THE LATEST ON VAPING: ADDRESSING INJURIES, MISINFORMATION AND POLICY
WELCOME

Panelist Overview

- Darcie Johnston, Director, Intergovernmental Affairs at the Department of Health and Human Services
- Dr. Chris Jones, CAPT, Associate Director of Strategy and Innovation, US Public Health Service Senior Advisor at the Centers for Disease Control and Prevention
- Tammy Jo Musgraves, Policy Specialist, NCSL Health Program
- Dr. Cara Christ, State Health Official and Director, Arizona Department of Health Services

Legislative Respondents

- Senator Elizabeth Steiner Hayward, District 17 Oregon Legislature, Senate Deputy Majority Leader
- Senator Deb Soholt, District 14 South Dakota Legislature

Discussion: Q & A
Darcie Johnston, Director, Intergovernmental Affairs at the Department of Health and Human Services
E-CIGARETTES, OR VAPING, PRODUCT USE ASSOCIATED LUNG INJURY (EVALI): EPIDEMIOLOGY AND POLICY UPDATE

CHRISTOPHER M. JONES PHARMD, DRPH, MPH
INCIDENT MANAGER
CDC 2019 LUNG INJURY RESPONSE
No Conflicts to Report
LEARNING OBJECTIVES

1. Describe the evolving landscape of e-cigarettes, or vaping product use in the United States.
2. Discuss the impact of these products on individual and population level health.
3. Discuss the current lung injury outbreak.
4. Outline population-based strategies that can be implemented to minimize the risks of e-cigarettes, or vaping products on public health.
OUTLINE

- Background
- Trends
- Lung injury update
- Policy response
THE EVOLUTION OF E-CIGARETTES
KEY FACTS ABOUT USE OF E-CIGARETTE, OR VAPING, PRODUCTS

- E-cigarettes are also called vapes, e-hookahs, vape pens, tank systems, mods, and electronic nicotine delivery systems (ENDS).
- Using an e-cigarette product is commonly called vaping.
- E-cigarettes work by heating a liquid to produce an aerosol that users inhale into their lungs.
- The liquid can contain:
  - Nicotine
  - Tetrahydrocannabinol (THC) and cannabinoid (CBD) oils
  - Other substances and additives
OUTLINE

- Background
- Trends
- Lung injury update
- Policy response
CURRENT TOBACCO PRODUCT USE AMONG U.S. HIGH SCHOOL STUDENTS - NYTS, 2011–2018

Pipe
Hookah
Smokeless
Cigarette
Cigar
E-cigarette

COMBINED USE AMONG MIDDLE AND HIGH SCHOOL STUDENTS, NYTS, 2019

Source: https://www.cdc.gov/mmwr/volumes/68/ss/pdfs/ss6812a1-H.pdf
PERCEPTIONS OF HARM AMONG MIDDLE AND HIGH SCHOOL STUDENTS, NYTS, 2019

Source: https://www.cdc.gov/mmwr/volumes/68/ss/pdfs/ss6812a1-H.pdf
CURRENT E-CIGARETTE USE AMONG U.S. ADULTS, 2014-2018

Percentage

2014: 3.7
2015: 3.5
2016: 3.2
2017: 2.8
2018: 3.2

Source: National Health Interview Survey, 2014-2018
EVER USE OF E-CIGARETTES AMONG CURRENT, FORMER, AND NEVER ADULT CIGARETTE SMOKERS — 2010-2018

Source: CDC licensed data fielded by Porter Novelli Services. Summer Styles Survey. 2010-2018
YOUNG ADULTS AGED 18–24 WHO CURRENTLY SMOKE CIGARETTES OR USE ELECTRONIC CIGARETTES, BY YEAR — NHIS, 2014–2018

OUTLINE

- Background
- Trends
- Lung injury update
- Policy response
### POTENTIAL HEALTH RISKS OF E-CIGARETTES

