettes are generally regarded as safe by the FDA, although these designations relate to oral consumption (flavorings used in food), and most have not been studied for safety when inhaled with an e-cigarette.

The primary humectants are propylene glycol and glycerol (also known as vegetable glycerin). Similar to flavorings, they are generally regarded as safe for ingestion, but less is known about their health effects when inhaled.

Overall, e-cigarette aerosol contains fewer numbers and lower levels of toxicants than smoke from combustible tobacco cigarettes. Nicotine exposure can mimic that found with use of combustible tobacco cigarettes, but it is highly variable. The exposure to nicotine and toxicants from the aerosolization of flavorings and humectants depends on device characteristics and how the device is used.

HEALTH EFFECTS OF E-CIGARETTES

Because e-cigarettes have only been on the U.S. market for a relatively brief time—first imported in 2006, most have entered the market much more recently—it is difficult to scientifically compare their health effects to those of combustible tobacco cigarettes, whose health effects were not fully appreciated until after decades of use. However, in contrast to long-term effects, research on short-term health effects of e-cigarettes is now available.

The committee evaluated the current state of knowledge on outcomes including dependence and abuse liability, cardiovascular diseases, cancers, respiratory diseases, oral diseases, reproductive and developmental effects, and injuries and poisonings.

Overall, the evidence reviewed by the committee suggests that e-cigarettes are not without biological effects in humans. For instance, use of e-cigarettes results in dependence on the devices, though with apparently less risk and severity than that of combustible tobacco cigarettes. Yet the implications for long-term effects on morbidity and mortality are not yet clear.

To see the full text of the committee's conclusions organized by levels of evidence and outcome, visit [nationalacademies.org/eCigHealthEffects](https://www.nationalacademies.org/eCigHealthEffects).

Levels of Evidence for Conclusions

Conclusive evidence: There are many supportive findings from good-quality controlled studies (including randomized and non-randomized controlled trials) with no credible opposing findings. A firm conclusion can be made, and the limitations to the evidence, including chance, bias, and confounding factors, can be ruled out with reasonable confidence.

Substantial evidence: There are several supportive findings from good-quality observational studies or controlled trials with few or no credible opposing findings. A firm conclusion can be made, but minor limitations, including chance, bias, and confounding factors, cannot be ruled out with reasonable confidence.

Moderate evidence: There are several supportive findings from fair-quality studies with few or no credible opposing findings. A general conclusion can be made, but limitations, including chance, bias, and confounding factors, cannot be ruled out with reasonable confidence.

Limited evidence: There are supportive findings from fair-quality studies or mixed findings with most favoring one conclusion. A conclusion can be made, but there is significant uncertainty due to chance, bias, and confounding factors.

Insufficient evidence: There are mixed findings or a single poor study. No conclusion can be made because of substantial uncertainty due to chance, bias, and confounding factors.

No available evidence: There are no available studies; health endpoint has not been studied at all. No conclusion can be made.

The net public health outcome of e-cigarette use depends on the balance between positive and negative consequences.

E-CIGARETTES AND HARM REDUCTION

FDA regulations require that tobacco products introduced to the U.S. market over the past decade must show a net public health benefit. In considering this public health effect, a product must pose less risk to users than combustible tobacco cigarettes. Additionally, if a product caused more people to start harmful tobacco use, or caused fewer people to quit tobacco use, a product would be kept off the market. So separate from the health effects of e-cigarettes, the tobacco control field must pay close attention to the effects of e-cigarettes on starting and quitting combustible tobacco products.

For youth and young adults, there is substantial evidence that e-cigarette use increases the risk of ever using combustible tobacco cigarettes. For e-cigarette users who have also ever used combustible tobacco cigarettes, there is moderate evidence that e-cigarette use increases the frequency and intensity of subsequent combustible tobacco cigarette smoking.

There is insufficient evidence from randomized controlled trials about the effectiveness of e-cigarettes as cessation aids compared to no treatment or to FDA-approved smoking cessation treatments. While the overall evidence from observational trials is mixed, there is moderate evidence from observational studies that more frequent use of e-cigarettes is associated with increased likelihood of cessation.

