E-cigarette Use is Growing Among Youth and Adults Nationwide

Electronic cigarette, or e-cigarette, use is growing rapidly in the U.S., outpacing conventional cigarettes as the most popular tobacco product among youth. The Centers for Disease Control and Prevention (CDC) reported that e-cigarette use rose from 1.5% in 2011 to 16.0% in 2015 among high school students. Youth-friendly marketing and advertising, e-liquids that come in appealing flavors, and a lack of understanding about the dangers associated with nicotine make e-cigarettes particularly popular. This is problematic because most e-cigarettes contain nicotine, which is addictive and affects the developing brain in adolescents. As most smoking behavior begins in adolescence, nicotine products that appeal to youth could roll back the progress made in recent decades to reduce youth tobacco use, especially in light of evidence that youth e-cigarette use has been linked to future use of conventional cigarettes.

What are E-Cigarettes?

E-cigarettes were first introduced to the U.S. market in 2007, offering an alternative tobacco product to conventional cigarette smokers. E-cigarettes are designed to heat a liquid, typically containing nicotine and flavorings, to produce an aerosol that users inhale. E-cigarettes are offered in different forms including disposable cigarette-like products, refillable and rechargeable vape pens, and tank systems that allow users to modify the devices. E-cigarettes are marketed as a lower-risk alternative to conventional cigarettes; however, many e-cigarettes contain nicotine, an addictive chemical that encourages future use, among other substances that may cause harm (like formaldehyde). The long-term health effects of e-cigarette use are currently unknown, however emerging research suggests that e-cigarettes could have harmful health consequences.

How does Virginia's Youth Tobacco Use Compare to Neighboring States?

E-cigarette use is now more common in Virginia and its neighboring states than conventional cigarette smoking. However, Virginia high school students are below the national average for both e-cigarette and cigarette use. In 2015 Virginia had the second lowest prevalence of e-cigarette use among high school students at 16.8%, and the lowest prevalence of current cigarette use at 8.2% (Figure 1). Virginia second, after Maryland, in fiscal year 2018 for spending the most state money among its neighbors ($8.5 million) on tobacco prevention programs. Nonetheless, the Virginia Department of Health estimated in 2015 that 7,300 youth in Virginia become new regular, daily smokers each year.

State and Local Policy Strategies to Reduce Youth Tobacco Use*

In order to prevent and reduce use of e-cigarettes by youth, many policymakers have applied similar strategies aimed at restricting conventional cigarettes use. These regulatory approaches include both price and non-price policies. Price policies for conventional cigarettes are typically local, state, and federal excise taxes on conventional cigarette sales, raising the purchase price of cigarettes by a fixed dollar amount to discourage consumption. For e-cigarettes, some states have also begun levying ad valorem taxes, which add a tax to an e-cigarette product in proportion to its wholesale price.

- Youth in Virginia are twice as likely to use e-cigarettes (16.8%) than conventional cigarettes (8.2%).
- Emerging evidence suggests that e-cigarettes could have harmful health consequences.
- Youth e-cigarette use is associated with use of conventional cigarettes.
- The Virginia Department of Health estimates that over 7,000 youth in Virginia become new regular, daily smokers each year.

*At the federal-level, under the Tobacco Control Act (2009), the FDA finalized regulation in August 2016 to formally extend their authority on e-cigarettes to prohibit sale to minors, prevent the distribution of free samples and sale in vending machines, and require warning labels on nicotine, premarket review, manufacturer registration, and disclosure of detailed information on product ingredients.
TABLE 1: Conventional Cigarette Excise Tax Rates\textsuperscript{15-17}  

<table>
<thead>
<tr>
<th>State</th>
<th>Excise Tax Rate (Rank among 50 states and D.C.)</th>
<th>E-cigarette Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Average</td>
<td>$1.69 (50th)</td>
<td>N/A</td>
</tr>
<tr>
<td>Virginia</td>
<td>$0.30 (50th)</td>
<td>--</td>
</tr>
<tr>
<td>Maryland</td>
<td>$2.00 (15th)</td>
<td>--</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>$2.50 (13th)</td>
<td>Ad Valorem (Proportional Tax): 65% wholesale price</td>
</tr>
<tr>
<td>North Carolina</td>
<td>$0.45 (47th)</td>
<td>Excise Tax: $0.05 per milliliter of e-liquid containing nicotine</td>
</tr>
<tr>
<td>Tennessee</td>
<td>$0.62 (42nd)</td>
<td>--</td>
</tr>
<tr>
<td>West Virginia</td>
<td>$1.20 (33rd)</td>
<td>Excise Tax: $0.075 per milliliter of e-liquid</td>
</tr>
<tr>
<td>Kentucky</td>
<td>$0.60 (43rd)</td>
<td>--</td>
</tr>
</tbody>
</table>

