



**Testimony before the Minnesota House Committee on Commerce  
Lindsey Stroud, State Government Relations Manager  
The Heartland Institute  
February 19, 2020**

Chairwoman Halverson and members of the committee, thank you for taking the time today to discuss the issue of banning sales of electronic cigarettes and flavored tobacco products including menthol cigarettes and flavored cigars. The Heartland Institute is a 34-year-old independent, national, nonprofit organization whose mission is to discover, develop, and promote free-market solutions to social and economic problems. Heartland is headquartered in Illinois and focuses on providing national, state, and local elected officials with reliable and timely research and analyses on important policy issues. Heartland would like to submit the following testimony regarding the proposed ban.

Many localities and states have proposed banning flavored tobacco products altogether in an effort to combat what the media and some public health officials have declared is a “youth vaping epidemic.”

Although addressing policies that could help to deter youth consumption of tobacco products are laudable, policymakers should refrain from proposals that would restrict adult access to tobacco harm reduction products. Moreover, states aiming to further restrict adult access to flavored tobacco products such as flavored cigars and menthol cigarettes are impeding on the choices of adults.

### **E-Cigarettes and Tobacco Harm Reduction**

E-cigarettes have emerged as an effective smoking cessation tool, with a recent study in the *New England Journal of Medicine* finding their use to be “twice as effective” as nicotine replacement therapy (i.e. gums and lozenges), in helping smokers quit.<sup>1</sup> Since their introduction to the U.S. market in 2007, an estimated three million American adults have used these products to quit combustible cigarettes.<sup>2</sup>

Combustible tobacco cigarettes contain 600 ingredients and when burned, emit an estimated 7,000 chemicals. Ample research indicates it is the *smoke* created by burning cigarettes that produces the most severe harm. Whereas, e-cigarettes generally contain five ingredients and when used, emit a vapor significantly less harmful than combustible cigarettes.<sup>3</sup>

These findings have been noted by numerous public health groups. Most recently, the American Cancer Society noted in June 2019 “that e-cigarette use is likely to be significantly less harmful for adults than smoking regular cigarettes.”<sup>4</sup>

These findings are similar to other public health agencies’ conclusions. In 2015, Public Health

England, a leading health agency in the United Kingdom and similar to the U.S. Food and Drug Administration found “that using [e-cigarettes are] around 95% safer than smoking,” and that their use “could help reduce smoking related disease, death and health inequalities.”<sup>5</sup> In 2018, the agency reiterated its findings, finding vaping to be “at least 95% less harmful than smoking.”<sup>6</sup>

In 2016, the Royal College of Physicians found the use of e-cigarettes and vaping devices “unlikely to exceed 5% of the risk of harm from smoking tobacco.”<sup>7</sup> In 2018, the National Academies of Sciences, Engineering and Medicine concluded e-cigarette use results in “reduced short-term adverse health outcomes in several organs.”<sup>8</sup>

### **Menthol Cigarette Ban Will Have Little Impact on Adult and Youth Consumption**

Beyond e-cigarettes, policymakers’ fears about the role of menthol and flavorings in cigarettes and cigars are overblown and banning these products will likely lead to black markets.

Data from the National Health Interview Survey (NHIS) finds nearly a third of all American adult smokers smoke menthol cigarettes. In a 2015 NHIS survey, “of the 36.5 million American adult smokers, about 10.7 million reported that they smoked menthol cigarettes,” and white menthol smokers “far outnumbered” the black and African American menthol smokers.<sup>9</sup>

Although lawmakers believe banning menthol cigarettes will deter persons from smoking those, such a ban will likely lead to black markets. A 2012 study featured in the journal *Addiction* found a quarter of menthol smokers surveyed indicated they would find a way to purchase, even illegally, menthol cigarettes should a menthol ban go into place.<sup>10</sup> Further, there is little evidence that smokers would actually quit under a menthol ban. A 2015 study in *Nicotine & Tobacco Research* found only 28 percent of menthol smokers would give up cigarettes if menthol cigarettes were banned.<sup>11</sup>

Further, there is no evidence to suggest that menthol cigarettes lead to youth tobacco use. Analysts at the Reason Foundation examined youth tobacco rates and menthol cigarette sales.<sup>12</sup> The authors of the 2020 report found that states “with more menthol cigarette consumption relative to all cigarettes have *lower* rates of child smoking.” Indeed, the only “predictive relationship” is between child and adult smoking rates, finding that “states with higher rates of adult use cause higher rates of youth use.”

