

**Testimony before the Washington Senate
Senate Health & Long Term Care Committee
Regarding Enhanced Regulation of Vapor Products
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January 31, 2022**

Chair Cleveland, Vice-Chair Frockt, and Members of the Committee,

Thank you for your time today to discuss enhancing the regulation of vapor products. My name is Lindsey Stroud and I am Director of The Taxpayers Protection Alliance's (TPA) Consumer Center. TPA is a non-profit, non-partisan organization dedicated to educating the public through the research, analysis and dissemination of information on the government's effects on the economy. TPA's Consumer Center focuses on providing up-to-date information on adult access to goods including alcohol, tobacco and vapor products. TPA also analyzes regulatory policies that affect adult access to other consumer products, including harm reduction, technology, innovation, antitrust and privacy.

As the nation continues to address youth use of age-restricted products, many lawmakers are considering regulation of vapor products. Tobacco harm reduction products such as e-cigarettes and vapes are significantly less harmful than combustible cigarettes and have helped millions of American adults quit smoking. Therefore, regulations should take account of the benefits these products can provide and take care not to deter smokers from switching to far safer alternatives.

Adult Vaping Rates

Despite providing annual data on cigarette and smokeless tobacco use, the CDC's BRFSS only reports on adult e-cigarette use for 2016 and 2017.

In 2017, according to the BRFSS, 4.3 percent of Washington adults were current e-cigarette users. Similar to income status among smokers, lower income persons are more likely to use vapor products. In 2017, among current adult e-cigarette users, 13.2 percent reported household incomes of \$25,000 or less per year. Conversely, only 3.2 percent reported earning \$50,000 a year or more.

Economic Impact of Vaping in Washington

In 2021, according to the analysis by the Vapor Technology Association, the industry created 1,285 direct vaping-related jobs in Washington. These jobs generated more than \$58.3 million in wages.¹ Moreover, the industry has created hundreds of secondary jobs in the Evergreen State, bringing the total economic impact in 2021 to \$399.3 million. In the same year, Washington received more than \$37.6 million in state taxes attributable to the vaping industry.

Unfortunately, efforts by anti-vaping organizations and policymakers have negatively affected vape shops in the Evergreen State. The number of employees has decreased by 35.6 percent from 1,995 in 2018 to 1,285 in 2021, representing a loss of \$10.5 million in wages.² Further, state tax collections in 2021 were down 6.2 percent from 2018's level of \$40.1 million. Overall, the economic output from the vaping industry in Washington was reduced from over \$483.7 million in 2018 to \$399.3 million in 2021, a 10.5 percent decrease.

Youth Tobacco and Vaping Rates

The most recent data on youth tobacco and vapor product use in Washington comes from the 2018 Healthy Youth Survey.³ In 2018, 30 percent of Washington high school students (as defined by 10th and 12th graders) reported ever trying e-cigarettes, 25.4 percent reported past month use, and 5.2 percent reported using vapor products daily.

It is worthy to note that youth combustible cigarette use is at an all-time low. In 2018, 21.2 percent of Washington high school students reported ever trying cigarettes, a 39.4 percent decrease from 2010 when 35 percent of high school students had tried cigarettes. Further, past month use of combustibles has decreased 59.9 percent from 16.2 percent in 2010 to 6.5 percent in 2018. Daily cigarette use has decreased 77.3 percent from 4.4 percent of high school students that reported daily cigarette use in 2010 to one percent in 2018.

Moreover, nationally, the youth vaping rate continues to decline. In 2021, according to the National Youth Tobacco Survey (NYTS), an estimated 11.3 percent of high school students and 2.8 percent of middle school students reported having used a vapor product on a least one occasion in the month prior to the survey.⁴ Further, only 3.1 percent of high school students and less than one percent of middle schoolers reported daily e-cigarette use. The rate of decline is remarkable: among high school students, vaping rates have declined by 41.8 percent since 2020 and by 58.9 percent since 2019, when 27.5 percent reported using e-cigarettes.

