Vaping & Public Health

This image is released under Creative Commons and courtesy of https://vaping360.com/
Highly addictive nature

2/3 of JUUL users aged 15-24 unaware of nicotine content

Single JUUL pod contains as much nicotine as 20 cigarettes
Health concerns of vaping

Chemicals in Flavorings

Associated with **COPD, asthma, other serious lung diseases**\(^3\)

Damage human blood vessel endothelium & increases risk of cardiovascular disease (especially cinnamon & menthol)\(^3\)

Contain **heavy metals & carcinogens** (especially mint & menthol)\(^3,4\)
First reported to the CDC in Aug 2019

Gradual onset of respiratory and GI symptoms over days to weeks

2400 hospitalized patients and 52 deaths nationwide as of Dec 2019

78% of patients age 35 & younger

Nearly 1/2 requiring ICU care

EVALI (E-cigarette & vaping-associated lung injury)

Associated with Vitamin E acetate, a thickening agent often added to illicit THC oils

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Associated with higher incidence of cigarette smoking later\textsuperscript{6}

Non-smoking teens 3-4x more likely to start smoking in the future\textsuperscript{7}

More research needed to see if it is a confounding or causal relationship\textsuperscript{8}
Vaping use in youth

13.3%
• Maryland high school students using* e-cigarettes⁹

2.2%
• Maryland adults using* e-cigarettes⁹

*On at least one day in the last 30 days
Vaping use in youth

% Maryland high schoolers ever- tried e-cigarettes

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Grade 9</td>
<td>27.2</td>
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<tr>
<td>Grade 10</td>
<td>32.8</td>
</tr>
<tr>
<td>Grade 11</td>
<td>37.6</td>
</tr>
<tr>
<td>Grade 12</td>
<td>44.6</td>
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10
• **2/3 of adolescents** think e-cigarettes **only contain flavor**\(^{11}\)
• Youth are **more likely to try flavored** e-cigarettes vs. non-flavored\(^{12}\)

![Diagram showing different flavors]

- **MINT**: 4x
- **FRUIT**: 4.5x
- **CANDY**: 7.5x
<table>
<thead>
<tr>
<th>New York</th>
<th>Washington</th>
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<tr>
<td><strong>E-cigarette or e-liquid tax</strong></td>
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| N.Y. Tax § 1181 (2019) (effective December 1, 2019)  
E-cigarette tax of 20% of the retail price is imposed on all vapor products.  | Wash Rev. Code Ann. § 82.102(1)(a)(i) (2019) (effective October 1, 2019)  
Vapor products taxed at rate of $0.27 per milliliter of solution. |
| **Restrictions for Youth Access**            | **Restrictions for Youth Access**              |
Sale/distribution of vapor products to persons under age 21 prohibited.  
Purchase/possession of vapor products by persons under age 18 prohibited. |
| **Flavor ban**                               | **Flavor ban**                                 |
| N.Y. Comp. Codes R.& Regs. tit. 10, § 9-3.2 (effective September 17, 2019)  
Possession, manufacture, distribution and sale of flavored (except menthol) electronic cigarettes and nicotine e-liquids prohibited.  | Temporary 120-day emergency rule banning the sale of flavored vaping products (as of October 9, 2019). |
• The bill will prohibit the shipping, importing, or selling of flavored tobacco products in the state.
• The bill would apply to vaping and tobacco products
• Has an exemption for “tobacco” flavor but does ban menthol
• Exempts FDA approved products
• Advertising a product as flavored creates a presumption that it is flavored for the purposes of the law
• Will be a general prohibition in the Health General Article at MD Code, Health - General, § 24-301
Goal: Tax vape products as similar to cigarettes as possible

1) How to tax?
   • By volume or by nicotine content

2) How much to tax?
   • Where to set the level
   • Different levels for different systems (e.g., open vs. closed, reusable vs. disposable, etc.)

3) Other considerations
   • Avoid incentivizing high nicotine content
   • Possibly cap total nicotine content?
   • Feasibility of field nicotine content testing for enforcement?
References


