



Severe Acute Respiratory Illness Associated with Vaping

Summary and Action Items:

The Centers for Disease Control and Prevention (CDC) was notified on August 2, 2019 of a cluster of patients in Wisconsin hospitalized with severe respiratory illness potentially related to vaping. As of August 15, 2019, there were 94 possible cases in 14 states. As of August 21, 2019, the Kansas Department of Health and Environment has received one report of a potential case.

- Ask patients who present with respiratory symptoms about vaping and e-cigarette use. Evaluate for infectious etiology.
- Report suspect cases to KDHE via the Epidemiology Hotline (1-877-427-7317).

Symptoms and Imaging:

Other states are seeing a gradual onset of respiratory symptoms including cough, difficulty breathing, 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 pleuritic chest pain, fever, 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.

Potential Exposures:

All patients reported “vaping” (i.e., use of e-cigarette devices to aerosolize substances for inhalation) or “dabbing” (vaping marijuana oils, extracts, or concentrates) in the weeks and months prior to hospital admission. The products consumed include nicotine, THC, synthetic cannabinoids, or a combination of these; however, no specific product has been identified by all cases, nor has any product been conclusively linked to this clinical syndrome.

Management:

Some patients experienced progressive respiratory compromise requiring mechanical ventilation but subsequently improved with corticosteroids. 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.

What Clinicians Should Do:

- Please share this health alert broadly with health care providers in your area.
- Ask patients who present with respiratory symptoms about vaping and e-cigarette use.
 - Ask patients about any retained product, including devices and liquids, in order to ascertain availability for possible testing to be coordinated by KDHE.



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- When treating patients with respiratory symptoms who report a history of vaping, consider consultation with a pulmonologist and conduct a thorough infectious disease evaluation. Also consider running a heavy metal panel as many vaping products contain high levels of nickel and lead.

Contact:

For more information or to report suspect cases to KDHE contact the Epidemiology Hotline (1-877-427-7317).

Background:

E-cigarette aerosol contains harmful chemicals, such as ultrafine particles, volatile organic compounds, heavy metals like nickel, tin and lead, and other cancer-causing chemicals. E-cigarettes, vapes, e-pipes, and other vaping products are battery-powered devices that allow users to inhale aerosolized liquid. E-cigarettes contain nicotine, which is highly addictive and harmful to the adolescent brain. Nicotine can impact learning, memory and attention span, and contributes to future addiction to tobacco and other substances.

As of January 1, 2019, KDHE has seen approximately 20 emergency department visits throughout the state for patients with a history of vaping and some of the above-mentioned symptoms. In 2017, 10.6% of Kansas high school students reported current use of electronic vapor products. In the same year, 4.6% of Kansas adults aged 18 years and older reported current use of electronic cigarettes.

For More Information:

- 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.