Finally, menthol bans would require law enforcement to enforce such bans and will likely lead to racial repercussions. Although white Americans smoke more menthol cigarettes than black or African Americans, “black smokers [are] 10-11 times more likely to smoke” menthol cigarettes than white smokers.<sup>13</sup>

Given African Americans’ preference for menthol cigarettes, a ban on menthol cigarettes would force police to further scrutinize African Americans and likely lead to unintended consequences. Lawmakers in Albany should reexamine the case of Eric Garner, a man killed while being arrested for selling single cigarettes in the city. In a recent letter to the NYC council, who are also debating a ban on menthol cigarettes, Garner’s mother, as well as Trayvon Martin’s

mother, implored officials to “pay very close attention to the unintended consequences of a ban on menthol cigarettes and what it would mean for communities of color.”<sup>14</sup> Both mothers noted that a menthol ban would “create a whole new market for loosies and re-introduce another version of stop and frisk in black, financially challenged communities.”

### **Flavored Tobacco Product Ban Will Increase Tobacco Smuggling**

Despite lawmakers’ best intentions, a ban on flavored tobacco products will not decrease consumption, it will only increase demand for black market tobacco products, which Minnesota is already overwhelmed by.

With an excise tax of \$3.59, in 2017, Minnesota ranked 6th in the Tax Foundation’s cigarette smuggling report. Indeed, cigarette smuggling in the Gopher State increased by 149 percent from 2006 to 2017. Indeed, from 2016 to 2019, the Minnesota Department of Revenue received more than \$1 million annually from the state’s General Fund to “Stop Cigarette Smugglers.”<sup>15</sup>

Notable incidents of police seizing smuggled tobacco, include a traffic stop in 2016, in which police officers seized \$78,017 in untaxed tobacco products. In 2017, police seized “more than \$53,000 in untaxed tobacco products.”<sup>16</sup> And in 2018, at another traffic stop, police seized “more than \$49,000 in untaxed tobacco products – including dozens of cases of Swisher Sweets, Classic cigarillos, Backwoods Honey Berry Cigars and Good Stuff premium pipe tobacco.” One prosecutor noted that the suspect from 2018 had rented vehicles from Enterprise “16 times between June 2017 and December 2018,” and estimates the smuggled tobacco market in Minnesota is valued at hundreds of thousands of dollars.

### **Minnesota Youth Tobacco Use**

According to the 2019 Minnesota Student Survey, during the past 30 days, 96.9 and 94.7 percent of 9th and 11th grade students reported *not using* a combustible cigarette.<sup>17</sup> Further, youth reported less use of other tobacco products including cigars, cigarillos and little cigars, with 98.3 and 96.5 percent of 9th and 11th graders reporting *not having used* these types of tobacco products in the 30 days prior to the survey.

Minnesota youth are also not using menthol products in significant numbers. For example, only 0.4 and 1.3 percent of 9th and 11th graders, respectively, reported using a menthol-flavored tobacco product all 30 days, prior to the survey. The most popular tobacco products among Minnesota youth are electronic cigarettes, but it is not as rampant as many believe. For example, 83.7 percent of 9th graders and 73.6 percent of 11th graders reported *not using* a vapor product in the 30 days prior to the survey.

Despite lawmakers’ intentions, flavor bans have little effect on youth e-cigarette use. The Heartland Institute examined the effects of flavor bans, finding these measures to have no impact on youth e-cigarette use.<sup>18</sup> For example, Santa Clara County, California, banned flavored tobacco products to age-restricted stores in 2014. Despite this, youth e-cigarette use *increased*. In the 2015-16 California Youth Tobacco Survey (CYTS), 7.5 percent of Santa Clara high school students reported current use of e-cigarettes. In the 2017-18 CYTS, this *increased* to 10.7

percent.

