

**Comment to the New Zealand Ministry of Health
Regarding the Regulation of Electronic Cigarettes and Vapor Products
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The Honorable Minister of Health, Andrew Little and the Ministry of Health:

Thank you for your inquiry into regulating electronic cigarettes and vapor products in New Zealand. My name is Lindsey Stroud and I am a Policy Analyst with the Taxpayers Protection Alliance (TPA). 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.

Tobacco and Vapor Product Use in New Zealand

According to data from the 2016/17 New Zealand Health Survey, in that period, 15.7 percent of New Zealand adults were current smokers, amounting to 600,000 adults. This was a 20.1 percent decrease from the 2006/07 New Zealand Health Survey.¹

In 2018/19, regarding e-cigarette use, 21.2 percent of New Zealand adults had tried an e-cigarette, including just a puff.² This represents a 14.6 percent increase from 2017/18 when 18.5 percent had tried an e-cigarette. And, this is a 30.9 percent increase from 2015/16 when only 16.2 percent of adults had tried a vapor product.

E-cigarettes are used by persons as an aid to quit smoking. For example, according to the 2015/16 survey, only 6.3 percent of adults that had tried a vapor product reported never having smoked. Data from 2017/18 New Zealand Smoking Monitor which examined e-cigarette use among current and former smokers, found that “[r]ates of e-cigarette use were highest among recent quit attempters.”³ Further, daily e-cigarette use “was more common among recent quit attempters.”

Māori & Smoking

Māori have “one of the highest smoking rates in New Zealand.”⁴ In fact, among Māori, 32.7 percent were current smokers, compared to 14.1 percent of New Zealand's European population being current smokers.

Regarding use of e-cigarette products, Māori “were nearly twice as likely as non- Māori to have tried an electronic cigarette,” with 43.2 percent of Māori adults having tried a vapor product, as reported in the 2015/16 New Zealand Health Survey. Data from the 2017/18 New Zealand Smoking Monitor found that 73 percent of Māori had tried an e-cigarette, compared to 64 percent of New Zealand's Pacific Population and 64 percent of its European/Other population.

As reported in qualitative analysis of Māori smokers' own experience with vapor products, Māori could benefit from the use of e-cigarettes.⁵ Indeed, the authors found “two key challenges that participants reported facing: their search for a satisfying [vapor product] experience and resisting social cues that could trigger relapse.” The authors urged that health policies and measures that promote the use of e-cigarettes for smoking cessation “could reduce inequities in smoking prevalence that indigenous people experience.”

E-Cigarettes and Tobacco Harm Reduction

The evidence of harm associated with combustible cigarettes has been understood since the 1960s. Research overwhelmingly shows the smoke created by the burning of tobacco, rather than the nicotine, produces the harmful chemicals found in combustible cigarettes.⁶ There are an estimated 600 ingredients in each tobacco cigarette, and “when burned, [they] create more than 7,000 chemicals.”⁷ 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.⁸

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” appeals.

During the past 30 years, the tobacco harm reduction (THR) approach has successfully helped millions of smokers transition to less-harmful alternatives. THR includes 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.

E-cigarettes were first introduced in the United States in 2007 by Ruyan, a Chinese manufacturer.⁹ 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.”¹⁰ 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 cig-alikes, “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).¹¹ 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: In 2015, Public Health England, a leading health agency in the United Kingdom and similar to the FDA 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.”¹² In 2018, the agency reiterated their findings, finding vaping to be “at least 95% less harmful than smoking.”¹³

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.”¹⁴

The Royal College of Physicians: 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.”¹⁵ The Royal College of Physicians (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.”¹⁶

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.”¹⁷ 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 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 over 12,4000 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.”

The substitution of e-cigarettes for combustible cigarettes could also save New Zealand in health care costs, as examined in data from the United States.

In the US, it is well known that Medicaid recipients smoke at rates of twice the average of privately insured persons, according to the Centers for Disease Control and Prevention (CDC). In 2013, “smoking-related diseases cost Medicaid programs an average of \$833 million per state.”¹⁸

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.¹⁹

A 2017 study by 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.²⁰

The Role of Flavors in Electronic Cigarettes and Vapor Products

Due to the uptick of youth use of e-cigarettes, many governments around the world have proposed limiting flavors in vapor products to tobacco, mint, and menthol. These flavors are found in tobacco products, including cigars, cigarettes, and smokeless tobacco. Although addressing youth use of vapor products is a laudable goal, flavors are integral in helping smokers transition and remain smoke-free.

Indeed, in New Zealand, the use of flavors in e-cigarettes “was very common.”²¹ Data from the 2017/18 New Zealand Smoking Monitory found that 85 percent of ever users reported using a flavored e-cigarette. Further, 50 percent reported using flavors other than tobacco-related flavors, including “fruit, candy, alcohol, coffee, vanilla, etc.” and 26 percent reported using tobacco flavors.