Overall, the evidence suggests that while e-cigarettes might cause youth who use them to transition to use of combustible tobacco products, they might also increase adult cessation of combustible tobacco cigarettes.

Completely substituting e-cigarettes for combustible tobacco cigarettes conclusively reduces a person's exposure to many toxicants and carcinogens present in combustible tobacco cigarettes and may result in

reduced adverse health outcomes in several organ systems. **Across a range of studies and outcomes, e-cigarettes appear to pose less risk to an individual than combustible tobacco cigarettes.**

To examine the possible effects of e-cigarette use at the population level, the committee used population dynamic modeling. Under the assumption that using e-cigarettes increases the net cessation rate of combustible tobacco cigarettes among adults, the modeling projects that in the short run, use of these products will generate a net public health benefit, despite the increased use of combustible tobacco products by young people. Yet in the long term (for instance, 50 years out), the public health benefit is substantially less and is even negative under some scenarios. If the products do not increase combustible tobacco cessation in adults, then with the range of assumptions the committee used, the model projects that there would be net public health harm in the short and long terms.

RESEARCH RECOMMENDATIONS

There is a great need for more evidence around the new field of e-cigarettes; research with both long- and short-term horizons is required.

The committee identified gaps in the literature in every aspect in its work and provides overarching categories of research needs and specific research suggestions within the final chapters of each of the three major sections of the report. These overarching categories include: (1) addressing gaps in substantive knowledge and (2) improving research methods and quality through protocol and methods validation and development, including the use of appropriate study design.

To download a copy of the report and read the full text of the committee's recommendations, please visit **[nationalacademies.org/eCigHealthEffects](https://www.nationalacademies.org/eCigHealthEffects)**.

Committee on the Review of the Health Effects of Electronic Nicotine Delivery Systems

David L. Eaton (Chair)

University of Washington

Anthony J. Alberg

University of South Carolina

Maciej Goniewicz

Roswell Park Comprehensive Cancer Center

Adam Leventhal

University of Southern California

José E. Manautou

University of Connecticut

Sharon McGrath-Morrow

Johns Hopkins University School of Medicine

David Mendez

University of Michigan

Richard Miech

University of Michigan

Ana Navas-Acien

Columbia University

Kent E. Pinkerton

University of California, Davis

Nancy A. Rigotti

Harvard Medical School and Massachusetts General Hospital

David A. Savitz

Brown University

Gideon St.Helen

University of California, San Francisco

CONCLUSION

Although e-cigarettes are not without risk, compared to combustible tobacco cigarettes they contain fewer toxicants; can deliver nicotine in a similar manner; show significantly less biological activity in most, but not all, in vitro, animal, and human systems; and might be useful as a cessation aid in smokers who use e-cigarettes exclusively. However, young people who begin with e-cigarettes are more likely to transition to combustible cigarette use and become smokers who are at risk to suffer the known health burdens of combustible tobacco cigarettes. The net public health outcome of e-cigarette use depends on the balance between positive and negative consequences.

More and better research is needed to help clarify whether e-cigarettes will prove to reduce harm—or induce harm—at the individual and the population levels. The approach taken by the committee to evaluate the health effects of e-cigarettes in this report is anticipated to provide a generalizable template for future evaluations of the evidence.

Study Staff and Fellow

Kathleen Stratton

Study Director

Leslie Y. Kwan

Associate Program Officer

Aimee Mead

Research Associate (from July 2017)

Alexis Wojtowicz

Senior Program Assistant

Jorge Mendoza-Torres

Senior Research Librarian

Rebecca Morgan

Senior Research Librarian

Doris Romero

Financial Associate (until March 2017)

Misrak Dabi

Financial Associate (from April 2017)

Hope Hare

Administrative Assistant

Rose Marie Martinez

Senior Board Director, Board on Population Health and Public Health Practice

Andrew Merluzzi

Christine Mirzayan Science and Technology Policy Graduate Fellow

Study Sponsor

U.S. Food and Drug Administration

To read the full report, please visit
[nationalacademies.org/eCigHealthEffects](https://www.nationalacademies.org/eCigHealthEffects)

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

The nation turns to the National Academies of Sciences, Engineering, and Medicine for independent, objective advice on issues that affect people's lives worldwide.

www.national-academies.org

Reason Foundation, Informational, SB0003

Uploaded by: BENTLEY, GUY

Position: INFO

Testimony: SB 3
Guy Bentley, director of consumer freedom
Reason Foundation
January 29, 2020

Chairman Guzzone and members of the committee,

Reason Foundation is a nonpartisan public policy think tank that promotes competition, and a dynamic market economy as the foundation for human dignity and progress.

