

**Severe Acute Pulmonary Disease Associated with Vaping**



<b>DATE:</b>	08/16/2019
<b>TO:</b>	Health Alert Network
<b>FROM:</b>	Rachel Levine, MD, Secretary of Health
<b>SUBJECT:</b>	<b>Severe Acute Pulmonary Disease Associated with Vaping</b>
<b>DISTRIBUTION:</b>	Statewide
<b>LOCATION:</b>	Statewide
<b>STREET ADDRESS:</b>	Statewide
<b>COUNTY:</b>	Statewide
<b>MUNICIPALITY:</b>	Statewide
<b>ZIP CODE:</b>	Statewide

**This transmission is a “Health Advisory”: provides important information for a specific incident or situation; may not require immediate action.**

**HOSPITALS:** PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, INFECTION CONTROL, NURSING, AND LABORATORY STAFF IN YOUR HOSPITAL

**EMS COUNCILS:** PLEASE DISTRIBUTE AS APPROPRIATE

**FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE

**LOCAL HEALTH JURISDICTIONS:** PLEASE DISTRIBUTE AS APPROPRIATE

**PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP.

**Summary**

- In the last 2-3 weeks, the Pittsburgh Poison Control Center has been hearing increasing reports of lung injury, in some cases severe, which have preliminarily been associated with vaping.
- In most cases, patients have reported vaping THC containing products though the remaining chemical constituents of the products have not been identified in most cases.
- In addition, other states have seen other vaping products containing nicotine, CBD, synthetic cannabinoids, or a combination of substances.
- Clinicians who become aware of cases similar to those described above are asked to report them to the Pennsylvania Poison Centers at 1-800-222-1222.

The Pennsylvania Department of Health (DOH) is forwarding the following information to healthcare providers, **Severe Acute Pulmonary Disease Associated with Vaping** from the Pittsburgh Poison Control Center. If you have any questions or concerns, please call the Pennsylvania Poison Centers at 1-800-222-1222.

**Background**

In the last 2-3 weeks, the Pittsburgh Poison Control Center has been hearing increasing reports of lung injury, in some cases severe, which have preliminarily been associated with vaping or

dabbing/juuling. A definitive causal relationship has not been determined, but the association is strong. In most cases, patients have reported vaping THC containing products though the remaining chemical constituents of the products have not been identified in most cases. In addition, other states have seen other vaping products containing nicotine, CBD, synthetic cannabinoids, or a combination of substances. At this time, we are gathering as much information as possible related to cases of lung injury that may be related to vaping. We are aware of at least four cases that have been treated in Pittsburgh hospitals in the last week that appear likely to be related to vaping, though the specific products are unknown at this time. Specialists from the Pittsburgh Poison Center are working with a multidisciplinary team of physician experts to identify cases and investigate the incidence, course, and causation in collaboration with the PA Department of Health and the Centers for Disease Control & Prevention.

### **Reported Cases**

Reported symptoms and findings in cases of suspected vaping associated lung injury include:

- Fever, nausea, vomiting
- Shortness of breath, cough, and chest pain
- Bilateral perihilar infiltrates and ground glass opacities, often with peripheral sparing
- Progression of symptoms over several days with similarities to a viral illness
- Patients endorse vaping, often THC products, in the days to weeks preceding symptom onset

### **Evaluation**

1. Be aware of the potential for significant lung injury in patients presenting with pulmonary symptoms or otherwise appearing to have a “viral syndrome”
2. If a patient has a history of vaping, perform a careful pulmonary examination and provide patient education regarding the potential for severe lung injury
3. Provide education to any patient who endorses vaping regarding the immediate risk of lung injury in addition to long term health concerns

### **Case Identification**

In patients with lung injury without an apparent alternative cause, obtain a detailed history of:

1. Vaping activity
  - a. Device used
  - b. Products used; including substance
  - c. Whether the product was purchased from a store vs. from the street or otherwise potentially tampered with
  - d. Where, geographically, was it purchased and used (e.g. city, county, zip code)
  - e. Chronicity and pattern of vaping
  - f. Timing of use relative to symptom onset
2. Symptom onset and progression
3. Baseline lung or other systemic disease
4. Any other drug or environmental exposure
5. Recent travel

### **Diagnostics**

1. Vital sign assessment
2. Pulmonary examination findings

3. Imaging: plain film and/or CT without contrast according to clinical indication and availability
4. If possible and appropriate, the following data may be helpful in diagnosis and treatment:
  - a. Urine drug screen
  - b. Complete blood count, comprehensive metabolic panel, venous or arterial blood gas
  - c. Sputum culture
  - d. Viral and fungal pathogen testing
  - e. Bronchoalveolar lavage findings and specimen evaluation

### **Treatment**

At this time, no additional systemic toxicity has been identified. The goals of therapy are supportive to maintain adequate oxygenation and ventilation through means determined by the patient's clinical condition and response to therapy. Significant hypoxemia and precipitous deterioration in respiratory illness have been reported. Some reported cases have required mechanical ventilation and VV-ECMO.

### **Surveillance**

The identification of cases will be critical in order to fully assess the impact as well as investigate the cause and prevent further harm. If you suspect a case of lung injury related to vaping, please call Pennsylvania's Poison Centers at **1-800-222-1222**. The poison centers can provide assistance in the evaluation and potentially management of patients. Additionally, cases reported to poison centers will be catalogued in the National Poison Data System which will greatly strengthen the public health response to this potential threat.

If you have any questions or concerns, please call the Pennsylvania Poison Centers at 1-800-222-1222.

Please see the link below to the newsletter, **CDC Urges Clinicians to Report Possible Cases of Unexplained Vaping-associated Pulmonary Illness to their State/Local Health Department** from the CDC Clinician Outreach and Communication Activity:

<https://emergency.cdc.gov/newsletters/coca/081619.htm>

Categories of Health Alert messages:

**Health Alert:** conveys the highest level of importance; warrants immediate action or attention.

**Health Advisory:** provides important information for a specific incident or situation; may not require immediate action.

**Health Update:** provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of August 16, 2019, but may be modified in the future.