Further, youth tobacco use is at historic lows. According to the Centers for Disease Control and Prevention's 1998 *Morbidity and Mortality Weekly Report*, in 1997, 36.4 percent of high school students reported using combustible cigarettes in the 30 days preceding the survey.<sup>19</sup> Results from the 2018 National Youth Tobacco Survey concluded that only 8.1 percent of high school students had reported using tobacco cigarettes.<sup>20</sup> This is a 28.3 percent decrease. Further, total tobacco product use is also significantly lower than 1990s levels, decreasing from 42.7 percent in 1997 to 27.1 percent in 2018.

The Heartland Institute recently analyzed several statewide youth vaping surveys to understand the role of flavors in youth e-cigarette use.<sup>21</sup> In an analysis of five states, only 15.6 percent of high school students cited using e-cigarettes because of flavors. Overwhelmingly, youth are using vapor products because a friend and/or family member had used them.

Additionally, bans on electronic cigarettes and vaping devices have seemingly increased youth use of other tobacco products. For example, after initiating a task force to combat youth e-cigarette sales, Lancaster County, Nebraska reported sales of vaping products to minors decreased "from 21.2 percent in 2017 to 5.3 percent in 2018."<sup>22</sup> Meanwhile, sales of non-vaping tobacco products increased during the same period, from 5.9 to 8.7 percent. A 2015 study reached similar conclusions, finding bans on the sales of e-cigarettes to youth increased smoking rates by "1.0 percentage point."<sup>23</sup>

### **Recent Vaping-Related Lung Illnesses Overwhelmingly Linked to Black Market THC**

Many lawmakers are proposing flavor bans to address recent vaping-related hospitalizations. Unfortunately, such measures are unlikely to have any effect on vaping-related lung illnesses as these are being increasingly linked to the use of vaping devices containing tetrahydrocannabinol (THC), the psychoactive ingredient found in marijuana.

As of December 30, 2019, the Minnesota Department of Health (MDH) has reported 141 confirmed or probable cases of vaping-associated lung illnesses, including three deaths. The state's first death was reported September 6, 2019, with the patient over the age of 65-years-old and had vaped "illicit THC products."<sup>24</sup> MDH reported the additional two deaths on October 16, 2019, noting both patients were over the age of 50 and one had vaped "illegal THC," and the other was "believed to have vaped unknown products in addition to nicotine."<sup>25</sup>

MDH's findings are similar to the Center for Disease Control and Prevention's (CDC) national reporting. As of January 14, 2020, CDC reported 2,758 cases of vaping related lung illnesses, including 64 deaths. Of 2,022 patients with data on substance used, 82 percent "reported using THC-containing products."<sup>26</sup>

MDH Public Health Laboratory examined illicit THC products, "including 12 confirmed or probable lung-injury patients."<sup>27</sup> According to lab test results, "11 of the 12 lung injury patients vaped THC products" containing vitamin E acetate. MDH also worked with Minnesota law enforcement and tested illicit THC products seized in 2018 and 2019, finding no vitamin E

acetate in the cartridges that were from 2018.

In September, other state health departments began noting the role of vitamin E acetate in vaping-related lung injuries.<sup>28</sup> Further, in November, CDC examined 29 patients with vaping-related lung illnesses, including five from Minnesota, finding vitamin E acetate in all 29 patient lung samples.

Further, in September, 2019, Minnesota police seized more than 75,000 illicit THC cartridges, worth an estimated \$4 million.<sup>29</sup> The suspect apparently sold the products using Snapchat.

It is imperative that lawmakers understand that the majority of vaping-related lung injuries have been associated with black market products, mainly containing THC. Banning the sale of flavored e-cigarettes would only create a larger black market as users of these products are forced to rely on informal sources.

### **The Importance of Flavors in Harm Reduction**

The use of flavors in e-cigarettes is vital for these products' success with many former smokers crediting flavors for their ability to give up combustible cigarettes.

