WHAT WE KNOW SO FAR:

- As of October 8th, 2019, 49 states, the District of Columbia, and 1 U.S territory have reported approximately 1,299 cases of severe lung disease associated with the use of e-cigarettes.
- 26 deaths has been confirmed in 21 states: Alabama, California (2), Connecticut, Delaware, Florida, Georgia (2), Illinois, Indiana, Kansas (2), Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, New Jersey, Oregon (2), Pennsylvania, Texas, and Virginia.
- CDC has received complete sex and age data on 1,043 cases: 70% of cases are male; median age of patients is 24 years and ranges from 13-75 years. 80% of patients are under 35 years old, making this a teen and adult problem.
- More cases are expected as CDC and FDA advisories are encouraging the medical community to report suspected cases.

WHAT DO ALL THESE CASES HAVE IN COMMON?

- All confirmed cases have a reported history of e-cigarette product use.
- The latest findings from the investigation into lung injuries associated with e-cigarette use, or vaping, suggest products containing THC plat a role in the outbreak.
- Of the 573 patients with information on substances used in e-cigarette, or vaping, products in the 3 months prior to symptom onset; about 76% reported using THC-containing products; 32% reported exclusive use of THC-containing products; about 58% reported using nicotine-containing products; 13% reported exclusive use of nicotine-containing products.
- Suspected cause is a chemical exposure, though the specific chemical exposure(s) remains unknown at this time.
- No single product or substance has been linked to all lung injury cases. More information is needed to know whether a single product, substance, brand, or method of use is responsible for the outbreak.

CLINICAL FEATURES:

Among the cases, three major groups of symptoms have been associated with this outbreak:

1. Chest symptoms appear to occur over several days to several weeks and includes:
   - Cough
   - Chest pain
   - Shortness of breath

2. Abdominal symptoms preceding chest symptoms and includes:
   - Nausea
   - Vomiting
   - Diarrhea

3. Other symptoms include:
   - Increased heart rate (tachycardia)
   - Fever and/or chills
**POSSIBLE DIAGNOSIS?**

‘**VAPING-ASSOCIATED LUNG INJURY’**

Vaping-associated lung injury is the term currently used to describe lung abnormalities associated with vaping, typically seen on chest imaging. This disease describes four major lung imaging patterns: Acute eosinophilic pneumonia, Diffuse alveolar damage, Organizing pneumonia, and Exogenous lipoid pneumonia.

Most of the cases who used cannabinoid oil developed acute exogenous lipoid pneumonia. Exogenous lipoid pneumonia is a lung disease caused by inhaling chemicals containing lipids (hydrocarbon or oil based products). These lipids cause an inflammatory response within the small alveolar spaces in the lungs.

**WHAT CAN PARENTS AND YOUTH DO:**

- **STOP/DO NOT USE E-CIGARETTE/ JUUL PRODUCTS UNTIL THE EPIDEMIC IS OVER**
  - It’s important to communicate to your children about the dangers of vaping-associated lung injury. Visit these websites for tips on starting the conversation.
    - How to talk with your kids about vaping
    - Surgeon General: Parent tip sheet on e-cigarettes
  - If you use e-cigarette products, or your child vapes, and you experience or notice any of the symptoms described above, seek medical care immediately.
  - Regardless of the ongoing investigation:
    - Youth and young adults should not use e-cigarette products. Visit catchmybreath.org to learn about a free 5th-12th grade CATCH My Breath E-cigarette prevention program.
    - Women who are pregnant should not use e-cigarette products.
    - If you do use e-cigarette products, you should not buy street products (for example, e-cigarette products with THC or other cannabinoids).
    - You should not modify e-cigarette products or add any substances to these products that are not intended by the manufacturer.
    - Adult smokers who are attempting to quit tobacco products should use evidence-based treatments, including counseling and FDA-approved medications; see CDC: Ways to Quit Smoking. If you need help quitting tobacco products, including e-cigarettes, contact your doctor or other medical provider.

**Updated Sources:**

- MMWR: Severe Pulmonary Disease Associated with Electronic-Cigarette–Product Use — Interim Guidance
- MMWR: Notes from the Field: Outbreak of Electronic-Cigarette Associated Acute Lipoid Pneumonia—North Carolina, July-August, 2019
- What’s the Bottom Line about Electronic Cigarettes?
- What’s the Bottom Line on the Risks of E-cigarettes for Kids, Teens, and Young Adults?
- CDC Media Statement: CDC, FDA, States Continue to Investigate Severe Pulmonary Disease Among People Who Use E-cigarettes
- FDA’s Information on Vaporizers, E-cigarettes, and other Electronic Nicotine Delivery Systems
- Michael & Susan Dell Center for Healthy Living: JUUL fact sheet, vaping become epidemic among students.