Moreover, retailers in Washington do a good job in preventing sales of vapor products to minors. Only 3 percent of U.S. Food and Drug Administration (FDA) retail compliance checks in Washington resulted in sales of e-cigarettes to minors from January 1, 2018 to September 30, 2019.⁵

Young Adult Smoking Rates

Electronic cigarettes and vapor products were first introduced to the U.S. in 2007 “and between 2009 and 2012, retail sales of e-cigarettes expanded to all major markets in the United States.”⁶ Moreover, between September 2014 and May 2020, e-cigarette sales in the U.S. increased by 122.2 percent.⁷

Examining data from the CDC's BRFSS finds that e-cigarettes' market emergence has coincided with a significant reduction in smoking rates among young adults.

In 1998, among current adult smokers, 30.4 percent were 18 to 24 years old. In 2008, this had decreased by 27.3 percent to 22.1 percent of adult smokers in Washington being between 18 to 24 years old.

In the years after e-cigarette's market emergence in the early 2010s, smoking rates among current smokers aged 18 to 24 years decreased by 64.1 percent. Indeed, in 2010, among current smokers in Washington, 17 percent were between 18 to 24 years old. In 2020, only 6.1 percent of current smokers were 18 to 24 years old.

Interestingly, e-cigarettes' market emergence was associated with greater declines in average annual percent decreases. Between 1998 and 2008, the percentage of current smokers aged 18 to 24 years old decreased on average by 2.7 percent each year. Between 2010 and 2020, annual percentage decreases average at eight percent.

Further, since 2016, when the U.S. surgeon general issued an alarm about youth e-cigarette use, smoking rates among adults aged 18 to 24 years in the Evergreen State have decreased by 57.9 percent, with an average annual decrease of 13.5 percent.

E-Cigarettes and Tobacco Harm Reduction

The evidence of harm associated with combustible cigarettes has been understood since the 1964 U.S. Surgeon General's Report that determined that smoking causes cancer. Research overwhelmingly shows the smoke created by the burning of tobacco, rather than the nicotine, produces the harmful chemicals found in combustible cigarettes.⁸ There are an estimated 600 ingredients in each tobacco cigarette, and "when burned, [they] create more than 7,000 chemicals."⁹ As a result of these chemicals, cigarette smoking is directly linked to cardiovascular and respiratory diseases, numerous types of cancer, and increases in other health risks among the smoking population.¹⁰

For decades, policymakers and public health officials looking to reduce smoking rates have relied on strategies such as emphasizing the possibility of death related to tobacco use and implementing tobacco-related restrictions and taxes to motivate smokers to quit using cigarettes. However, there are much more effective ways to reduce tobacco use than relying on government mandates and "quit or die" approaches.

During the past 30 years, the tobacco harm reduction (THR) approach has successfully helped millions of smokers transition to less-harmful alternatives. THRs include effective nicotine delivery systems, such as smokeless tobacco, snus, electronic cigarettes (e-cigarettes), and vaping. E-cigarettes and vaping devices have emerged as especially powerful THR tools, helping nearly three million U.S. adults quit smoking from 2007 to 2015.

In fact, an estimated 10.8 million American adults were using electronic cigarettes and vapor products in 2016.¹¹ Of the 10.8 million, only 15 percent (or 1.6 million adults) were never-smokers, indicating that e-cigarettes are overwhelmingly used by current and/or former smokers.

E-Cigarettes and Vapor Products 101

E-cigarettes were first introduced in the United States in 2007 by a company called Ruyan.¹² Soon after their introduction, Ruyan and other brands began to offer the first generation of e-cigarettes, called “cigalikes.” These devices provide users with an experience that simulates smoking traditional tobacco cigarettes. Cig-alikes are typically composed of three parts: a cartridge that contains an e-liquid, with or without nicotine; an atomizer to heat the e-liquid to vapor; and a battery.

In later years, manufacturers added second-generation tank systems to e-cigarette products, followed by larger third-generation personal vaporizers, which vape users commonly call “mods.”¹³ These devices can either be closed or open systems.

