TOP LINE MESSAGES

• The Centers for Disease Control and Prevention (CDC) is working with the Food and Drug Administration (FDA), state health departments, and public health and clinical partners to investigate the multistate outbreak of lung injury associated with use of e-cigarette, or vaping, products.

• CDC has activated the Emergency Operations Center (EOC). More than 100 staff from across the agency and in the field are working to support these investigations.

• The latest national and state findings suggest products containing THC, particularly those obtained off the street or from other informal sources (e.g. friends, family members, illicit dealers), are linked to most of the cases and play a major role in the outbreak.

• At this time, no single compound or ingredient used in e-cigarette, or vaping, products has emerged as the cause of this outbreak.

• The updated number of cases, number of deaths and impacted states and territories are reported on the CDC Lung Injury website every Thursday.

• If the public has questions, they can contact CDC-INFO at 800-232-4636, or visit https://wwwn.cdc.gov/dcs/ContactUs/Form.

ISSUE, SYMPTOMS, AND TREATMENTS

• Patients in this investigation have reported the following:

  ➢ respiratory symptoms (cough, shortness of breath, chest pain)
  ➢ gastrointestinal symptoms (nausea, vomiting, abdominal pain, diarrhea)
  ➢ non-specific symptoms (fever, chills, weight loss)

• Some patients reported that their symptoms developed over a few days, while others have reported that their symptoms developed over several weeks.
CDC is working 24/7 to identify the cause or causes of this outbreak through partnerships with states and other federal agencies. CDC has activated the EOC to coordinate activities and provide assistance to states, public health partners and clinicians around the nation.

CDC’s Lung Injury response efforts are committed to:

- Identify and define the risk factors and the sources for lung disease associated with use of e-cigarette, or vaping, products.
- Detect and track confirmed and probable cases in the US.
- Communicate actionable recommendations to state, local, and clinical audiences.
- Establish lab procedures that can assist with the public heath investigation and patient care.

CDC and FDA are expanding the range of available laboratory testing.

- CDC is currently testing bronchoalveolar lavage (BAL) fluid samples, as well as blood or urine samples paired to BAL fluid samples.
- CDC is testing pathologic specimens, including lung biopsy or autopsy specimens, associated with patients.
- CDC is offering aerosol emission testing of case-associated product samples from e-cigarette, or vaping, products and e-liquids. Analysis of aerosol emissions will augment FDA’s ongoing work to characterize e-liquid and will improve our understanding of exposure among case-patients associated with the Lung Injury outbreak. CDC is coordinating e-cigarette, or vaping, product analysis with FDA.
- Results may provide insight into the nature of the chemical exposure(s) contributing to this outbreak.

CDC continues to collaborate with multiple public health and clinical partners across the Nation to optimize response efforts. Some of these include:

- Engaging with states and the Council of State and Territorial Epidemiologists (CSTE) to create and refine a case definition to classify cases in a consistent way. This case definition along with other investigation tools (national case form) used to conduct the investigations will continue to evolve as more data becomes available.
- Working closely with the Association of Public Health Laboratories (APHL) to understand and help support state level laboratory testing activities and engage public health laboratorians.
- Working closely with the Association of State and Territorial Health Officials (ASTHO) to engage state health officers and public health preparedness coordinators on this outbreak.

Additional information has also been published in Morbidity and Mortality Weekly Report (MMWR) and New England Journal of Medicine (NEJM).

- MMWR article from Utah, (October 22, 2019)
- MMWR article on characteristics of cases, (Sept. 27, 2019)
- MMWR article with additional information on cases in Illinois and Wisconsin, (Sept. 27, 2019)
- MMWR article with interim guidance from CDC, (September 13, 2019)
- MMWR article from North Carolina, (September, 13, 2019)
- NEJM article on cases from Illinois and Wisconsin,(September 6, 2019)
RECOMMENDATIONS FOR THE PUBLIC

- CDC recommends that people should not:
  - Use e-cigarette, or vaping, products that contain THC.
  - Buy any type of e-cigarette, or vaping, products, particularly those containing THC, off the street.
  - Modify or add any substances to e-cigarette, or vaping, products that are not intended by the manufacturer, including products purchased through retail establishments.

- Since the specific compound or ingredient causing lung injury are not yet known, the only way to assure that you are not at risk while the investigation continues is to consider refraining from use of all e-cigarette, or vaping, products.

- The use of e-cigarettes is unsafe for all ages, including youth and young adults.

- If you are an adult using e-cigarettes, or vaping, products to quit cigarette smoking, do not return to smoking cigarettes. Adults addicted to nicotine using e-cigarettes should weigh all risks and benefits and consider utilizing FDA approved nicotine replacement therapies.

- If you are a youth or adult who is trying to quit smoking:
  - Contact your health care provider if you need help quitting tobacco products, including e-cigarettes.
  - Use evidence-based treatments, including counseling and FDA-approved medications.

- If you are a youth or adult who is addicted to marijuana:
  - Effective treatments are available and recovery is possible.
  - Visit Substance Abuse and Mental Health Services Administration's Treatment Locator to locate treatment in your area, or call 1-800-662-HELP (4357).

