The Dangers of Vaping

Presentation to: Fayette County Board of Commissioners Meeting
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We Protect Lives.
### Tobacco Use in GA vs District 4

**Prevalence of Tobacco Use, among Adults, Georgia, 2018**

<table>
<thead>
<tr>
<th></th>
<th>Georgia</th>
<th>4-0 LaGrange Health District</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Percent</strong></td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>Current Smoking</strong></td>
<td>16.1</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>Current E-Cigarette Use</strong></td>
<td>5.3</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Ever Use E-Cigarettes</strong></td>
<td>23.9</td>
<td>28.3</td>
</tr>
</tbody>
</table>

2018 GA Behavioral Risk Factor Surveillance System (BRFSS)
E-Cigarettes

- E-cigarettes come in a variety of shapes and sizes, but most have a heating element, battery, a place to hold liquid nicotine.
  - Aka JUULs, vape pens, vapes

- They work by producing an aerosol by heating a liquid containing nicotine. Bystanders can also breath in the aerosol the user exhales into the air.

- E-cigarettes can also be used to deliver marijuana and other drugs.
Dangers of E-Cigarettes

• E-cigarettes contain nicotine, which has the following health effects:
  – Nicotine is highly addictive.
  – Nicotine is toxic to developing fetuses.
  – Nicotine can harm youth brain development.
  – Nicotine is a health danger for pregnant women and developing babies.

• Defective e-cigarette batteries have caused fires and explosions, and some have resulted in serious injuries.
Dangers of E-Cigarettes

• Acute nicotine exposure can be toxic.

• Both children and adults have been poisoned by swallowing, breathing, or absorbing e-cigarette liquid through their skin or eyes.
Dangers of E-Cigarettes

• Besides nicotine, e-cigarettes can contain harmful and potentially harmful ingredients, including:
  – ultrafine particles that can be inhaled deep into the lungs
  – flavorants such as diacetyl, a chemical linked to serious lung disease
  – volatile organic compounds
  – heavy metals, such as nickel, tin, and lead
Dangers of E-Cigarettes to the Lungs

- Multiple studies have found that the chemical additives in e-cigarettes are toxic to cells, can cause lung and cardiovascular disease, in addition to acute lung injury and COPD. One additive may also be linked to asthma and lung cancer.

- Both the U.S. Surgeon General and the National Academies of Science, Engineering and Medicine have warned about the risks of inhaling secondhand e-cigarette emissions, which are created when an e-cigarette user exhales the chemical cocktail created by e-cigarettes.
Table 1. Number of Nicotine Poisonings from E-Cigarettes, by Public Health District, Georgia, January 1, 2011 to April 15, 2018

<table>
<thead>
<tr>
<th>Public Health District</th>
<th># of Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1 Northwest (Rome)</td>
<td>16</td>
</tr>
<tr>
<td>1-2 North Georgia (Dalton)</td>
<td>22</td>
</tr>
<tr>
<td>2-0 North (Gainesville)</td>
<td>15</td>
</tr>
<tr>
<td>3-1 Cobb/Douglas</td>
<td>13</td>
</tr>
<tr>
<td>3-2 Fulton</td>
<td>13</td>
</tr>
<tr>
<td>3-3 Clayton County (Jonesboro)</td>
<td>2</td>
</tr>
<tr>
<td>3-4 East Metro (Lawrenceville)</td>
<td>13</td>
</tr>
<tr>
<td>3-5 DeKalb</td>
<td>10</td>
</tr>
<tr>
<td><strong>4-0 LaGrange</strong></td>
<td><strong>37</strong></td>
</tr>
<tr>
<td>5-1 South Central (Dublin)</td>
<td>1</td>
</tr>
<tr>
<td>5-2 North Central (Macon)</td>
<td>13</td>
</tr>
<tr>
<td>6-0 East Central (Augusta)</td>
<td>12</td>
</tr>
<tr>
<td>7-0 West Central (Columbus)</td>
<td>11</td>
</tr>
<tr>
<td>8-1 South (Valdosta)</td>
<td>11</td>
</tr>
<tr>
<td>8-2 Southwest (Albany)</td>
<td>17</td>
</tr>
<tr>
<td>9-1 Coastal (Savannah)</td>
<td>17</td>
</tr>
<tr>
<td>9-2 Southeast (Waycross)</td>
<td>20</td>
</tr>
<tr>
<td>10-0 Northeast (Athens)</td>
<td>8</td>
</tr>
</tbody>
</table>
E-cigarette poisonings

