

Center for Policy, Planning and Evaluation Administration  
Division of Epidemiology – Disease Surveillance and Investigation

**August 27, 2019**

**Health Notice for District of Columbia Healthcare Providers**  
**Severe Lung Disease in Patients Reporting Recent Vaping**

**Summary**

As of August 21, nearly 100 cases of severe pulmonary disease have been reported in multiple states. Patients all reported recent use of vaping products containing either nicotine or THC in the weeks leading up to presentation.

Cases have reported various symptoms upon presentation, including:

- Headache
- Fatigue
- Cough
- Pleuritic chest pain
- Shortness of breath
- Nausea
- Loss of appetite
- Fever
- Weight loss

Most cases have required hospitalization, with some requiring ventilators. It is unclear at this point if the illnesses are associated with the vaping devices themselves, or with any contaminants inhaled through them. Clinicians are encouraged to remain alert for potential cases.

**Background**

Vaping is the act of inhaling and exhaling an aerosol (often mistaken as water vapor), which actually consists of fine particles. Many of these particles contain varying amounts of toxic chemicals, which have been linked to cancer, as well as respiratory and heart disease.

The e-liquid in vaporizer products usually contains a propylene glycol or vegetable glycerin-based liquid with nicotine, flavoring and other chemicals and metals, but not tobacco. Some people use these devices to vape tetrahydrocannabinol (THC), the chemical responsible for most of marijuana's mind-altering effects, as well as synthetic cannabinoids.

Since June of this year, patients have been presenting to emergency rooms with pronounced respiratory symptoms that progressively worsen. Some patients have become sick enough to need mechanical ventilation, but later improved with corticosteroid administration. All patients said they had "vaped" during the weeks and months prior to hospitalization, with many claiming they had recently used THC-containing products. According to the CDC, there is no

**Please contact DC Health for more information:**  
**Phone: 202-727-3616 (8:15am-4:45pm) | 1-844-493-2652 (after-hours calls)**

product conclusively linked to this clinical syndrome, and no specific product in common among all cases.

### **Recommendations for DC Healthcare Providers**

As ED and urgent care providers are likely to be the first healthcare providers to encounter these patients, we encourage you to implement the following guidance for patients who present with progressive respiratory symptoms, especially those without any history of respiratory illness:

- 1. Providers should obtain a thorough substance use history from patients presenting with these symptoms, paying attention to inhalation drug use, particularly vape products.**
- 2. If possible, obtain any information about name and type of products used, and a sample of the product for testing.**
- 3. If you encounter a suspected case, please promptly report the case to the District of Columbia Department of Health (202) 727-3616 and the National Capital Poison Control Center at 1 (800) 222-1222.**
- 4. If you have previously encountered any similar cases since July 2019, please also promptly report to the District of Columbia Department of Health (202) 727-3616 and the National Capital Poison Control Center at 1 (800) 222-1222.**

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**Case Definition**

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**Confirmed** Inhalational drug\* use in 90 days prior to symptom onset.  
**AND**  
Pulmonary infiltrate, as manifested by opacities on plain film chest radiograph or ground-glass opacities on chest CT  
**AND**  
Absence of pulmonary infection: Minimum criteria include negative respiratory viral panel, influenza PCR, and blood culture. All other ID testing (e.g., urine strep pneumo/ legionella/ mycoplasma, sputum culture if productive cough, BAL culture if done, HIV-related opportunistic respiratory infections if appropriate) must be negative  
**AND**  
No evidence in medical record that pulmonary disease is due to rheumatologic or neoplastic process.

**Probable** Inhalational drug\* use in 90 days prior to symptom onset.  
**AND**  
Pulmonary infiltrate, as manifested by opacities on plain film chest radiograph or ground-glass opacities on chest CT.  
**AND**  
Infection identified via culture or PCR, but clinical team believes this is not the sole cause of the underlying disease process.

--OR--

Inhalational drug\* use in 90 days prior to symptom onset.  
**AND**  
Pulmonary infiltrate, as manifested by opacities on plain film chest radiograph or ground-glass opacities on chest CT.  
**AND**  
Minimum criteria to rule out pulmonary infection not met (testing not performed) and no mention of infectious process in discharge summary or ICD10 discharge diagnoses.

**Suspect** Inhalational drug\* use in 90 days prior to symptom onset.  
**AND**  
Clinical signs or symptoms\*\* of respiratory dysfunction.

**Footnotes** \* Includes vaping or smoking of any plant or chemical, including nicotine, marijuana, THC concentrate, CBD, synthetic cannabinoids, or other  
\*\* Includes shortness of breath, pleuritic chest pain (i.e., pain with inspiration), cough with or without hemoptysis, hypoxia (pulse oximetry <=95%), with or without fever