- If you are concerned about your health after using an e-cigarette, or vaping, product, contact your health care provider, or local poison control center at 1-800-222-1222.

- There is no safe tobacco product. All tobacco products, including e-cigarettes, carry a risk.

- If people continue to use e-cigarette, or vaping, products they should carefully monitor themselves for symptoms, and see a healthcare provider immediately if symptoms develop.

- Irrespective of the ongoing investigation:
  - Youth and young adults should not use e-cigarette, or vaping, products
  - Women who are pregnant should not use e-cigarette, or vaping, products
  - Persons who do not currently use tobacco products should not start using e-cigarette, or vaping, products.
• As this investigation continues, CDC encourages clinicians to report possible cases of e-cigarette, or vaping, product use associated lung injury (EVALI) to their local or state health department for further investigation.

• If EVALI is suspected, a detailed history of the substance(s) used, the sources of products, duration and frequency of use, and the devices used and how they are used should be obtained, as outlined in Update: Interim Guidance for Health Care Providers Evaluating and Caring for Patients with Suspected E-cigarette, or Vaping, Product Use Associated Lung Injury — United States, October 2019.

• CDC has also developed International Classification of Diseases, Tenth Edition, Clinical Modification (ICD-10-CM)-Supplement coding guidance for healthcare encounters related to EVALI.

• CDC’s interim guidance provides clinicians a framework for their initial assessment, evaluation, management, and follow-up of people with symptoms of lung injury associated with use of e-cigarette, or vaping, products.
  - Patients discharged from the hospital after inpatient treatment of EVALI should have a follow-up visit no later than 1-2 weeks after hospital discharge. Patients who received care for EVALI on an outpatient basis should have close follow-up within 24-48 hours to assess and manage possible worsening lung injury.
  - Advise patients with EVALI to discontinue use of e-cigarette, or vaping, products. Cessation of e-cigarette, or vaping, products might speed recovery; resuming use of e-cigarette, or vaping, products has the potential to cause recurrence of symptoms or lung injury. Long-term effects and the risk of recurrence of EVALI are not known.
  - During influenza season, health care providers should consider influenza in all patients with suspected EVALI. Antivirals should be considered in accordance with established guidelines. Decisions on initiation or discontinuation of treatment should be based on specific clinical features and, when appropriate, in consultation with specialists.

• More information for healthcare providers is located on our website: www.cdc.gov/lunginjury under “For Healthcare Providers”.
• State public health officials should promptly notify CDC about possible cases of lung injury associated with using e-cigarette, or vaping, products via eocevent101@cdc.gov.

• CDC and FDA are working together to coordinate e-cigarette, or vaping, product analysis to provide insight into the nature of the chemical exposure(s) contributing to the outbreak. FDA is analyzing e-liquids for the presence of a broad range of chemicals. When sufficient product is available, CDC will conduct aerosol emissions testing of the e-cigarette, or vaping, product.

• States can request to submit product to either CDC or FDA. Product(s) must be linked to a confirmed or probable case and have a CDC case ID.
  - For information about collection and submission of e-cigarette, or vaping, products and e-liquids associated with confirmed or probable cases for possible testing by FDA, contact: FDAVapingSampleInquiries@fda.hhs.gov.
  - For information about collection and submission of e-cigarette, or vaping, products and e-liquids associated with confirmed or probable cases for possible aerosol emissions testing by CDC, contact IncidentResponse@cdc.gov.

• State health department officials seeking technical assistance with an epidemiologic investigation or with laboratory testing can contact CDC at eocevent101@cdc.gov.

• An updated case definition can be found on CDC’s response website at www.cdc.gov/lunginjury. Contact CDC at eocevent101@cdc.gov for data collection tools, reporting guidelines, case investigation forms, and technical assistance with an epidemiologic investigation.

• State health department should consider conducting case-finding activities that use existing data sources (e.g., local poison control center, coroner and medical examiner’s office, and other applicable surveillance systems including syndromic surveillance). CDC has developed two working syndromic surveillance definitions (one version with specific symptoms and a second focused on use of e-cigarette, or vaping, products). The latter has been preset within CDC’s National Syndromic Surveillance Program’s BioSense/ESSENCE platform, however the symptom-based syndrome category is only available as a free-text query. Either of these could be used for case-finding within the platform. Contact NSSP@cdc.gov for more information.

• Lung Injury Associated with E-cigarette Use or Vaping National Case Form is now available. This document provides guidance for health departments to report any probable or confirmed patient case of EVALI and transmit data to CDC using the Data Collection and Integration for Public Health (DCIPHER) platform, or by contacting CDC at eocevent101@cdc.gov

• For more information on general sample collection, storage, and shipping guidance see the following resources:
  - See Specimen Submission Guidance for Pathologic Evaluation of Tissue Specimens from Cases of Lung Injury Associated with E-Cigarette, or Vaping Product Use
  - See Laboratory Clinical Sample Collection, Storage, and Submission Guidance for Lung Injury Associated with E-Cigarettes, or Vaping Product Use

• More information for health departments is located on our website: www.cdc.gov/lunginjury under “For Health Departments”.

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