Since state and local governments can implement taxes, substantial variation in tobacco product prices exist across the U.S. Virginia’s state excise tax on cigarettes is $0.30 per pack, currently ranking 50th among U.S. states and D.C. These state and local excise taxes are levied in addition to a federal cigarette excise tax of $1.01 per pack (Table 1). Thus, the average pack of cigarettes costs $5.25 in Virginia and $7.75 in D.C.\textsuperscript{16}

To date, e-cigarette products have not been subjected to a federal excise tax. As of October 2017, seven states and D.C. tax e-cigarettes (Table 1). Virginia is not one of these states. However, three of its neighbors do tax e-cigarettes, including D.C. (65% of the wholesale price), North Carolina ($0.05 per milliliter of e-liquid containing nicotine), and West Virginia ($0.075 per milliliter of e-liquid).\textsuperscript{17} The average price for an e-liquid tank system starter kit can range from $20-$80, and a 15ml bottle of e-liquid costs approximately $10-$15.\textsuperscript{18,19}

Many states have chosen to implement a ban on youth possession of e-cigarettes; however, fewer states have passed legislation restricting the use of e-cigarettes in public spaces where youth spend time, like K-12 public schools, and only four states restrict use in private vehicles when youth are present (Figure 2). Virginia (2014), along with the neighboring states of Kentucky (2014), West Virginia (2014), Tennessee (2015), and the District of Columbia (2016), have banned youth possession of e-cigarette products. Virginia also banned indoor use of e-cigarettes in public K-12 schools in 2015, as did neighboring West Virginia in 2014 and D.C. in 2016. D.C. also banned e-cigarette use in restaurants and bars in 2016.\textsuperscript{17,20,21}

**Future Directions for E-cigarette Policies in Virginia**

The introduction of a new, alternative tobacco product, such as e-cigarettes, requires research on the physical harms associated with their use and action at the state and federal level to decide how to regulate these products to minimize harm. Virginia has a lower prevalence of e-cigarette and conventional cigarette use in comparison to the national average and its neighboring states. Efforts made by state-wide organizations, such as the Virginia Department of Health and the Virginia Foundation for Healthy Youth (VFHY), have paved the way for tobacco control in Virginia. For example, The Virginia Department of Health established the Tobacco Use Control Program\textsuperscript{22} to prevent tobacco use among youth, promote cessation among smokers, and create a statewide program for tobacco use prevention and control. VFHY utilizes several approaches including engaging youth through Y Street teen volunteer group, a multimedia campaign ‘Y do u think’, and community prevention programs.\textsuperscript{23}

Youth in Virginia are twice as likely to use e-cigarettes compared to conventional cigarettes. Previous legislative sessions considered but failed to pass bills that would have added e-cigarettes to indoor clean air restrictions (2016) and levied state excise taxes on e-cigarette products (10% proportional tax and $0.05 per milliliter of e-liquid, 2017).\textsuperscript{24,25} The 2018 legislative session will find policymakers considering SB 303, requiring school boards to design and implement policies prohibiting use of tobacco and nicotine vapor products on school property, school buses and at school-sponsored activities, and prohibit student possession of these products. At the same time, HB 794 and 1518 propose changing clean indoor air laws but fail to include e-cigarettes. Moving forward, considering a comprehensive approach to implementing tobacco prevention policies that includes e-cigarettes, along with continuing to invest in tobacco prevention programs, could reduce the harms associated with e-cigarette use among youth in Virginia, allowing the Commonwealth to remain a leader among its neighbors in mitigating the burden of tobacco products.

This policy brief was prepared by L. Morgan Snell, MPP, Doctoral Student in the Department for Health Behavior and Policy at Virginia Commonwealth University; Nicole E. Nickles, PhD, MPH, Postdoctoral Research Fellow in the Center for the Study of Tobacco Products and Department of Health Behavior and Policy at Virginia Commonwealth University; Andrew J. Barnes, PhD, Associate Professor in the Department of Health Behavior and Policy and faculty affiliate in the Center for the Study of Tobacco Products at Virginia Commonwealth University; and Andrew J. Barnes, PhD, Associate Professor in the Department of Health Behavior and Policy and faculty affiliate in the Center for the Study of Tobacco Products at Virginia Commonwealth University. The findings and conclusions in this policy brief are those of the authors, and no official endorsement by VCU Health or the VCU School of Medicine is intended or should be inferred. For references, see the appendix at https://hbp.vcu.edu/policy-briefs/
Surveying the Policy Environment for E-Cigarettes in Virginia

APPENDIX

January 2018


17 Centers for Disease Control and Prevention. State Tobacco Activities Tracking and Evaluation (STATE) System.


22 Virginia Department of Health- Tobacco Control Program (TCP).

