Background

CDC Urges Clinicians to Report Possible Cases of Unexplained Vaping-associated Pulmonary Illness to their State/Local Health Department

As of August 14, 2019, 30 cases of severe pulmonary disease have been reported to the Wisconsin Department of Health Services (DHS). Using a case definition drafted by DHS, 15 cases are confirmed (ages 16-34 years) and 15 cases are still under investigation (ages 16-53 years). Patients presented with respiratory symptoms including cough, shortness of breath, and fatigue. Symptoms worsened over a period of days or weeks before admission to the hospital. Other symptoms reported by some patients included fever, chest pain, weight loss, nausea, and diarrhea. Chest radiographs showed bilateral opacities, and CT imaging of the chest demonstrated diffuse ground-glass opacities, often with sub-pleural sparing. Evaluation for infectious etiologies was negative among nearly all patients.

Some patients experienced progressive respiratory compromise requiring mechanical ventilation but subsequently improved with corticosteroids. All patients reported “vaping” (i.e., use of e-cigarette devices to aerosolize substances for inhalation) in the weeks and months prior to hospital admission. Many have acknowledged recent use of tetrahydrocannabinol (THC)-containing products while speaking to healthcare personnel or in follow-up interviews by health department staff; however, no specific product has been identified by all cases, nor has any product been conclusively linked to this clinical syndrome. DHS is working with the Wisconsin State Lab of Hygiene and the U.S. Food and Drug Administration to investigate the possible cause of these illnesses by testing patient specimens and vaping products.

Illinois has identified 24 possible cases. Of these, 10 are considered confirmed, 12 are still under investigation, and 2 have been excluded. Other states such as NY, CA, IN, and UT have also reported possible cases of similar illness and some have issued health alerts to clinicians and healthcare providers in their states. The etiology of this illness is unclear at this time; however, active, state-specific epidemiological investigations are ongoing to better characterize the demographic, clinical, and laboratory features of cases.

What Clinicians Can Do

Clinicians should always inquire about potential drug (legal and illicit) use as part of a general history. When patients present with respiratory or pulmonary illness, especially of unclear etiology, clinicians should ask about the use of e-cigarette products (devices, liquids, refill pods and/or cartridges) for “vaping”. If possible, inquire about the types of drugs (legal or illicit) used and methods of drug use (e.g., smoking, “vaping”).

CDC recommends that clinicians report cases of significant respiratory illness of unclear etiology and a history of vaping to the appropriate state and/or local health department.

It is important to consider all possible causes of illness in patients presenting with these symptoms, even if they report a history of e-cigarette product use. Clinicians should evaluate and treat for other likely causes of illness (e.g., infectious or other) as clinically indicated. Evaluation for common infectious etiologies when also suspected should be pursued and less common infections, and rheumatologic or neoplastic processes considered, as clinically indicated. Aggressive supportive care in these possible or suspected cases is warranted, and in severe cases, pulmonary, infectious disease and critical care specialists should be consulted.

If an e-cigarette product is suspected as a possible etiology of a patient’s illness, it is important to inquire what type of product as well as if the patient is:

- using commercially available devices and/or liquids (i.e. bottles, cartridges or pods);
- sharing e-cigarette products (devices, liquids, refill pods and/or cartridges) with other people;
- re-using old cartridges or pods (with homemade or commercially bought products); or
- heating the drug to concentrate it and then using a specific type of device to inhale the product (i.e., “dabbing”).
Healthcare providers should also ask patients about any retained product, including devices and liquids, in order to ascertain availability for possible testing to be coordinated by the local/state health department.

State health department officials seeking technical assistance with an epidemiological investigation or laboratory testing can discuss with their state health department laboratories, or contact CDC by email at: duipinqueries@cdc.gov.

What is CDC Doing?

CDC is actively assisting state health departments with their epidemiological and laboratory investigations by facilitating information sharing between state health departments, providing assistance in the development of data collection tools and health communication materials, and identifying options to facilitate laboratory testing of vaping products and solutions. Public health officials wanting to discuss possible cases can contact CDC by emailing: duipinqueries@cdc.gov.

For More Information

Wisconsin Department of Health: https://www.dhs.wisconsin.gov/outbreaks/index.htm
- Information on electronic cigarettes and similar devices: https://www.cdc.gov/tobacco/basic_information/e-cigarettes/index.htm
- For assistance with management of patients suspected of illness related to recreational, illicit, or other drugs: Call your local poison control center at: 1-800-222-1222.

The Emergency Risk Communication Branch in the Division of Emergency Operations, Center for Preparedness and Response is responsible for the management of all COCA products.

For information about this update or other clinical issues, or to send your feedback, please contact us at coca@cdc.gov

CDC Clinician Outreach and Communication Activity Facebook page—connect with COCA on Facebook

Clinician Outreach and Communication Activity—resources for healthcare providers

COCA RSS Feed—subscribe to be notified of conference calls, updates, and CDC guidance for health providers

Crisis & Emergency Risk Communication Training—training program that draws from lessons learned during public health emergencies, and incorporates best practices from the fields of risk and crisis communication

Health Alert Network—CDC's primary method of sharing cleared information about urgent public health incidents with public information officers; federal, state, territorial, and local public health practitioners; clinicians; and public health laboratories

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