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**PUBLIC HEALTH DEPARTMENT**

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**PUBLIC HEALTH ADVISORY**

**Vaping-Associated Pulmonary Injuries Reported Nationwide**

Since late June, more than 200 cases of severe lung illness associated with e-cigarette use have been reported by 23 states, including 36 cases in California. The first death related to the outbreak of severe lung disease in those who use e-cigarette or “vaping” devices was reported this week. No cases have been reported to date in Imperial County.

Although the cause of illness is not yet known, most of the cases report vaping cannabis products such as THC and/or CBD, and some cases also report vaping nicotine products. Some report using vaping products purchased from unlicensed, unregulated entities.

Patients typically present to the hospital with cough, difficulty breathing, fever, and sometimes vomiting and diarrhea. In many cases, the initial diagnosis was presumed to be infectious, but no evidence of infection or other cause to explain pulmonary disease was found. All California cases were hospitalized, with most requiring respiratory support with supplemental oxygen, high-flow oxygen, or bi-level positive airway pressure (BiPAP). At least 10 patients had respiratory failure requiring mechanical ventilation.

Clinicians are asked to report suspect cases of unexplained vaping-associated pulmonary illness to the Public Health Department by calling (442) 265-1464. Local health departments are collecting information on vaping habits and products from patients suspected of having vaping-associated pulmonary injury.

### **Information for Physicians and Hospitals**

The clinical presentation of vaping-associated pulmonary infection (VAPI) can initially mimic common pulmonary diagnoses such as pneumonia, but patients typically do not respond to antibiotic therapy. High clinical suspicion is necessary to make the diagnosis of VAPI. In some cases, patients sought care at outpatient clinics in the days prior to presenting to the hospital and received antibiotics for presumed pneumonia or bronchitis, which did not improve their symptoms.

### **California Department of Public Health Recommended Guidelines**

- Ask patients presenting with respiratory complaints in either outpatient or inpatient settings about their use of vaping or “dabbing” devices, especially individuals who had an initial diagnosis of pneumonia or bronchitis that did not respond to antibiotics.
- Ask individuals who vape about the type of vaping product used (nicotine or cannabis or cannabinoid compounds), amount of use (how long, last time and how often), and where they purchase supplies and what brands they use.
- **Report suspect cases to the local health department within one business day by calling (442) 265-1464.** Public Health staff will contact the hospital laboratory to arrange the transfer of biospecimens to the Public Health lab.

## **Clinical Course**

Patients typically present for care within a few days to weeks of symptom onset. At the time of hospital presentation, patients are often hypoxic and meet criteria for systemic inflammatory response syndrome (SIRS), including high fever. In some cases, patients had progressive respiratory failure following hospital admission and were intubated. Recovery for discharge was days to weeks.

Symptoms include shortness of breath, cough, fatigue, body aches, fever, vomiting and diarrhea. Non-specific laboratory abnormalities have been reported, including elevation in white blood cell count, transaminases, procalcitonin, and inflammatory markers. Imaging abnormalities are typically bilateral and include pulmonary infiltrates or opacities on chest x-ray and ground glass opacities on chest CT. Treatment guidelines are not yet available.

VAPI is a clinical diagnosis of exclusion when infectious, rheumatologic, neoplastic, cardiac, or other processes cannot explain an acute pulmonary illness.

The U.S. Food and Drug Administration (FDA) is working with the Centers for Disease Control and state health officials to gather information on any products or substances used and providing technical and laboratory assistance.

FDA encourages the public to submit detailed reports of any unexpected tobacco- or e-cigarette-related health or product issues to the FDA online:

<https://www.fda.gov/tobacco-products/tobacco-science-research/safety-reporting-portal-tobacco-products>

For more information on the risks of vaping:

<https://www.cdph.ca.gov/Programs/CCDPHP/Pages/RisksofVaping.aspx>

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

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