Closed systems, often referred to as “pod systems,” contain a disposable cartridge that is discarded after consumption. Open systems contain a tank that users can refill with e-liquid. Both closed and open systems utilize the same three primary parts included in cigalikes—a liquid, an atomizer with a heating element, and a battery—as well as other electronic parts. Unlike cigalikes, “mods” allow users to manage flavorings and the amount of vapor produced by controlling the temperature that heats the e-liquid.

Mods also permit consumers to control nicotine levels. Current nicotine levels in e-liquids range from zero to greater than 50 milligrams per milliliter (mL).¹⁴ Many users have reported reducing their nicotine concentration levels after using vaping devices for a prolonged period, indicating nicotine is not the only reason people choose to vape.

Health Effects of Electronic Cigarettes and Vapor Products

Despite recent media reports, e-cigarettes are significantly less harmful than combustible cigarettes. Public health statements on the harms of e-cigarettes include:

Public Health England (PHE): In 2015, a landmark report relying on 185 studies and produced by PHE (a leading health agency in the United Kingdom), found “that using [e-cigarettes are] around 95% safer than smoking,” and that their use “could help reducing smoking related disease, death and health inequalities.”¹⁵ In 2018, the agency reiterated their findings, finding vaping to be “at least 95% less harmful than smoking.”¹⁶

As recent as February 2021, PHE provided the latest update to their ongoing report on the effects of vapor products in adults in the UK. The authors found that in the UK, e-cigarettes were the “most popular aid used by people to quit smoking [and] ... vaping is positively associated with quitting smoking successfully.”¹⁷

The Royal College of Physicians (RCP): In 2016, RCP found the use of e-cigarettes and vaping devices “unlikely to exceed 5% of the risk of harm from smoking tobacco.”¹⁸ RCP is another United Kingdom-based public health organization, and the

same public group the United States relied on for its 1964 Surgeon General’s report on smoking and health.

The National Academies of Sciences, Engineering, and Medicine: In January 2018, the academy noted “using current generation e-cigarettes is less harmful than smoking.”¹⁹

Cochrane Review: Researchers at the Tobacco Addiction Group analyzed studies that examined the effects of e-cigarettes in helping smokers quit. The researchers found 61 studies that had over 16,700 adults that had smoked. The studies compared the instances of quitting smoking using e-cigarettes to other nicotine replacements including nicotine replacement therapy, nicotine-free e-cigarettes, behavioral support and others. Of the available evidence, the authors found that more people “probably stop smoking for at least six months using nicotine e-cigarettes than using nicotine replacement therapy ... or nicotine-free e-cigarettes.” The authors also found that e-cigarette “may help more people to stop smoking than no support or [behavioral] support only.”²⁰

Society for Research on Nicotine and Tobacco (SRNT): An article in August 2021 co-authored by 15 past presidents of the SRNT reported that “Many scientists have concluded that vaping is likely substantially less dangerous than smoking”. Furthermore, they found that “A growing body of evidence indicates that vaping can foster smoking cessation” and warned “Studies have found that policies intended to restrict e-cigarette use may have unintentionally increased cigarette smoking”.²¹

E-Cigarettes Help Smokers Quit

A 2017 study in *BMJ*’s peer-reviewed journal *Tobacco Control* examined health outcomes using “a strategy of switching cigarette smokers to e-cigarette use ... in the USA to accelerate tobacco control progress.”²² The authors concluded that replacing e-cigarettes “for tobacco cigarettes would result in an estimated 6.6 million fewer deaths and more than 86 million fewer life-years lost.”

An earlier October 2020 review in the *Cochrane Library Database of Systematic Reviews* analyzed 50 completed studies which had been published up until January 2020 and represented more than 12,400 participants.

The authors found that there was “moderate-certainty evidence, limited by imprecision, that quit rates were higher in people randomized to nicotine [e-cigarettes] than in those randomized to nicotine replacement therapy.” The authors found that e-cigarette use translated “to an additional four successful quitters per 100.” The authors also found higher quit rates in participants that had used e-cigarettes containing nicotine, compared to the participants that had not used nicotine.

