



NC DEPARTMENT OF  
**HEALTH AND  
HUMAN SERVICES**

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Division of Public Health

To: North Carolina Clinicians  
From: Zack Moore, MD, MPH, State Epidemiologist  
**Subject: Severe Acute Pulmonary Disease among People who Reported Vaping**  
Date: August 16, 2019

The North Carolina Division of Public Health is alerting clinicians to recent reports of severe pulmonary disease following vaping. Three cases have been identified in North Carolina since late July; similar cases have been reported from other states, including Wisconsin, Illinois, California, and Minnesota. The causes of these illnesses are under investigation.

### **Clinical Presentation**

Patients identified in other states have presented with respiratory symptoms including cough and shortness of breath. Symptoms worsen over a period of days or weeks before admission to the hospital. Other symptoms may include fever, anorexia, fatigue, pleuritic chest pain, nausea, abdominal pain and diarrhea. Findings on chest radiographs have included bilateral opacities, typically in the lower lobes, and findings on CT imaging of the chest have included diffuse ground glass opacities, often with subpleural sparing. Evaluation for infectious etiologies has been negative in all patients. Some patients have had progressive respiratory compromise requiring endotracheal intubation but subsequently improved with systemic steroids.

### **Potential Exposures**

No specific product has been identified by all cases identified nationally, nor has any product been conclusively linked to this clinical syndrome. The three case patients in North Carolina reported using vape pens with THC, which is consistent with reports from other states. The products used by case patients might also contain nicotine, cannabis, CBD, synthetic cannabinoids, flavors, or other chemicals.

### **Recommendations**

North Carolina clinicians are urged to take the following steps to ensure appropriate identification and clinical management of cases:

- 1. Contact North Carolina Poison Control at 1-800-222-1222 immediately to report cases and discuss treatment and management for any patient presenting meeting all of the following criteria:**
  - Severe acute pulmonary disease (including but not limited to pneumonitis and acute respiratory distress syndrome (ARDS));
  - Requiring admission to a hospital and respiratory support (including but not limited to high-flow oxygen, BIPAP, or intubation with mechanical ventilation);
  - No infectious etiology defined; and
  - Recent history of vaping.
- 2. Ask all patients with progressive respiratory symptoms and unknown etiology if they have used vaping devices within the last 3 months and which substances were used.**

### **Reporting**

To report any similar cases, or if you have questions about treatment and management of these cases, please contact North Carolina Poison Control at 1-800-222-1222.

If you have questions about the ongoing outbreak, please contact the NC Division of Public Health at 919-695-2662.

**NC DEPARTMENT OF HEALTH AND HUMAN SERVICES • DIVISION OF PUBLIC HEALTH**

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