



DALLAS COUNTY
DEPARTMENT OF HEALTH AND HUMAN SERVICES

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To: Dallas County Medical Providers
Date: September 6, 2019

HEALTH ADVISORY:
Severe Pulmonary Disease Associated with Using E-cigarette Products

Dallas County Health and Human Services (DCHHS) has received reports from hospitals within Dallas County of 9 probable or confirmed cases of severe pulmonary disease associated with using electronic cigarette (e-cigarette) products. The median age of cases has been 19 years, with 5 patients requiring intubation and mechanical ventilation, and 2 patients requiring extracorporeal membrane oxygenation (ECMO).

E-cigarettes produce an aerosol by heating liquids which typically contain nicotine, flavorings, or other chemicals which are inhaled, a practice referred to as "vaping." Marijuana and other drugs can also be delivered by e-cigarettes. Nationally, 450 possible cases of pulmonary illness associated with e-cigarettes have been reported from 32 states as of September 6, 2019, including 3 confirmed deaths. Information about the multistate outbreak investigation is available on the CDC website¹.

Clinical course and outcomes of cases are described in several articles being released today in the NEJM^{2,3} and MMWR^{4,5}. Based on these preliminary reports, patients have typically experienced onset of respiratory symptoms (e.g. pleuritic chest pain, nonproductive cough, shortness of breath) over several days to weeks prior to hospitalization. Other frequently reported symptoms have included nausea, vomiting, diarrhea, fever and tachycardia. All patients have developed abnormal radiologic findings, including bilateral pulmonary infiltrates on chest radiographs, or diffuse ground-glass opacities on chest CT scan.

Although most patients have reported a history of using e-cigarette products containing cannabinoids such as THC, to date no single e-cigarette product or substance has been consistently associated with illnesses being reported nationally. CDC is therefore currently recommending that until a definitive cause is known, **persons should consider not using e-cigarettes. E-cigarette products should never be used by youths, young adults, pregnant women, or by adults who do not currently use tobacco products.** Adult smokers who are attempting to quit are advised to contact their healthcare provider to use evidence-based smoking cessation products, including counseling and FDA-approved medications.

Current Recommendations for Clinicians in Dallas County include:

- **Immediately report cases of severe pulmonary illness of unclear etiology and history of use of e-cigarette products within the preceding 90 days to DCHHS at (214) 819-2004.** For such patients, take a detailed history that includes the type and brands of substances used and sources of substances. Determine if any remaining products are available for testing by FDA.
- **Clinical questions can be directed to Poison Control at 1-800-222-1222,** where a toxicologist is available 24/7 to assist with patient care recommendations. Clinical improvement of some patients with severe pulmonary disease associated with e-cigarette use has been reported with the use of corticosteroids. All possible causes of illness should be considered in patients reporting respiratory symptoms after e-cigarette use, as clinically indicated.
- See attached CDC Health Advisory from 8/30/19 for additional detailed guidance (<https://emergency.cdc.gov/han/han00421.asp>)

1. CDC. Outbreak of Pulmonary Disease Associated with Using E-cigarette Products www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html
2. Layden JE et al. Pulmonary Illness Related to E-Cigarette Use in Illinois and Wisconsin. NEJM Sep 6, 2019. www.nejm.org/doi/full/10.1056/NEJMoa1911614
3. Christiani DC. Vaping-induced Lung injury. NEJM Sep 6, 2019. www.nejm.org/doi/full/10.1056/NEJMe1912032
4. CDC. Outbreak of Electronic-Cigarette-Associated Acute Lipoid Pneumonia — North Carolina, July–August 2019 MMWR Sept 6, 2019.
5. CDC. Severe Pulmonary Disease Associated with Electronic-Cigarette-Product Use — Interim Guidance. MMWR Sept 6, 2019 www.cdc.gov/mmwr/volumes/68/wr/mm6836e2.htm?s_cid=mm6836e2_w