A 2013 internet study concluded that flavors in e-cigarettes “appear to contribute to both perceived pleaser and the effort to reduce cigarette consumption or quit smoking.”<sup>30</sup> A 2015 online survey conducted by the Consumer Advocates for Smoke Free Alternatives Association (CASAA) examined 27,343 Americans over the age of 18. Seventy-two percent of the respondents “credited tasty flavors with helping them give up tobacco.”<sup>31</sup> Of the respondents who were still smoking, “53% say interesting flavors are helping move them toward quitting.”

A 2018 survey of nearly 70,000 American adult vapers “found flavors play a vital role in the use of electronic cigarettes and vaping devices.”<sup>32</sup> Moreover, 83.2 percent and 72.3 percent of survey respondents reported vaping fruit and dessert flavors, respectively, “at least some of the time.”<sup>33</sup>

A 2017 study discovered older adults “use of an e-cigarette flavored with something other than tobacco (69.3%) was ... significantly higher than the same at initiation (44.1%).”<sup>34</sup> Thus, e-cigarette users often first consume tobacco flavored e-liquids and products but then transition to other flavors, helping aid their cessation of combustible cigarettes.

Another 2017 study examined the impact of a flavor ban in electronic cigarettes and vaping devices. The authors concluded banning flavors “would result in increased choice of combustible cigarettes,” and they said they expect e-cigarette use to decline by approximately 10 percent if flavors are banned.<sup>35</sup> Additionally, a 2018 “systematic review of research examining consumer preference” for flavors concluded adults “in general also preferred sweet flavors.”<sup>36</sup>

### **Minnesota Already Does Good Job in Enforcing Age Requirements to Purchase Tobacco Products**

The U.S. Food and Drug Administration (FDA) regularly performs tobacco compliance checks in which the agency uses a minor to attempt to purchase tobacco products including cigars, cigarettes, e-cigarettes, and smokeless tobacco.

From January 1, 2018 to September 30, 2019, FDA conducted 7,037 inspections in tobacco retailers located in the Gopher State. Only 573, or 8 percent, resulted in the sales of tobacco products to minors.<sup>37</sup>

### **Minnesota Tobacco Monies**

According to the Vapor Technology Association, in 2018, the industry created 1,152 direct vaping-related jobs, including manufacturing, retail, and wholesale jobs in Minnesota, which generated \$44 million in wages alone.<sup>38</sup> Moreover, the industry has created hundreds of secondary jobs in the Gopher State, bringing the total economic impact in 2018 to \$336,366,200. In the same year, Minnesota received more than \$20 million in state taxes attributable to the vaping industry. These figures do not include sales in convenience stores, which sell vapor products including disposables and prefilled cartridges. In 2016, average national sales of these products eclipsed \$2.6 million.

Rather than impede access to tobacco products, policymakers should utilize existing funding from tobacco monies on programs that can help curb tobacco use. Minnesota spends very little on tobacco prevention. In 2019, the Gopher State received \$703.6 million in tobacco settlement payments and taxes. In the same year, only \$17.3 million in state funds, and 2 percent of what was received in tobacco monies, was dedicated to tobacco control. The CDC recommends the state dedicate \$52.9 million a year, or 7 percent of what Minnesota receives in tobacco monies.

The lack of funding is most apparent when compared to tobacco company marketing. In 2018, tobacco companies spent \$110 million in marketing expenditures in Minnesota.

\*\*\*\*\*

It is disingenuous that lawmakers would purport to protect public health yet restrict access to safer products. Rather than restricting access to tobacco harm reduction products and flavored tobacco products, lawmakers should encourage the use of e-cigarettes and work towards earmarking adequate funding for smoking education and prevention programs.

Thank you for your time today.