Notably, the authors found that for “every 100 people using nicotine e-cigarettes to stop smoking, 10 might successfully stop, compared with only six of 100 people using nicotine replacement therapy or nicotine-free e-cigarettes.”

Other reports have also noted that substitution of e-cigarettes for combustible cigarettes could save the state in health care costs.

According to the Centers for Disease Control and Prevention (CDC), it is now well known that Medicaid recipients smoke at rates of twice the average of privately insured persons. In 2013, “smoking-related diseases cost Medicaid programs an average of \$833 million per state.”²³

A 2015 policy analysis by State Budget Solutions examined electronic cigarettes’ effect on Medicaid spending. The author estimated Medicaid savings could have amounted to \$48 billion in 2012 if e-cigarettes had been adopted in place of combustible tobacco cigarettes by all Medicaid recipients who currently consume these products.²⁴

A 2017 study by the R Street Institute examined the financial impact to Medicaid costs that would occur should a large number of current Medicaid recipients switch from combustible cigarettes to e-cigarettes or vaping devices. The author used a sample size of “1% of smokers [within] demographic groups permanently” switching. In this analysis, the author estimates Medicaid savings “will be approximately \$2.8 billion per 1 percent of enrollees,” over the next 25 years.²⁵

Spotlight: E-Cigarette Use and Flavored Vapor Products in the UK

Despite widespread e-cigarette use and a wealth of flavors being readily available, the UK has not experienced negative consequences from light touch regulation. Furthermore, there is an appetite to de-regulate current restrictions to maximise the benefits of tobacco harm reduction which has already delivered impressive successes in driving down smoking rates.

Product Regulation in the UK

Makers of e-cigarette and vape liquid products must submit a notification to the Medicines & Healthcare products Regulatory Agency six months before they intend to put their product on the market in Great Britain and/or Northern Ireland.²⁶ A fee is charged for each individual notification, currently £150 (\$200) per SKU.²⁷

E-cigarette liquids are permitted as long as they do not contain any ingredient that poses a risk to human health in heated or unheated form, vitamins or other additives that create the impression that a tobacco product has a health benefit or presents reduced health risks, and any additives that pose a risk to health such as Diacetyl, Ethylene glycol, Formaldehyde and Acrolein.²⁸

E-cigarette tanks must hold a maximum of 2ml of e-liquid, the maximum bottle size of e-liquid containing nicotine is restricted to 10ml, the highest strength nicotine e-liquid permitted is 20mg/ml. All nicotine-containing e-liquids must be packaged in child-resistant bottles and the packaging must indicate that the product contains nicotine, and that nicotine is an addictive substance.

Regulation is dictated by The Tobacco and Related Products Regulations 2016 (TRPR)²⁹ which, in turn, was drafted in compliance with the European Union Tobacco Products Directive.³⁰ In 2018 the UK government's Science and Technology Committee recommended that some of the provisions of the TRPR be revisited³¹ and all its recommendations were accepted. Now that the UK has left the European Union, a parliamentary inquiry has also recommended that liberalising regulation of reduced risk products would be advantageous to public health.³²

E-Cigarette Flavors in the UK

Flavors are integral to the appeal of low-risk alternatives to cigarettes. Many consumers emphasise their exit from smoking is maintained by the more pleasant taste of smoke-free products confirming a break from combustible tobacco. Regulation of flavors should proceed with great care for unintended consequences (driving people back to smoking or inhibiting switching).

Not every smoker experimenting with vaping is sufficiently determined to persevere if the experience is not to their satisfaction compared with smoking. A large proportion of former smokers using e-cigarettes in the UK are “accidental quitters;” those who tried vaping on a whim, and it attracted them away from smoking specifically because of the better taste. Many consumers emphasise their exit from smoking is maintained by preferring non-tobacco flavors in smoke-free products.

