

CDC: Vaping-related illnesses surpass 1,000 including 18 deaths

October 3, 2019

Alyson Sulaski, Wyckoff, Associate Editor; Melissa Jenco, News Content Editor

Article type: [News](#)

Topics: [Pulmonology](#), [Smoking](#)

At least 1,080 people have experienced serious vaping-related lung illnesses and 18 have died, according to new data from the Centers for Disease Control and Prevention (CDC).

The growing case count comes amid new research that found the injuries may be linked to toxic chemicals, although no one product or substance is involved in all cases. Another new study looking more broadly at teen vaping trends found large percentages are using flavored products.

The new case count is up from 805 illnesses and 12 deaths a week ago. It reflects confirmed and probable lung injury cases in 48 states and the U.S. Virgin Islands. Patients who died ranged in age from their 20s to their 70s, with a median age of almost 50 years.

“We cannot stress enough the seriousness of these lung injuries associated with vaping,” Anne Schuchat, M.D., principal deputy director of the CDC, said in a telebriefing Thursday.

Among 578 patients with information on substances they used in e-cigarettes products, about 78% reported using tetrahydrocannabinol (THC)-containing products with or without nicotine; 37% reported exclusive use of THC-containing products; and 17% reported exclusive use of nicotine-containing products.

In patients with lung injury, 70% were male, and about 80% were under 35 years of age. Thirty-seven percent were under age 21.

Patients 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 Food and Drug Administration (FDA) has received or collected 440 samples from 18 states, and the numbers continue to increase. Investigators and agents are gathering any available evidence, including devices, pods, cartridges and diluting agents, according to Judy McMeekin, Pharm.D., FDA deputy associate commissioner for regulatory affairs.

“Getting to the bottom of this ... is a federal priority,” Dr. McMeekin said.

In a new report, researchers from Mayo Clinic reviewed lung biopsies from 17 people who experienced vaping-related illnesses and found the injury may be caused by inhaled toxic substances. They did not find evidence of a lipid accumulation, according to the report published in the *New England Journal of Medicine*.

“While we can’t discount the potential role of lipids, we have not seen anything to suggest this is a problem caused by lipid accumulation in the lungs,” co-author Brandon Larsen, M.D., Ph.D., said in a news release.

“Instead, it seems to be some kind of direct chemical injury, similar to what one might see with exposures to toxic chemical fumes, poisonous gases and toxic agents.”

Still, it's too early in the investigation to understand the full clinical spectrum, Dr. Schuchat said.

“I think we really have the feeling right now there may be a lot of different nasty things in e-cigarette or vaping products, and they may cause different harms in the lung,” Dr. Schuchat said. “The main point is these are really serious injuries in the lung, and we don't know how well people will recover from them, whether lung damage may be permanent ... So the glimpses that the pathologists are getting are very helpful ... but we have a lot more to learn.”

In another new study released Thursday, researchers from the CDC and FDA analyzed data from the 2014-'18 National Youth Tobacco Surveys on current use of flavored tobacco products. Federal law prohibits flavored cigarettes, but other flavored tobacco products are not restricted.

About 3.64 million youths were current e-cigarette users in 2018, and 65% of those students reported using a flavored product, according to the study published in the *Morbidity and Mortality Weekly Report*. Among high school students, 68% of those who vaped used a flavored e-cigarette, the highest rate in the five-year span. About 51.5% of middle school students who vaped in 2018 used flavored products, the second highest in the study after being at 55% in 2014.

E-cigarettes are addictive and harmful to developing brains, but youths often are drawn to the products that come in flavors like bubble gum, cotton candy and various fruits.

Last month, the Trump administration proposed **pulling flavored e-cigarettes** from the market until they've been reviewed by the FDA. It said it would release more details in the coming weeks.

Authors of the study wrote, “FDA regulation of the manufacturing, distribution, and marketing of flavored tobacco products, coupled with sustained implementation of comprehensive tobacco control and prevention strategies, can further reduce tobacco product initiation and use among youths.”

The CDC encourages clinicians to 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>. For information about the collection of e-cigarette products for possible testing by the FDA, email FDAVapingSampleInquiries@fda.hhs.gov.

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

Resources

- [CDC e-cigarette website for health care providers](#)
- [AAP Julius B. Richmond Center of Excellence e-cigarette website](#)
- [AAP policy "E-Cigarettes and Similar Devices"](#)
- [FDA's The Real Cost youth e-cigarette prevention campaign](#),
- [Information for parents from HealthyChildren.org about e-cigarettes](#)
- [Pediatrics e-cigarette article collection](#)
- [Surgeon general's interactive website about e-cigarettes geared toward parents and others who work with youths](#)