**For more information about The Heartland Institute's work, please visit our website at [www.heartland.org](http://www.heartland.org), or contact Lindsey Stroud by phone at 757/354-8170 or by email at [lstroud@heartland.org](mailto:lstroud@heartland.org).**

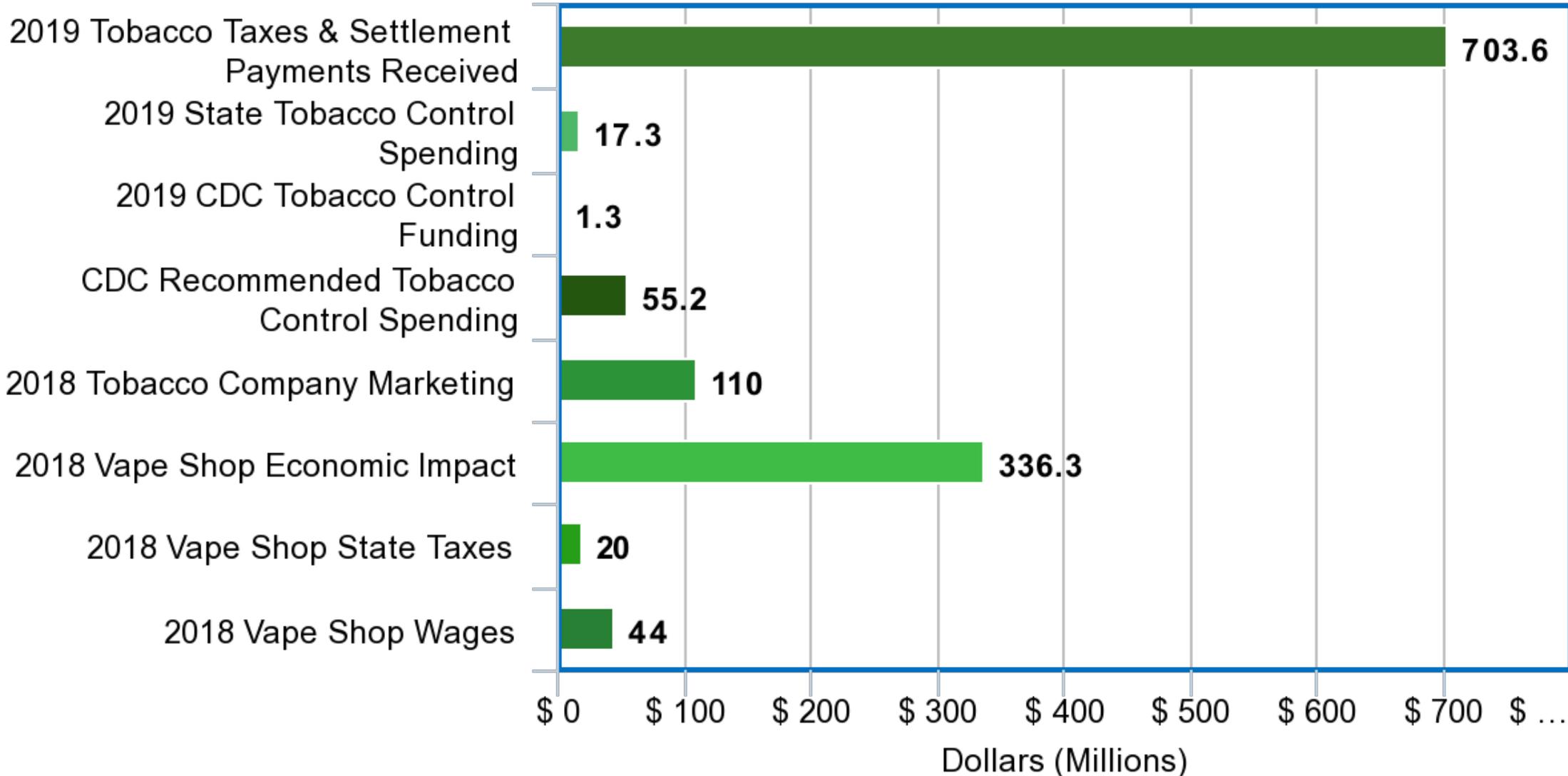
---

<sup>1</sup> Lindsey Stroud, "Randomized Trial Finds E-Cigarettes are More Effective Smoking Cessation Tool Than Nicotine Replacement Therapy," *Research & Commentary*, The Heartland Institute, February 11, 2019, <https://www.heartland.org/publications-resources/publications/research--commentary-randomized-trial-finds-e-cigarettes-are-more-effective-smoking-cessation-tool-than-nicotine-replacement-therapy>.

