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Health Alert**

***E-cigarette, or Vaping, Product Use-Associated Lung Injury (EVALI) Cases
During California's COVID-19 Response***

May 9, 2020

Key Messages

- The California Department of Public Health (CDPH) identified 8 patients with e-cigarette, or vaping, product use-associated lung injury (EVALI) who were hospitalized in April 2020. Each patient was reported negative for SARS-CoV-2 infection by diagnostic testing and reported recently vaping THC-containing products. These are the first cases of EVALI identified by CDPH since February 2020.
- Considering the current COVID-19 response, California's definition of EVALI is provisionally revised to require that SARS-CoV-2 nucleic acid test is negative for CONFIRMED EVALI cases; the PROBABLE EVALI case definition is provisionally eliminated.
- Clinicians evaluating patients for possible COVID-19 should also inquire about vaping practices. Clinicians should consider EVALI diagnosis for hospitalized patients who report a history of vaping in the past 90 days AND have a negative SARS-CoV-2 nucleic acid test; and should report suspected cases to their local health department.
- Local health departments should continue to report new cases of EVALI to CDPH under the Vaping Associated Pulmonary Injury (VAPI) disease condition in CalREDIE, using the EVALI case definition provisional revision. Local health departments should direct questions related to cases to VAPI@cdph.ca.gov.
- These cases serve as a reminder of the serious health risks associated with e-cigarette use or vaping. CDPH continues to urge all individuals to refrain from all e-cigarette use or vaping, no matter the substance or source, and to particularly avoid vaping THC-containing products from unlicensed sources.



Summary

This health advisory provides information about the ongoing health threat of e-cigarette, or vaping, product use-associated lung injury (EVALI), a severe pulmonary disease associated with the use of vaping products. Several new cases of EVALI have been recently identified in California. This health advisory contains updated guidance for clinicians, local health departments, and the public about EVALI in the context of COVID-19, as both conditions can have similar clinical presentations. California's EVALI case definition is temporarily modified to require rule-out of COVID-19 by SARS-CoV-2 nucleic acid test.

Current Situation

The California Department of Public Health (CDPH) identified 210 cases of E-cigarette, or vaping, product use-associated lung injury (EVALI) among California residents from August 2019 to February 2020, including 4 deaths. Most cases were associated with vaping THC-containing products, most of which had been obtained from unlicensed sources, and laboratory analyses conducted by CDPH and by CDC identified vitamin E acetate in many recovered THC-containing vaping products and in bronchoalveolar lavage samples of EVALI patients. Peak hospitalizations in California occurred in September and October 2019. On February 27, 2020, CDPH transitioned to a surveillance-focused approach and advised local health departments to discontinue case patient interviews.

In May 2020, CDPH received reports from 5 California jurisdictions of 8 cases of EVALI hospitalized occurring in April. All 8 patients, who had a median age of 17 years, reported recently vaping THC-containing products, and all tested negative for SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID-19).

It is unclear whether these newly reported cases represent a re-emergence of EVALI in California, or whether EVALI cases have been missed or underreported during the COVID-19 pandemic.

Provisional Revision of California EVALI Case Definition

EVALI and COVID-19 symptoms can be similar. Due to the large number of COVID-19 cases in California, CDPH has provisionally changed the definition of a **confirmed** EVALI case to require a negative SARS-CoV-2 nucleic acid (PCR) test. The provisional confirmed case definition is as follows (changes highlighted in yellow):

- Respiratory illness requiring hospitalization AND
- Using an e-cigarette ("vaping") or dabbing in 90 days prior to symptom onset* AND
- Pulmonary infiltrate, such as opacities on plain film chest radiograph or ground-glass opacities on chest CT AND
- Absence of respiratory infection on initial work-up: Minimum criteria include the

following negative tests: 1) SARS-CoV-2 nucleic acid test** AND 2) respiratory viral PCR panel AND 3) influenza PCR or rapid test, if local epidemiology supports testing AND 4) all other clinically indicated respiratory infectious disease testing (e.g., urine antigen for *Streptococcus pneumoniae* and *Legionella*, sputum culture if productive cough, bronchoalveolar lavage culture if done, blood culture, HIV-related opportunistic respiratory infections if appropriate) AND

- No evidence in medical record of alternative plausible diagnoses (e.g., cardiac, rheumatologic or neoplastic process).

*Includes using an electronic device (e.g., electronic nicotine delivery system (ENDS), electronic cigarette, e-cigarette, vaporizer, vape(s), vape pen, dab pen, or other) or dabbing to inhale substances (e.g., nicotine, marijuana, THC, THC concentrates, CBD, synthetic cannabinoids, flavorings, or other substances).

