

Health Advisory:

Severe Lung Disease Associated with Vaping

August 20, 2019

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Health Alerts convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies, and/or the public.

Health Advisories provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

Health Guidances contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

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Health Advisory
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SUBJECT: Severe Lung Disease Associated with Vaping

There have been 94 possible cases of severe lung illness associated with vaping in 14 states (30 cases in Wisconsin) from June 28, 2019, to August 15, 2019. As of August 17, 2019, the Centers for Disease Control and Prevention (CDC) is assisting several states (Wisconsin, Illinois, California, Indiana, and Minnesota) in investigation of clusters of pulmonary illnesses linked to e-cigarette product use, or “vaping,” primarily among adolescents and young adults. While some cases in each of the states are similar and appear to be linked to e-cigarette product use, more information is needed to determine what is causing the illnesses. Even though no severe lung disease associated with vaping has been reported in Missouri to date, the Missouri Poison Center has received over 600 calls with various complaints related to e-cigarettes over the last 10 years, and has managed over 30 cases with breathing difficulties associated with vaping over the last 5 years.

Patients presented with cough, shortness of breath, chest pain, and fatigue, which became worse over days or weeks before hospital admission. 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; however, no specific product has been identified by all cases, nor has any product been conclusively linked to this clinical syndrome. The severity of the disease has varied among patients, with some needing mechanical ventilation to assist with breathing, and subsequently those patients improved with corticosteroid treatment. All confirmed cases required hospitalization. Some patients also had fever, anorexia, pleuritic chest pain, nausea, and diarrhea. Evaluation for infectious etiologies was negative among nearly all patients. Chest radiographs of those patients showed bilateral opacities, mostly in the lower lobes. Chest CT imaging was consistent with diffuse ground-glass opacities. While patients have improved with treatment, long-term health effects are unknown at this time.

As of today, e-cigarettes available in the U.S. have not been systemically reviewed by the Food and Drug Administration (FDA) to determine their impact on lung health. Nevertheless, it is known that e-cigarettes both contain and emit a number of potentially toxic substances. In January 2018, the National Academies of Science, Engineering and Medicine released a consensus study report stating that inhalation of harmful chemicals through “vaping” can cause irreversible lung damage and lung disease. The Academies' report also states there is moderate evidence that youth who use e-cigarettes are at increased risk for cough and wheezing and an increase in asthma exacerbations.

The Missouri Department of Health and Senior Services (DHSS) recommends:

1. Any person, particularly young people, experiencing unexplained chest pain or difficulty breathing after vaping in the days or weeks prior to their symptom onset should seek medical attention.
2. Health care providers caring for patients with respiratory or pulmonary illness, especially of unclear etiology, should ask about the use of e-cigarette products for “vaping” and inquire about the types of drugs (legal or illicit) used and methods of drug use (e.g., smoking, “vaping”).
3. Clinicians should report cases of significant respiratory illness of unclear etiology in patients with a history of vaping to the local public health agency (LPHA), or to DHSS.
4. Evaluation for common infectious etiologies when also suspected should be pursued, and less common infections, and rheumatologic or neoplastic processes, considered as clinically indicated.
5. If an e-cigarette product is suspected as a possible etiology of a patient’s illness, it is important to inquire, and when possible document, 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”).

This information is preliminary and subject to change as CDC provides further guidance.

Questions should be directed to DHSS’ Tobacco Prevention and Control Program at 573-522-2824.

References

Public Health Consequences of **E-Cigarettes**. January 23, 2018.

<https://www.nap.edu/read/24952/chapter/1>