- 
- <sup>2</sup> M. Mirbolouk *et al.*, “Prevalence and Distribution of E-Cigarette Use Among U.S. Adults: Behavioral Risk Factor Surveillance System,” *Annals of Internal Medicine*, August 28, 2016, <https://annals.org/aim/article-abstract/2698112/prevalence-distribution-e-cigarette-use-among-u-s-adults-behavioral>.
- <sup>3</sup> Brad Rodu *et al.*, “Vaping, E-Cigarettes, and Public Policy Toward Alternatives to Smoking,” *The Heartland Institute*, February 20, 2017, <https://www.heartland.org/publications-resources/publications/vaping-e-cigarettes-and-public-policy-toward-alternatives-to-smoking>.
- <sup>4</sup> American Cancer Society, “What Do We Know About E-Cigarettes?” June 19, 2019, <https://www.cancer.org/cancer/cancer-causes/tobacco-and-cancer/e-cigarettes.html>.
- <sup>5</sup> A. McNeill *et al.*, “E-cigarettes: an evidence update,” Public Health England, August, 2015, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/733022/Ecigarettes\\_an\\_evidence\\_update\\_A\\_report\\_commissioned\\_by\\_Public\\_Health\\_England\\_FINAL.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/733022/Ecigarettes_an_evidence_update_A_report_commissioned_by_Public_Health_England_FINAL.pdf).
- <sup>6</sup> A. McNeill *et al.*, “Evidence review of e-cigarettes and heated tobacco products 2018,” Public Health England, February 2018, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/684963/Evidence\\_review\\_of\\_e-cigarettes\\_and\\_heated\\_tobacco\\_products\\_2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684963/Evidence_review_of_e-cigarettes_and_heated_tobacco_products_2018.pdf).
- <sup>7</sup> Royal College of Physicians, *Nicotine without Smoke: Tobacco Harm Reduction*, April, 2016, <https://www.rcplondon.ac.uk/projects/outputs/nicotine-without-smoke-tobacco-harm-reduction-0>.
- <sup>8</sup> Committee on the Review of the Health Effects of Electronic Nicotine Delivery Systems, “Public Health Consequences of E-Cigarettes,” *The National Academies of Science, Engineering, and Medicine*, 2018, <https://www.nap.edu/catalog/24952/public-health-consequences-of-e-cigarettes>.
- <sup>9</sup> Brad Rodu, “Who Smokes Menthol Cigarettes?” *Tobacco Truth*, December 4, 2018, <https://rodutobaccotruth.blogspot.com/2018/12/who-smokes-menthol-cigarettes.html>.
- <sup>10</sup> RJ O’Connor *et al.*, “What would menthol smokers do if menthol in cigarettes were banned?” *Addiction*, April 4, 2012, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3370153/>.
- <sup>11</sup> Olivia A. Wackowski, PhD, MPH, *et al.*, “Switching to E-Cigarettes in the Event of a Menthol Cigarette Ban,” *Nicotine & Tobacco Research*, January 29, 2015, [https://www.researchgate.net/publication/271592485\\_Switching\\_to\\_E-Cigarettes\\_in\\_the\\_Event\\_of\\_a\\_Menthol\\_Cigarette\\_Ban](https://www.researchgate.net/publication/271592485_Switching_to_E-Cigarettes_in_the_Event_of_a_Menthol_Cigarette_Ban).
- <sup>12</sup> Guy Bentley and J.J. Rich, “Does Menthol Cigarette Distribution Affect Child or Adult Cigarette Use?” Policy Study, Reason Foundation, January 30, 2020, <https://reason.org/policy-study/does-menthol-cigarette-distribution-affect-child-or-adult-cigarette-use/>.
- <sup>13</sup> D. Lawrence *et al.*, “National patterns and correlates of mentholated cigarette use in the United States,” *Addiction*, December, 2010, <https://www.ncbi.nlm.nih.gov/pubmed/21059133>.
- <sup>14</sup> Carl Campanile, “Menthol cig ban will lead to more stop-and-frisk: Moms of Garner, Martin,” *New York Post*, October 16, 2019, <https://nypost.com/2019/10/16/menthol-cig-ban-will-lead-to-more-stop-and-frisk-moms-of-garner-martin/>.
- <sup>15</sup> “2016-17 Governor’s Budget – Revenue, Department of,” 2016-17 Revised Biennial Budget, State of Minnesota, March, 2015, <https://www.leg.state.mn.us/docs/2017/mandated/170365/revisions-revenue.pdf>.
- <sup>16</sup> Mary Divine, “How tobacco smuggling costs Minnesota hundreds of thousands of dollars a year,” Pioneer Press, October 6, 2019, <https://www.twincities.com/2019/10/06/how-tobacco-smuggling-costs-minnesota-hundreds-of-thousands-of-dollars-a-year/>.
- <sup>17</sup> Minnesota Department of Education, “Minnesota Student Survey Reports 2013-2019,” <https://public.education.mn.gov/MDEAnalytics/DataTopic.jsp?TOPICID=242>.
- <sup>18</sup> Lindsey Stroud, “Research & Commentary: Flavor Bans Do Not Reduce Youth E-Cigarette Use,” *Research & Commentary*, The Heartland Institute, August 29, 2019, <https://www.heartland.org/publications-resources/publications/research--commentary-flavor-bans-do-not-reduce-youth-e-cigarette-use>.
- <sup>19</sup> Centers for Disease Control and Prevention, “Morbidity and Mortality Weekly Report,” April 3, 1998, <https://books.google.com/books?id=sO7ZnIEDbMsC&pg=PA230&lpg=PA230&dq=1997+36.4+percent+students+smoking+42.7+percent+total&source=bl&ots=0E5wga25PH&sig=ACfU3U01EgogTzIPrQ0ZVeYz7Cy0ZsqkgA&hl=en&a=X&ved=2ahUKewjmu-t9rflAhURA6wKHcJWAucQ6AEwAHoECAoQAQ#v=onepage&q=1997%2036.4%20percent%20students%20smoking%2042.7%20percent%20total&f=false>.

