



## Severe Pulmonary Disease in People Who Report Vaping Health Alert

Date: August 16, 2019

**Public Health Message Type:**  Alert  Advisory  Update  Information

**Intended Audience:**  All public health partners  Healthcare providers  Infection preventionists  
 Local health departments  Schools/child care centers  ACOs  
 Animal health professionals  Other:

### Key Points or Updates:

- (1) Cases of acute severe pulmonary disease with no known infectious cause have been reported in persons who have used vaping products. These cases have occurred in multiple states and are now being reported in New Jersey.
- (2) Cases in New Jersey have been primarily reported in young persons (17 to 35 years-old) with no significant past medical history.
- (3) Clinicians should be alert for patients with progressive respiratory symptoms and a history of vaping.

### Action Items:

- (1) Clinicians treating patients with significant respiratory disease in the outpatient setting should assess their patients for recent or prior use of vaping products and consider the potential for worsening disease progression if risk factors are present.
- (2) Clinicians in the inpatient setting who are managing patients with severe pulmonary disease should consider the following:
  - a. Assess patients for a vaping history including vaping tobacco, tetrahydrocannabinol (THC), and/or other products
  - b. Consider this syndrome in these patients, particularly in those who have prior history of respiratory disease and no apparent etiology, infectious or otherwise.
  - c. Consider a pulmonology consultation to guide additional diagnostics and management for these patients
- (3) Educate all patients on the risks associated with vaping and the use of tobacco products and provide patients information on where to seek care if symptoms worsen or return after initial resolution

### Contact Information:

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- The Communicable Disease Service at (609) 826-5964 during business hours

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There have been reports from multiple states of patients who have been hospitalized with acute severe pulmonary disease associated with vaping (i.e. use of e-cigarette devices to aerosolize substances for inhalation). Patients presented with respiratory symptoms including cough, shortness of breath, and fatigue. Symptoms worsened over a period of days or weeks before admission to the hospital. Other symptoms reported by some patients included fever, anorexia, chest pain, weight loss, nausea, and diarrhea. Chest radiographs showed bilateral opacities, and CT imaging of the chest demonstrated diffuse ground-glass opacities, often with sub-pleural sparing. Evaluation for infectious etiologies was negative among nearly all patients. The Centers for Disease Control and Prevention (CDC) is working with states, including New Jersey, to characterize these cases and provide additional guidance.

No single product has been implicated. Patients have reported high variability in substances/products they used in vaping, including both tobacco and tetrahydrocannabinol (THC) containing products as well as other products.

The New Jersey Department of Health (NJDOH) is currently investigating similar reports from healthcare facilities primarily in the northern part of the state regarding nine individuals who presented severe lung disease in persons who have a vaping history. It is early in the investigation, and much is yet unknown, however here is what we know so far:

**Key Patient Characteristics:**

Patients are typically younger (ages 17 to 35 years old) and report no significant past medical history. All report a history of recent vaping of multiple products.

**Clinical Presentation and Disease Course:**

Symptom onset in NJ patients has ranged from 1 to 7 days. Patients are presenting with a variety of **respiratory and generalized signs and symptoms including: Cough, pleuritic chest pain, shortness of breath, fatigue, fever, chills, headache, nausea, vomiting, anorexia and diarrhea.** Initial laboratory evaluation has revealed increased WBC count (with reported neutrophilia). Chest radiography has shown diffuse infiltrates consistent with an atypical or multilobar pneumonia. Computed tomography (CT) of the chest often shows bilateral ground-glass opacities.

Patients currently under investigation have all been hospitalized, some with progression of respiratory compromise, requiring respiratory support and mechanical ventilation. Extensive evaluation for infectious causes has been unrevealing. Additional diagnostics have not provided other suspect etiologies (i.e. malignancy or autoimmune condition).

In patients presenting with these symptoms, a history of vaping, and no identified cause of their current illness, treatment has been supportive. While antimicrobials have been used, clinical improvement was seen in many patients after the initiation of steroid treatment and ongoing supportive care. Clinicians managing patients who have a similar clinical presentation and report a history of vaping should keep this syndrome on their differential and consider the appropriate treatment course, particularly in the absence of an infectious etiology.

**Assessing the Use of Vaping Products:**

Clinicians should be alert for patients who present with progressive respiratory symptoms, especially in those without a history of respiratory illness. If patients with these symptoms present for care, providers

should ensure a thorough substance use history is obtained, including attention to inhalation drug use, particularly vape products. Obtain information regarding frequency of use, type of product or substance vaped, type of device, product tampering, and where the device or product was purchased. This assessment should be done along with standard questions about the use of tobacco products, alcohol and any illicit substances.

**Case Reporting:**

All cases of suspected severe lung disease potentially associated with vape products should be reported during normal business hours to the local health department where the patient resides. If patient residence is unknown, report to your local health department. Contact information is available at: [localhealth.nj.gov](http://localhealth.nj.gov).

If local health department personnel are unavailable, healthcare providers should report the case to the New Jersey Department of Health (NJDOH), Communicable Disease Service (CDS) at 609-826-5964 during normal business hours.

The following information should be provided to the local health department when reporting: patient name, address, date of birth, name of the facility where the patient is currently being evaluated, and the name and contact of the providers caring for the patient.

**This situation is evolving and as new information becomes available NJDOH will share with partners.**