Public Health Response to the Vaping Epidemic

Tony Kuo, MD, MSHS
Director
Division of Chronic Disease and Injury Prevention
Los Angeles County Department of Public Health
Los Angeles County Health Agency
E-cigarette Use (Vaping) Epidemic

Electronic cigarettes and other vape devices are devices that deliver an aerosol to the user through inhalation by heating a liquid that usually contains nicotine, flavorings, and other substances (e.g., marijuana).

4.9 million middle and high school students in 2018 were current users of tobacco products, up from 3.6 million in 2017.¹

Over 15,000 e-juice flavors are on the market.²

Among LA County High School Students³...

1 in 10 are current e-cigarette users

56% Rate of increase among e-cigarette users between 2015-16 to 2017-18.

15% Rate of current marijuana use—higher than any tobacco products.
# VAPING-ASSOCIATED PULMONARY INJURIES (VAPI) ARE LINKED TO E-CIGARETTE USE

## Symptoms
Patients with VAPI injuries have experienced the following symptoms:

<table>
<thead>
<tr>
<th>Respiratory</th>
<th>Gastrointestinal</th>
<th>Constitutional</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Cough</td>
<td>- Nausea</td>
<td>- Fatigue or malaise</td>
</tr>
<tr>
<td>- Hemoptysis (coughing up blood)</td>
<td>- Vomiting</td>
<td>- Fever</td>
</tr>
<tr>
<td>- Shortness of breath</td>
<td>- Diarrhea</td>
<td>- Weight loss</td>
</tr>
<tr>
<td>- Chest pain</td>
<td>- Abdominal pain</td>
<td>- Chills</td>
</tr>
</tbody>
</table>

## Complications during Hospitalization

Approximately **50%** of Los Angeles County patients who were hospitalized for VAPI required mechanical ventilation.

## Compounds/Additives Found in VAPI Cases
Includes, but not limited to:

- Nicotine
- Tetrahydrocannabinol (THC)
- Cannabinoids (CBD)
- Synthetic cannabinoids
- Flavorings and other substances

## Ongoing Epidemiologic Investigations
The etiology of VAPI is **undetermined** and current epidemiologic investigations involves:

- Identification of harmful aspects of e-cigarette use
- Understanding the underlining mechanisms and causes

Nearly **2 in 3** cases reported in Los Angeles County are ages 25 and younger.²
By the numbers

Number of deaths associated with VAPI

Deaths Nationally: 34
Deaths in Los Angeles County: 1

Number of cases associated with VAPI

Cases Nationally: 1604
Cases in Los Angeles County: 29
Local Response to the Epidemic:

- **Education and Engagement** in schools (school toolkit), with parents, in disproportionately affected communities
- **Ordinance, Policy and Procedures** in school districts, County, municipalities
- **Global Risk Communications/Media** to raise public awareness, educate, encourage behavior change
- **Healthcare Providers** to champion and guide this public health crisis, improve identification and early treatment of nicotine addiction, especially in youth
**Public Health Response**

**CHANGES TO COUNTY TOBACCO RETAIL ORDINANCES**

- Require a Tobacco Retail License to sell electronic smoking devices (e.g., electronic cigarettes, vapes and other nicotine containing devices)

- Prohibit the sale, not use, of flavored tobacco products (e.g., watermelon, cherry, mint, gummy bears) and those that include menthol

---

**Addressing the Dangers of Increased E-Cigarette Use Among Youth: A Call to Action for Clinicians**

**September 2019**

Tony Kuo, MD, MSHS, FAAFP
Alicia Kuo, MD, PhD, MBA, FAAFP, FACP
and the Los Angeles County Medical Societies

---

Many in the medical and public health communities are increasingly concerned with the use of electronic cigarette products (e-cigarettes) among youth. These electronic products, which are handheld devices designed to "deliver emissions for inhalation by heating a solution that commonly contains nicotine, a humectant, and flavoring chemicals" (i.e., designed for the act of vaping) are becoming all too common in youth sensitive areas such as schools, parks, and libraries. The devices are also often used to deliver other dangerous chemicals such as cannabinoids, tetrahydrocannabinol (THC). Although research is underway to further study the use of e-cigarettes as a cessation aid for helping adult smokers quit using conventional cigarettes, the highly addictive nature of nicotine combined with the heavy promotion of these products to youth through subversive marketing and use of flavorings has caused a public health crisis in younger populations.

---

**MONDAY RX | Clear Lungs, Clear Minds**

Jun 24, 2019
Thank You!