- 
- <sup>20</sup> Centers for Disease Control and Prevention, “Data Visualization: Tobacco Product Use Among High School Students – 2018,” February 11, 2019, <https://www.cdc.gov/vitalsigns/youth-tobacco-use/data-visualization.html#info1>.
- <sup>21</sup> Lindsey Stroud, “Policy Tip Sheet: Tobacco Harm Reduction 101: Flavor Bans,” *Policy Tip Sheet*, The Heartland Institute, January 24, 2020, <https://www.heartland.org/publications-resources/publications/policy-tip-sheet-tobacco-harm-reduction-101-flavors>.
- <sup>22</sup> “Vapor product sales to minors decrease in 2018,” *1011 Now*, January 3, 2019, <https://www.1011now.com/content/news/Vapor-product-sales-to-minors-decrease-in-2018-503869351.html?fbclid=IwAR2YcBCVPEmXZXQbr2EDWoeNiEcdm5JL8M4eG4EFPItJqDGW8H2YRZ-ywJY>.
- <sup>23</sup> Lindsey Stroud, “How Do Electronic Cigarettes Affect Adolescent Smoking,” *Research & Commentary*, The Heartland Institute, March 28, 2016, [https://www.heartland.org/publications-resources/publications/research-commentary-how-do-electronic-cigarettes-affect-adolescent-smoking?fbclid=IwAR3MXDoO2v8rmSyez8yhSxLDNe\\_pTQJAPzbKRIWx8AIMTZeBMsmg88o7xnw](https://www.heartland.org/publications-resources/publications/research-commentary-how-do-electronic-cigarettes-affect-adolescent-smoking?fbclid=IwAR3MXDoO2v8rmSyez8yhSxLDNe_pTQJAPzbKRIWx8AIMTZeBMsmg88o7xnw).
- <sup>24</sup> Minnesota Department of Health, “Health officials report death in a patient hospitalized for vaping-related lung injury,” September 6, 2019, <https://www.health.state.mn.us/news/pressrel/2019/lunginjury090619.html>.
- <sup>25</sup> Minnesota Department of Health, “Health officials confirm two more deaths from severe lung injuries associated with vaping,” October 16, 2019, <https://www.health.state.mn.us/news/pressrel/2019/lunginjury101619.html>.
- <sup>26</sup> “Outbreak of Lung Injury Associated with E-cigarette Use, or Vaping,” *Smoking & Tobacco Use*, Centers for Disease Control and Prevention, February 11, 2020, [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/severe-lung-disease.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html). Accessed February 18, 2020.
- <sup>27</sup> Minnesota Department of Health, “MDH lab finds vitamin E acetate in 2019 illicit vaping products not in 2018 products,” November 26, 2019, <https://www.health.state.mn.us/news/pressrel/2019/vape112519.html>.
- <sup>28</sup> Lindsey Stroud, “Research & Commentary: Latest CDC Reports Link Vitamin E to Vaping Lung Illnesses,” *Research & Commentary*, The Heartland Institute, November 12, 2019, <https://www.heartland.org/publications-resources/publications/research-commentary-latest-cdc-reports-link-vitamin-e-to-vaping-lung-illnesses>.