Youth Vaping in the UK

The ready availability of flavors has not led to problematic youth vaping in the UK. In June 2021, the UK tobacco control organization Action on Smoking and Health's (ASH) latest survey of *Use of e-cigarettes among young people in Great Britain* reports that young never-smokers do not take up vaping because they find flavors and packaging attractive.³³ More than 88 percent of 11–17-year-olds have never tried or are unaware of e-cigarettes. Only 0.7 percent of 11–18-year-olds who regularly use e-cigarettes were not former smokers.

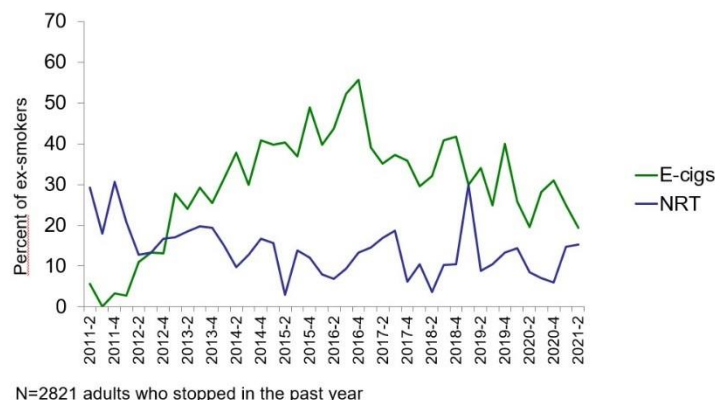
E-Cigarettes Are the Most Successful Smoking Cessation Aid in the UK

The Smoking Toolkit Study conducted by University College London has tracked e-cigarette use since 2011 in England and found that vaping is the most successful quitting aid for smokers.³⁴

This tallies with evidence which repeatedly shows vaping to be more effective in helping smokers to quit than traditional nicotine replacement therapy.³⁵

Use of nicotine products in recent ex-smokers

Smoking
Toolkit Study



N=2821 adults who stopped in the past year

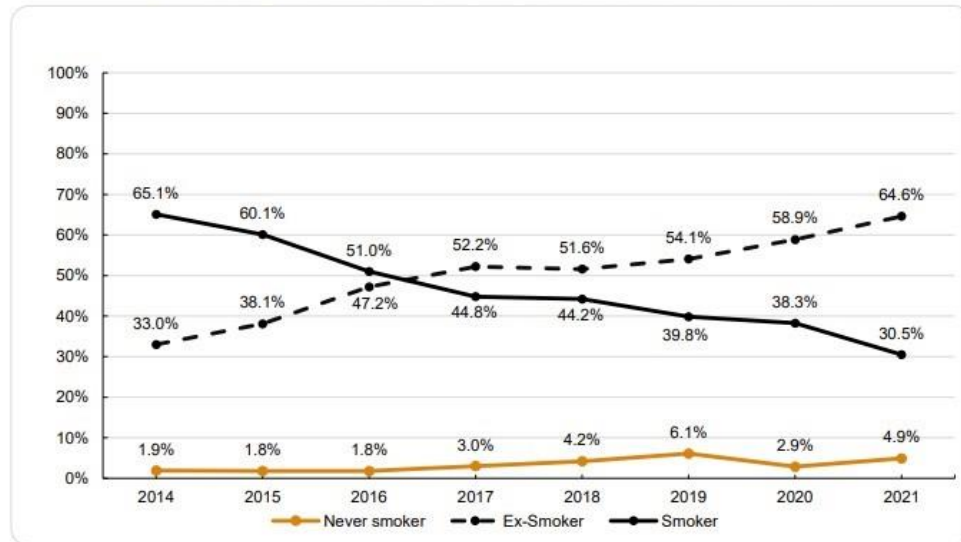
www.smokinginengland.info/latest-statistics

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Dual Use of Vaping and Smoking in the UK

Unless a smoking cessation method is 100 percent effective immediately, there will be continued smoking in the period between attempting to quit and successfully quitting smoking. Dual use is a transitional phase in the migration from smoking to vaping. It is the heaviest smokers – and therefore the hardest to reach – that stay in the dual use phase before switching entirely. The latest survey by ASH into *Use of e-cigarettes among adults in Great Britain*, published in June, charts the progress of how dual use leads to full switching to safer products.³⁶ In 2021, the UK has 3.6m vapers, two-thirds of whom are ex-smokers who have fully switched, which has increased from 33 percent in 2014.