<table>
<thead>
<tr>
<th>Risk</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leads to initiation of combustible tobacco use among non-smokers, particularly children</td>
<td></td>
</tr>
<tr>
<td>Leads to relapse among former smokers</td>
<td></td>
</tr>
<tr>
<td>Diminishes the chances that a smoker will quit</td>
<td></td>
</tr>
<tr>
<td>Discourages smokers from using proven quit methods</td>
<td></td>
</tr>
<tr>
<td>Exposes children, pregnant women, and non-users to secondhand aerosol</td>
<td></td>
</tr>
<tr>
<td>Glamorizes or renormalizes tobacco use</td>
<td></td>
</tr>
<tr>
<td>Results in poisonings among users or non-users</td>
<td></td>
</tr>
</tbody>
</table>
URGENT PUBLIC HEALTH ACTION NEEDED – CDC’S RESPONSE

- **August 2019**: CDC implemented an incident management structure
- **September 16, 2019**: CDC activated its Emergency Operations Center
- To date, approximately 300 CDC staff have been engaged in response efforts
Patients in this investigation have reported symptoms such as:

- Cough, shortness of breath, or chest pain
- Nausea, vomiting, abdominal pain, or diarrhea
- Fever, chills, or weight loss
Some patients reported symptoms developed over a few days, while others reported symptoms developed over several weeks.

Gastrointestinal symptoms preceded respiratory symptoms in some patients.
2,291 hospitalized lung injury cases associated with the use of e-cigarette, or vaping, products reported (as of 12/4/2019)
- 50 states, DC, Puerto Rico, and US Virgin Islands reported cases

48 deaths in 25 states and DC

All patients have reported a history of using e-cigarette, or vaping, products

Data updated Thursdays on cdc.gov/lunginjury
EPIDEMIC CURVE OF EVALI CASES

Date of Admission (N=2162)  Date of Symptom Onset (N=1702)

Number of Patients

03/31/19  04/28/19  05/23/19  06/23/19  07/21/19  08/18/19  09/15/19  10/13/19  11/10/19

Recent decline in reported onset and hospitalization due in part to reporting lag
WHAT WE KNOW: EPIDEMIOLOGY

- Most patients report history of using products containing THC
- Informal sources – friends, family, in-person and online dealers
- High endorsement of counterfeit brands
- Male
- Non-Hispanic white
- 18-34
Test results of bronchoalveolar lavage (BAL) samples from 29 patients from 10 states detected vitamin E acetate in all samples.

Vitamin E acetate: known additive in e-cigarette, or vaping products.

First time CDC detected a potential chemical of concern in biologic samples from patients with these lung injuries.
WHAT WE DON’T KNOW

- While it appears that Vitamin E acetate is associated with EVALI, evidence is not yet sufficient to rule out contributions of other chemicals of concern to EVALI.

- Many different substances and product sources under investigation, and it may be that there is more than one cause of this outbreak.
RECOMMENDATIONS FOR THE PUBLIC

- CDC recommends people should:
  - **Not** use THC-containing e-cigarette, or, vaping products
  - **Not** buy these products from informal sources, such as friends, family, or online or in-person dealers
  - **Not** modify or add any substances to these products
RECOMMENDATIONS FOR THE PUBLIC

- While it appears that vitamin E acetate is associated with EVALI, evidence is not yet sufficient to rule out contribution of other chemicals of concern to EVALI.

- Many different substances and product sources are still under investigation, and it may be that there is more than one cause of this outbreak.

- Only way to assure that you are not at risk is to consider refraining from all e-cigarette, or vaping products.
• If you continue to use an e-cigarette, or vaping, product and you have symptoms of lung injury, see a healthcare provider and report your e-cigarette, or vaping, product use.

• Adults using e-cigarettes to quit smoking should not go back to smoking. They should weigh all risks and benefits and consider utilizing FDA-approved medications.