**For critically ill patients requiring mechanical ventilation, a minimum of two negative SARS-CoV-2 tests are required, at least one of the two specimens must be from a lower respiratory tract sample or bronchoalveolar lavage.

CDPH is provisionally eliminating the **probable** EVALI case definition. The probable case definition included those patients for whom minimum testing criteria was not met. Given the potentially similar clinical presentations of COVID-19 and EVALI, large numbers of COVID-19 cases, and the fact that EVALI is a diagnosis of exclusion, there is little EVALI surveillance utility in the absence of SARS-CoV-2 nucleic acid testing.

Information for Physicians and Hospitals

As reported in a previous Health Alert and Health Advisory, EVALI can mimic common pulmonary diseases. EVALI and COVID-19 illness present with similar symptoms (cough, shortness of breath, fever, headache), and at time of presentation, both EVALI and COVID-19 patients are often hypoxic and require respiratory support.

Due to the similarity in clinical presentation between EVALI and COVID-19, CDPH recommends that physicians take the following actions to when evaluating patients for possible COVID-19:

- Ask patients about their use of vaping or “dabbing” devices. Note that the [COVID-19 Confidential Morbidity Report](#) includes a checkbox for e-cigarette or vaping use. For patients who do vape, ask these follow-up questions:
 - **Type of vaping products used**
 - Do you vape nicotine-containing substances?
 - Do you vape substances that contain cannabis or cannabinoid compounds:
 - THC?
 - CBD?
 - **Amount of use**
 - When was the last time you vaped?
 - How often do you vape?

- **Source**
 - Where did you acquire your vaping supplies?
 - What brands are your vaping devices, cartridges, and oils?
- If a hospitalized patient meets the provisional revision of the EVALI case definition above, providers should report the case to the local health department of the patient's residence.

Information for Local Health Departments

Local health departments are asked to report cases as described in the February 27, 2020 CAHAN "EVALI Work Flow Updates", with the following modification:

- Use the provisional revision of EVALI case definition described above. Of note, a CONFIRMED case requires a negative SARS-CoV-2 nucleic acid test. Note the date and test result in the CalREDIE Intake Form tab under the "Infectious Disease Testing" Section.

Local health departments should direct all inquiries related to this outbreak to VAPI@cdph.ca.gov. In addition to reporting in CalREDIE, please report any patient death suspected to be caused by EVALI to the CDPH Duty Officer [dutyofficer@cdph.ca.gov or 916-328-3605] the same day the report is received by the local health department.

When reporting cases in CalREDIE, LHDs should include any available information about vaping product type and source. If patient vaping products are available, LHDs may contact CDPH at the email address above to arrange for testing. Currently, CDPH is not asking LHDs to conduct interviews with EVALI case patients or collect patient biological specimens.

In the event the trajectory of the EVALI outbreak changes substantially or if there is reason to suspect that new sources of vaping materials linked to EVALI have emerged, CDPH may request that local health departments revert to active case follow-up with patient interviews, product collection, and biospecimen collection.

Messaging to Patients

- E-cigarette use or vaping is hazardous to your health. CDPH continues to urge everyone to quit vaping altogether, no matter the substance or source.
 - If individuals continue to vape, they are urged to avoid buying vaping products from unlicensed or informal sources, such as friends, dealers, or pop-up shops. Consumers should purchase vaping products only from licensed businesses and should never modify a store-bought vaping product. In addition, anyone who vapes should monitor themselves for

respiratory illness and to seek immediate medical attention if they experience symptoms of EVALI.

- E-cigarettes/vaping products have not been adequately tested nor approved as tobacco cessation devices. Nicotine replacement therapy products approved by the Food and Drug Administration contain controlled doses of nicotine and have been tested for safety and efficacy.
- Tailored information for [patients and providers](#) is available from the California Smokers' Helpline. The patient section includes free cessation counseling and other resources for tobacco users that want to quit. The provider section has videos on how to talk to your patients about quitting, posters for waiting rooms, and review material for treating tobacco use and dependence. Counselors are available weekdays, 7 a.m. to 9 p.m., and Saturday, 9 a.m. to 5 p.m. Or [sign up](#) 24/7 online.
 - English: 1-800-NO-BUTTS (1-800-662-8887)
 - Chinese: 1-800-838-8917
 - Korean: 1-800-556-5564
 - Spanish: 1-800-45-NO-FUME (1-800-456-6386)
 - Vietnamese: 1-800-778-8440