- <sup>29</sup> Theo Wray, “Minnesota police seize over 75,000 THC vaping cartridges in record bust,” *NBC News*, September 24, 2019. <https://www.nbcnews.com/news/us-news/minnesota-police-seize-over-75-000-thc-vaping-cartridges-record-n1058366>.
- <sup>30</sup> Konstantinos Farsalinos *et al.*, “Impact of Flavour Variability on Electronic Cigarette Use Experience: An Internet Survey,” *International Journal of Environmental Research and Public Health*, December 17, 2013, <https://www.mdpi.com/1660-4601/10/12/7272/html>.
- <sup>31</sup> Vape Ranks, “Large Survey Finds E-Cigarettes Do Help Smokers Quit,” January 12, 2016, <https://vaperanks.com/large-survey-finds-e-cigarettes-do-help-smokers-quit/>.
- <sup>32</sup> Lindsey Stroud, “Research & Commentary: Largest Vaping Survey Finds Flavors Play Important Role in Tobacco Harm Reduction,” *Research & Commentary*, The Heartland Institute, October 2, 2018, <https://www.heartland.org/publications-resources/publications/research-commentary-largest-vaping-survey-finds-flavors-play-important-role-in-tobacco-harm-reduction>.
- <sup>33</sup> Ali Anderson, “Ex Smokers Prefer Fruity E-Liquids Says Doctor’s FDA Survey,” *Vaping*, August 14, 2018, <https://vaping.com/blog/news/ex-smokers-prefer-fruity-e-liquids-says-doctors-fda-survey/>.
- <sup>34</sup> M.B. Harrell *et al.*, “Flavored e-cigarette use: Characterizing youth, young adult, and adult users,” *Preventative Medicine Reports*, March 2017, pp. 33-40, <https://www.sciencedirect.com/science/article/pii/S2211335516301346>.
- <sup>35</sup> John Buckell, Joachim Marti, and Jody L. Sindelar, “Should Flavors Be Banned in E-Cigarettes? Evidence on Adult Smokers and Recent Quitters from a Discrete Choice Experiment,” *National Bureau of Economic Research*, September 2017, <http://www.nber.org/papers/w23865.pdf>.
- <sup>36</sup> Samane Zare *et al.*, “A systematic review of consumer preference for e-cigarette attributes: Flavor, nicotine strength, and type,” *PLoS ONE* 13(3): e0194145. <https://doi.org/10.1371/journal.pone.0194145>.
- <sup>37</sup> U.S. Food and Drug Administration, “Compliance Check Inspections of Tobacco Product Retailers,” September 30, 2019, [https://www.accessdata.fda.gov/scripts/oc/inspections/oc\\_insp\\_searching.cfm](https://www.accessdata.fda.gov/scripts/oc/inspections/oc_insp_searching.cfm).
- <sup>38</sup> Vapor Technology Association, “The Economic Impact of the Vapor Industry MINNESOTA,” 2019, <https://vta.guerrillaeconomics.net/reports/e4e2ad3b-ca91-427e-9bf3-056543b2355b?>

# Minnesota Tobacco Monies



Lindsey Stroud, The Heartland Institute