Risks of e-cigarette taxation

The purpose of taxation is to provide revenue for government services. As such, tax policy should raise the required revenue while minimizing any economic damage caused by said taxation.

The question for policymakers when considering e-cigarette taxes is whether e-cigarettes present negative externalities requiring a special tax. These taxes are often referred to as ‘sin’ taxes. But smokers switching from cigarettes to e-cigarettes avoid the substantial health care costs associated with smoking-related diseases. Penalizing a smoker who switches from a lethal cigarette to an e-cigarette would be an inversion of a sin tax, it would be a virtue tax. It would also be highly regressive.

Half to three-quarters of American smokers are from low-income communities, so any price increase will necessarily present a more significant barrier to poorer smokers looking to switch to vaping than to those on higher incomes. The economic literature demonstrates just how harmful such taxes would be, with the price elasticity for rechargeable e-cigarettes being -1.9 , so for every 10 percent increase in the price of e-cigarettes sales fall by 19 percent.¹ Cigarettes, by contrast, are highly inelastic, ranging from -0.3 and -0.7 .

A recent working paper published in the National Bureau of Economic Research (NBER) examined the effect of Minnesota’s e-cigarette tax, which is 95% of the wholesale price. The study’s authors conclude: “Our results suggest that in the sample period about 32,400 additional adult smokers would have quit smoking in Minnesota in the absence of the tax. If this tax were

¹ Huang J, Tauras J, Chaloupka FJ. “The impact of price and tobacco control policies on the demand for electronic nicotine delivery systems.” *Tobacco Control* 2014;23:iii41-iii47.
https://tobaccocontrol.bmj.com/content/23/suppl_3/iii41

imposed on a national level about 1.8 million smokers would be deterred from quitting in a ten year period.”²

Independent e-cigarette businesses such as vape shops are also highly sensitive to significant tax increases, often operating on wafer-thin margins. In July 2016, the Pennsylvania General Assembly passed a 40 percent wholesale tax on e-cigarette products. By November 2017, 130 small vape shops closed.

Tobacco harm reduction

When considering the taxation of e-cigarette products, it must be acknowledged that these products are 95³ to 99⁴ percent safer than combustible cigarettes and are the most popular tool used by Americans smokers to quit. Research published in the *New England Journal of Medicine* (NEJM) shows e-cigarettes to be almost twice as effective as nicotine replacement therapies (NRT) at helping smokers quit.⁵ The study builds on years of empirical research showing similar results.^{6,7} It is beyond question that smokers who switch exclusively to e-cigarettes dramatically reduce their risk of smoking-related diseases. According to modeling conducted by Georgetown University Medical Centre, the replacement of cigarette use by e-cigarette use over ten years would yield 6.6 million fewer premature deaths.⁹

It is important to distinguish commercially available nicotine e-cigarettes, from THC vaping products. The latter is responsible for an outbreak of lung injuries and deaths beginning last year. Earlier this month, the Centers for Disease Control and Prevention (CDC) removed

² Saffer H, Dench D L., Grossman M, Dave D M. “E-Cigarettes and Adult Smoking: Evidence from Minnesota.” *National Bureau of Economic Research*. NBER Working Paper No. 26589. December 2019. <https://www.nber.org/papers/w26589>

³ Royal College of Physicians. “Nicotine without the smoke: Tobacco harm reduction.” London RCP, 2016. <https://www.rcplondon.ac.uk/projects/outputs/nicotine-without-smoke-tobacco-harm-reduction-0>