• Youth, young adults, and women who are pregnant should not use e-cigarette, or vaping, products.
RECOMMENDATIONS FOR THE PUBLIC

- If you are an adult who has ongoing problematic marijuana use leading to impairment and distress:
  - Effective treatments are available. A number of therapy-based treatments have been shown to help people who are addicted to marijuana
  - Recovery is possible

- Visit the Substance Abuse and Mental Health Services Administration’s treatment locator to find treatment in your area, or call 1-800-662-HELP (4357)
CDC UPDATES ON EVALI

Up-to-date information available on CDC's website

www.cdc.gov/lunginjury

For more information, contact CDC
1-800-CDC-INFO (232-4636)
OUTLINE

- Background
- Trends
- Lung injury update
- Policy response
PUBLIC HEALTH ACTIONS TO ADDRESS E-CIGARETTES

- **Federal Regulation**
- **Family Smoking Prevention and Tobacco Control Act**

  - Signed into law on June 22, 2009
  - Granted FDA the authority to regulate tobacco products
  - Enhanced the ability to intensify policy to reduce tobacco industry influence:
    - Manufacturing
    - Marketing
    - Sale

- **State, Local, Territory**
- **Potential Sub-National Action:**
  - Including e-cigarettes in smokefree indoor air policies
  - Restricting youth access to e-cigarette in retail settings
  - Licensing retailers
  - Establishing specific package requirements
  - Setting price policies
Types of Policy Approaches

1. EXECUTIVE ORDERS
2. EMERGENCY ADMINISTRATIVE RULES & REGS
3. LOCAL AND STATE LEGISLATION

- Products Sales Restrictions
- Retail Warning Signs
- Product Packaging Standards
- Social Media Campaigns
- Require Ingredient Disclosure
Policy Spectrum: Sales Restrictions

Vitamin E Acetate Sales Prohibition

New Considerations

Prohibit Sale of All Products (Electronic & Combustible)
Prohibit Sale of All Flavored Products (Electronic & Combustible)
Prohibit Sale of All Flavored E-Cigarette, or Vaping, Products
Restrict Sales of E-Cigarette, or Vaping Products to Adult only Stores
Sales of Products in Licensed Retail Stores

Exemptions

Menthol Exemption
THC Products Only
Nicotine Products Only
CONCLUSIONS

- E-cigarette, or vaping, product use continues to increase in the U.S.
- Range of harms associated with use
- New syndrome known as e-cigarette, or vaping, product use associated lung injury (EVALI) identified in August 2019
- Range of policy responses being implemented
POLICIES, PREVENTION AND LEGISLATIVE EFFORTS: VAPING TRENDS IN STATE LEGISLATURES

TAMMY JO MUSGRAVES
POLICY SPECIALIST, NCSL
STATE RESPONSE TO E-CIGARETTE OR VAPING PRODUCT ASSOCIATED LUNG INJURY (EVALI)

- One State – Full Ban
  - Massachusetts

- Nine States – Partial and Temporary Ban*
  - California, Michigan, Missouri, Montana, New York, Oregon, Rhode Island, Utah and Washington

- Six Tribes
  - Iipay Nation of Santa Ysabel, Lac Courte Oreilles Tribe, Muckleshoot Tribe, Oglala Sioux Tribe, Puyallup Tribe and the Turtle Mountain Band of Chippewa Tribe
2019 LEGISLATIVE TRENDS

- 2019 Legislative Session (Jan-July)
  - 585 bills introduced
    - Of these, 111 policies across 35 states enacted

- State Action Since Lung Injury Outbreak
  - **November 21, 2019** The Massachusetts Senate has approved legislation [Amendment S.2407](#), banning the sale of flavored tobacco products and levying a 75% excise tax on e-cigarettes as state officials aim to curb a spike in underage vaping.
  - **October 29, 2019** The California Legislature did sign into law [Assembly Bill 1529](#). This bill modifies the labeling requirements for cannabis vaping products by requiring they be directly labeled with the Universal Symbol for Cannabis.
RESOURCES

- NCSL, Alternative Nicotine Products – Electronic Cigarettes, [webpage](#)
- Centers for Disease Control and Prevention, [Outbreak of Lung Injury Associated with E-Cigarette Use, or Vaping](#)
- The Public Health Law Center is tracking these measures and the related litigation in eight states
  - [U.S. E-Cigarette Regulations – 50 State Review](#); includes information on: taxing, product packaging, definitions, youth access and retail licensing
- The Association of State and Territory Health Officials (ASTHO) is compiling links to legal pleadings in these cases
Arizona’s Public Health Response: National Outbreak of Respiratory Illness Associated with Vaping

December 10, 2019

Cara Christ, MD, MS | Director
While 1 in 2 teens have ever used an electronic vapor product, 16.1% report current use. Current use of electronic vapor products has decreased from 27.5% in 2015. (AZ vs. U.S.)
December 2018
Launch of anti-vape campaign aimed at kids 8-13

Facts Over Flavor

Flavored Vape

Fruity flavors can hide a rotten habit.
The Number Of Kids Who Vape Is On The Rise.