Flavors are an essential component of e-cigarettes’ commercial success and their effectiveness in helping smokers quit combustible tobacco. A 2013 internet study by Konstantinos Farsalinos et

al. concluded flavors in e-cigarettes “appear to contribute to both perceived pleasure and the effort to reduce cigarette consumption or quit smoking.”²² Similarly, a 2015 online poll conducted by the Consumer Advocates for Smoke-Free Alternatives Association found among the 27,343 Americans aged 18 or older that were surveyed, 72 percent “credited tasty flavors [in e-cigarette products] with helping them give up tobacco.”²³ Of the respondents who indicated they were still smoking combustible tobacco products, “53% [said] interesting flavors are helping move them toward quitting.” A 2018 survey of nearly 70,000 adult vapers in the United States “found flavors play a vital role in the use of electronic cigarettes and vaping devices,”²⁴ with 83.2 percent and 72.3 percent of survey respondents reporting use of vaping fruit and dessert flavors, respectively, “at least some of the time.”²⁵

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%).”²⁶ 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.

Additionally, research by Dr. Edward Anselm, a senior fellow for the R Street Institute and senior fellow and medical director of Health Republic Insurance of New Jersey, concludes the presence of flavorings in e-cigarettes significantly helps smokers quit using traditional tobacco cigarettes.²⁷ Anselm also notes concerns over “flavoring as a tool to recruit children are overblown,” in large part because there is no “evidence that suggests children are drawn to tobacco products specifically because of flavor.”

Sensible Regulations

A federal approach to regulating vapor products would help ensure product safety. In the United Kingdom, the government has embraced electronic cigarettes and heat-not-burn products and have successfully regulated a welcoming tobacco harm reduction market.

Nicotine-containing vapor products are currently regulated under the European Union Tobacco Products Directive and are subjected to strict regulations.²⁸ Selling and/or purchasing vapor products to persons under 18 is prohibited. Manufacturers must submit annual reports and adhere to specific restrictions on e-liquids and products including:

- Refill containers cannot exceed 10 milliliters
- Disposable electronic cigarettes and single-use cartridges cannot exceed 2 milliliters
- Tank capacity in mods cannot exceed 2 milliliters
- Nicotine-containing e-liquid cannot contain in excess of 20 milligrams per milliliter

Further, nicotine-containing e-liquid cannot contain vitamins, colorings, and/or additives that are currently prohibited in tobacco products and ingredients must be pure. Product information and

labeling is also subject to requirements and products are not permitted to be advertised as less harmful.

Similarly, the United States began regulating vapor products in 2016 when the U.S. Food and Drug Administration (FDA) issued a final rule that extended agency's authority so that it can regulate all tobacco products, including cigars, hookah tobacco, and even e-cigarettes, which don't include tobacco.²⁹

The regulations require manufacturers and retailers to comply with FDA regulations, including a lengthy and expensive study process known as a "premarket tobacco application." Beginning on August 8, 2016, no new e-cigarette or tobacco product can come to the U.S. market unless it acquires a premarket tobacco application by FDA.

FDA also restricted sales of e-cigarettes to individuals aged 18 or older, and the agency banned e-cigarette distribution in vending machines. FDA further required child-resistant packaging for every e-cigarette product. Other regulatory requirements include submitting to FDA ingredient listings, harmful and potentially harmful constituents, and substantial equivalency applications.

Finally, on September 9, 2020, all e-cigarette manufacturers were required to submit a premarket tobacco product application (PMTA). The PMTA is overarching application for every product the firm manufactures and the FDA has recently reported the agency received over 167,000 applications.³⁰

In addition to manufacturing information, detailed product listings, and an overview of the firms' customers, e-cigarette companies must submit chemical testing on each of their products. This is a costly process and may price out smaller companies of e-liquids. Indeed, one large e-cigarette manufacturer reported they felt "that a significant amount of our competitors will not have the resources, desire, and/or expertise to complete the extensive and costly PMTA process and that once complete, [the manufacturer] will be able to benefit from being one of only a select group of companies responsibly operating in the flavored nicotine product space."³¹ Due to the PMTA, essentially government regulations are determining the e-cigarette manufacturers as they are too costly for most firms in the United States.

Policy Recommendations

- Electronic cigarettes and vapor products have the potential to reduce smoking rates in New Zealand and should be embraced as tobacco harm reduction tool.
- Vapor products should be *reasonably* regulated. Policymakers should avoid putting forth policies that limit nicotine and/or flavors, as such bans have the potential to contribute to an illicit market. Further, regulations should be respective towards the vastly different players in the e-cigarette space. Many small firms cannot afford costly regulations and governmental policies should not pick winners and losers.

- New Zealand must promote the use of e-cigarettes in the populations that will benefit the most – specifically the Māori that smoke at higher rates and have also used e-cigarettes at higher rates.

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