- The majority (65%; n=174) of e-cigarette nicotine exposures occurred among children age 0-5 years.
- The most common routes of exposure for e-cigarette nicotine poisoning among children aged 0-5 years were: ingestion of the nicotine liquid (n=153), followed by dermal (n=12), inhalation/nasal (n=4), and ocular (n=3).
E-cigarette poisonings

• 30% (n=81) occurred among adults age 19 years and older.
• The most common routes of exposure for e-cigarette nicotine poisoning among adults age 19 years and older were: ingestion (n=35), followed by ocular (n=16), inhalation/nasal (n=15), and dermal (n=13).
Use Among Students

- **One in four** of Georgia HS students reported that they had *ever used* e-cigarettes (26.1%; 120,000).
- The number of students who **tried e-cigarettes, even once or twice,** had increased by 66% from 15.7% (72,900) in 2013 to 26.1% (120,000) in 2017.

![Percentage of Ever Using Electronic Cigarettes among High School Students, by Race/Ethnicity, Georgia, 2017](chart)

*Data Source: 2017 Youth Tobacco Survey*
Use Among Students

- One in four HS students (26.1%; 121,500) said they were curious about e-cigarettes.
- And almost three out of four cigarette users (74.1%; 26,000) were curious about e-cigarettes than non-smokers (22.3%; 94,500).

Data Source: 2017 Youth Tobacco Survey
Use Among Students

- Among Georgia HS students, 3.4% (15,500) were daily e-cigarette smokers.

- Among HS students who smoked, students living in urban areas (69.8%; 20,000) were more likely to use both cigarettes and e-cigarettes than students living in rural areas (50.5%; 4,500).
Use Among Students

Figure 9. Percentage of Current Electronic Cigarette High School Student User, by substitutes, Georgia, 2017

Data Source: 2017 Youth Tobacco Survey
Use Among Students

• In addition to believing e-cigarettes are less harmful than cigarettes, students believe they are also less addictive and more socially acceptable than regular cigarettes.

• Current HS e-cigarette users (65.4%; 34,000) were more likely to believe that e-cigarettes were less harmful than cigarettes compared to non-e-cigarette users (27.5%; 106,000).
Current Symptoms of Vaping-Related Illness

- Symptoms of vaping-associated lung injury, which worsen over time, include cough, shortness of breath, fatigue, chest pain, nausea, vomiting and diarrhea.

- More than 1,000 vaping-associated lung injuries have been reported to the Centers for Disease Control and Prevention (CDC), including at least 18 deaths.

- No specific e-cigarette device or substance has been linked to all cases, although the CDC’s current investigation indicates products containing THC play a role in the outbreak.
Prevention

• Vaping devices and products can be obtained from stores, online retailers, from informal sources (e.g., friends, family members), or “off the street.”

• People who vape may not know what is in these products because they can be modified to contain a mix of ingredients including dangerous and illicit substances.

• People who vape should not buy vaping products off the street or modify or add any substances to them.
Prevention

• Governor Brian P. Kemp and DPH Commissioner Kathleen E. Toomey, M.D., M.P.H. urge individuals to follow CDC recommendations and not use e-cigarettes or other vaping devices while this investigation is ongoing.

• Without knowing the specific cause of vaping-associated lung injury, discontinuing use of e-cigarettes and vaping devices is the best prevention against becoming ill.
Vaping Cases in Georgia

• The Georgia Department of Public Health (DPH) has identified the state’s second death from a vaping-associated illness.

• The patient had a history of nicotine vaping, but the case is still being reviewed to determine if other substances also may have been used.
Vaping Cases in Georgia

• The number of vaping-associated lung injury cases in Georgia is now 14, including two deaths. About 20 possible cases are under review.

• Cases range in age from 18 to 68 years (the median age is 31 years), and 71% are male.

• For more information, please visit: https://dph.georgia.gov/vapinglunginjury
ANY QUESTIONS?