Tobacco, Vape & E-Cigarettes
February 2019
Roundtable with the U.S. Surgeon General and statewide school administrators on the impact of vaping in Arizona schools.

Previous and potential future legislative initiatives:
• Raise age to 21 for tobacco
• Treat vape products like tobacco
• Retail licensing for vape
• Protect local regulations

Some local municipalities have adopted stricter regulations of tobacco and vaping products
Vaping-Related Respiratory Illness Outbreak

Overview
The past 2 years, the U.S. Food and Drug Administration (FDA), state and local health departments, and hospitals and public health partners have worked to identify a pattern of vaping-related respiratory illnesses (VRI) associated with using a vaping product pod.

Patients have reported symptoms that include:
- cough, shortness of breath, or chest pain
- nausea, vomiting, or diarrhea
- fatigue, fever, or weight loss

All patients have reported using a vaping device within 2 days of symptom onset. Some patients have reported using more than one vaping device and/or pod. The symptoms typically develop over a few days, while others have reported that their symptoms developed and died away in a few days. A lung infection does not appear to be causing the symptoms.

Vitamin E acetate has been identified as a common factor among patients with VRI. Recent CDC laboratory testing of lung fluid from patients with VRI who have died has identified vitamin E acetate as a common component of lung fluid from cases of VRI.

Most patients also report history of using the pod-containing products. The latest national and state findings suggest products containing THC, particularly from marijuana smoke, are "related to most of the cases and play a major role in the outbreak."
Vaping-Related Respiratory Illness Outbreak

For Healthcare Providers

- There have been 17 cases reported in Arizona. No deaths have been reported in Arizona.
- There have been 2,290 cases reported by 49 states (all except Alaska), the District of Columbia, and 2 U.S. territories (Puerto Rico and U.S. Virgin Islands). There have been 47 deaths confirmed in 25 states and the District of Columbia.
- If you are experiencing symptoms consistent with vaping-related respiratory illness, seek medical care immediately.
- Healthcare providers should report suspected cases of vaping-related respiratory illnesses in hospitalized patients to the Poison Control at 1-800-222-1222.

Arizona has increased its surveillance for cases of vaping-related respiratory illnesses. The CDC has provided Interim Guidance for healthcare providers who are evaluating and managing patients with vaping-related respiratory illness. With this guidance, Arizona providers are requested to do the following:

- Report suspected cases of vaping-related respiratory illnesses in hospitalized patients to the Arizona Poison & Drug Information Systems at 1-800-222-1222.
- Ask patients with acute pulmonary illnesses about vaping or e-cigarette use, including use of non-nicotine substances.
- Reassess outpatients with suspected VRRP within 24-48 hours to manage possible worsening illness.
- Admit patients with suspected VRRP if their O2 saturation < 95%, and initiate steroid treatment promptly.
- Determine if any remaining product (including devices and liquids) are available for testing and notify the Arizona Poison & Drug Information Systems.
Arizona Vaping Recommendations

Provide patients with the clear and consistent messaging:

- If you are experiencing symptoms, do not use vape products;
- There is no safe level of nicotine for children, and they should never use any vape device;
- Women who are pregnant should not use vape products; and
- Adults who use e-cigarettes containing nicotine to quit cigarette smoking should not return to smoking cigarettes;
- Do not buy vape-related products from informal sources (e.g. friends, family members) or “off the street,” and do not modify the device or add any substances to these products that are not intended by the manufacturer.
- Consider referring patients, as appropriate, to the Arizona Smokers’ Helpline (“ASHLine”) at 1-800-55-66-222 for vaping and smoking cessation support.
LEGISLATIVE RESPONDENTS

- Senator Elizabeth Steiner Hayward, District 17 Oregon Legislature, Senate Deputy Majority Leader

- Senator Deb Soholt, District 14 South Dakota Legislature
DISCUSSION: QUESTIONS?