Figure 1: The population of adult e-cigarette users, Great Britain 2021



Unweighted base: GB adult vapers 2014, n=498; 2015, n=614; 2016, n=667; 2017, n=669; 2018, n=738; 2019, n=854; 2020, n=787, 2021, n=826).

Wasted Tobacco Dollars

Between 2000 and 2020, Washington collected an estimated \$7.7 billion in cigarette taxes.³⁷ During the same 20-year period, the Evergreen State increased the tax rate on cigarettes three times. The last tax increase raised the rate by \$1.00, to \$3.025 per pack.

The last tax increase did lead to an immediate 11.5 percent increase in cigarette tax revenue the year after the tax was imposed, but this has steadily declined in the long-term. Between 2012 and 2020, cigarette tax revenue declined on average by 2.9 percent annually. In 2020, Washington collected \$331.3 million in cigarette tax revenue, a 23.4 percent decrease from the \$432.7 million in cigarette tax revenue that was collected in 2011.

In the mid-1990s, Washington sued tobacco companies to reimburse Medicaid for the costs of treating smoking-related health issues. And, in 1998 with 45 other states, the Evergreen State reached “the largest civil litigation settlement in U.S. history” through the Master Settlement Agreement (MSA).³⁸

Under the MSA, states receive annual payments – in perpetuity – from the tobacco companies, while relinquishing future claims against the participating companies. Between 2000 and 2020, Washington collected \$2.9 billion in MSA payments.³⁹

Tobacco taxes and tobacco settlement payments are justified to help offset the costs of smoking, as well as prevent youth initiation. Like most states, Washington spends very little of existing tobacco moneys on tobacco control programs – including education and prevention.

Between 2000 and 2020, Washington allocated only \$278.8 million in state funds towards tobacco control programs.⁴⁰ This is 3.6 percent of what the state collected in cigarette taxes in the same 20-year time span and 9.5 percent of MSA payments. In total, in 20 years, Washington allocated only 2.6 percent of what the state received in tobacco taxes and settlement payments towards tobacco education and prevention efforts. In essence, for every \$100 received in tobacco-related taxes and settlement payments, the state spent \$2.60 funding tobacco control programs.

Conclusion & Policy Recommendations:

When seeking to regulate tobacco harm reduction products such as e-cigarettes and vape, it is important to distinguish them from far more harmful combustible tobacco. There is no need to re-invent the wheel on vaping regulations. Instead, Washington State should look at regulations in other jurisdictions for regulatory regimes which address concerns and which are working efficiently. Lawmakers should resist the temptation to harshly regulate safer products within a coherent tobacco control program which is risk-proportionate in order to support adult smokers in switching to alternatives while educating the public to prevent uptake by non-smokers.

- E-cigarettes and vapor products are significantly less harmful than combustible cigarettes and should be regulated so that potential benefits to public health can be realized.
- Washington State should look to emulate regulations in countries which have experienced considerable declines in smoking rates as smokers move to safer nicotine alternatives.
- Nicotine, while itself is not benign, is not the cause of harm related to combustible cigarettes.
- Flavors are essential in helping smokers quit smoking and remain smoke-free. Although youth use of any age-restricted product deserves to be addressed, policies must not limit adult access to tobacco harm reduction products.
- Warnings on vaping products should inform consumers of relative risk and encourage smokers to switch while deterring non-users.
- As vaping products are less harmful than combustible cigarettes, policymakers should seek to incentivize smokers to use them and not subject them to restrictions which would deter switching.
- Washington State should fund robust tobacco control programs that utilize comprehensive education and prevention strategies to deter youth from e-cigarette use.

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