



Pulmonology

CDC: Vaping linked to 5 deaths, 450 reported illnesses

by Melissa Jenco, News Content Editor

Five people have died from vaping-related lung illnesses, and the number of possible cases has grown to 450, according to the Centers for Disease Control and Prevention (CDC).

"While the investigation is ongoing, CDC has advised that individuals consider not using e-cigarettes because as of now, this is the primary means of preventing severe lung disease," said Dana Meaney-Delman, M.D., M.P.H., incident manager for the CDC's 2019 Lung Injury Response. "Of course, e-cigarette use is never safe for youth, young adults and pregnant women."

The deaths occurred in Illinois, Oregon, Indiana, Minnesota and California. Cases have been reported in 33 states and one territory.

All patients had vaped within days or weeks of getting sick, and many had used e-cigarettes with tetrahydrocannabinol (THC). The patients, many of whom are adolescents and young adults, have complained of difficulty breathing, shortness of breath and/or chest pain. Some also experienced diarrhea, vomiting, fever and fatigue, according to the CDC.

The CDC released definitions for confirmed and probable cases of severe pulmonary disease associated with e-cigarette use in its *Morbidity and Mortality Weekly Report (MMWR)*, noting the definitions are for surveillance purposes, not clinical diagnosis.

Both confirmed and probable cases must have e-cigarette use or dabbing (heating substances with high concentrations of THC and other plant compounds and inhaling the aerosol) within 90 days of symptoms, evidence of pulmonary infiltrate and no evidence of alternative plausible diagnoses. Confirmed cases do not show pulmonary infection on initial work-up. In probable cases, an infection isn't believed to be the sole cause of illness despite identifying one or not being able to rule one out.

The CDC said it believes "a chemical exposure is likely" causing illnesses and is looking into multiple possibilities including reports linking the illnesses to vitamin E acetate.

"At this time, no one device, product or substance has been linked to all cases, and continued investigation is needed to better understand if a true relationship exists between any specific product or substance and the illnesses we are observing in patients," Dr. Meaney-Delman said.

The AAP has long been warning against using e-cigarettes, which can contain toxic chemicals, harm developing brains and lead to a new generation addicted to nicotine.

Reports released today in the *New England Journal of Medicine (NEJM)* and *MMWR* look more closely at case reports in several states. One *NEJM* article details 53 cases in Illinois and Wisconsin, which had a median age of 19 and were mostly males. About 94% were hospitalized, more than half were admitted to an intensive care unit, one-third required intubation and mechanical ventilation, and one died. About 80% reported recent THC use, and 61% reported recent nicotine use. About 44% reported recent use of both. An article in *MMWR* describes five cases of vaping-related illness in North Carolina, in which patients were diagnosed with acute exogenous lipid pneumonia.

Clinicians should consider vaping-related illnesses in patients with lung disease, collect detailed information on the products patients were using and report suspected cases to their state health department. Detailed guidance from the CDC is available at <https://emergency.cdc.gov/han/han00421.asp>.



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The CDC also encourages the public to report any unexpected tobacco or e-cigarette-related health or product issues to the Food and Drug Administration's online Safety Reporting Portal, <http://www.safetyreporting.hhs.gov>.

Resources

- [AAP Julius B. Richmond Center of Excellence e-cigarette website](#)
- [AAP policy "E-Cigarettes and Similar Devices"](#)
- [CDC e-cigarette website](#)
- [Information for parents from HealthyChildren.org about e-cigarettes](#)
- [FDA and CDC statement on federal and state collaboration](#)
- [Pediatrics e-cigarette article collection](#)
- [Surgeon general's interactive website about e-cigarettes geared toward parents and others who work with youths](#)