⁴ Stephens WE. “Comparing the cancer potencies of emissions from vapourised nicotine products including e-cigarettes with those of tobacco smoke.” *Tobacco Control* 2018;27:10-17. <https://tobaccocontrol.bmj.com/content/27/1/10>

⁵ Hajek, Peter et al. “A Randomized Trial of E-Cigarettes versus Nicotine-Replacement Therapy.” *N Engl J Med* 2019; 380:629-637 <https://www.nejm.org/doi/full/10.1056/NEJMoa1808779>

⁶ Zhuang Y, Cummins SE, Y Sun J, et al. “Long-term e-cigarette use and smoking cessation: a longitudinal study with US population.” *Tobacco Control* 2016;25:i90-i95. https://tobaccocontrol.bmj.com/content/25/Suppl_1/i90.info

⁷ Brown J, Beard E, Kotz D, Michie S & West R. “Real-world effectiveness of e-cigarettes when used to aid smoking cessation: a cross-sectional population study.” *Addiction*. May 2014. <http://onlinelibrary.wiley.com/doi/10.1111/add.12623/abstract>

⁸ Bullen, Christopher et al. “Electronic cigarettes for smoking cessation: a randomised controlled trial.” *The Lancet*. Volume 382, Issue 9905, P1629-1637, November 16, 2013.

⁹ Levy DT, Borland R, Lindblom EN, et al. “Potential deaths averted in USA by replacing cigarettes with e-cigarettes.” *Tobacco Control* 2018;27:18-25. <https://tobaccocontrol.bmj.com/content/27/1/18>

guidance from its website, asking people wishing to avoid these illnesses to consider stopping or not start using e-cigarettes. The CDC does, however, advise people to avoid vaping THC, especially when bought from illicit sources. This is because these THC liquids are often cut with vitamin E acetate, which can be extremely hazardous when vaporized and inhaled. No commercially available e-cigarette contains vitamin E acetate.

Preventing youth use

No one disagrees that youth vaping must be reduced. That's why the age of purchase for tobacco products has been raised at the federal level to 21. All fruit and sweet flavored pod or cartridge-based e-cigarettes product, which are typically sold in convenience stores, are being removed due to Food and Drug Administration (FDA) guidance, meaning the products most used by youth are banned until they are approved for sale by the FDA approval. These policies should be allowed to work before imposing levels of taxation that would shutter Maryland's e-cigarette businesses and dissuade smokers from switching to a safer alternative. It is possible to both stem and reduce youth use while maximizing the harm reduction potential for adults.

Thank you for your time.

Guy Bentley, director of consumer freedom
guy.bentley@reason.org

DBM_Info_SB3

Uploaded by: Wilkins, Barbara

Position: INFO



LARRY HOGAN
Governor

BOYD K. RUTHERFORD
Lieutenant Governor

DAVID R. BRINKLEY
Secretary

MARC L. NICOLE
Deputy Secretary

SENATE BILL 3 Electronic Smoking Devices, Other Tobacco Products, and Cigarettes – Taxation and Regulation (McCray)

STATEMENT OF INFORMATION

DATE: January 29, 2020

COMMITTEE: Senate Budget & Taxation Committee

SUMMARY OF BILL: SB 3 increases the statutory allocation in the Cigarette Restitution Fund for tobacco use prevention and cessation activities from \$10 million to \$21 million; and increases the cigarette tax from \$2 to \$4 per pack and applies the tax to electronic smoking devices.

EXPLANATION: The FY 2021 Budget allowance anticipates \$16 million from the payments described in the bill and are budgeted for Medicaid-related costs. The CRF also includes a FY 2020 allowance for substance abuse treatment in the amount of \$21.4 million.

The bill would require a General Fund backfill of \$4 million (25% of the \$16 million) for Medicaid-related costs because the bill diverts specific settlement payments to a specific purpose, i.e. substance use treatment.

Settlement payments, such as these, are inconsistent in frequency and amounts. The last such settlement received was in FY 2016

**For additional information, contact Barbara Wilkins at
(410) 260-6371 or barbara.wilkins1@maryland.gov**