ILLINOIS DEPARTMENT OF PUBLIC HEALTH
IDPH
PROTECTING HEALTH, IMPROVING LIVES

HEALTH ADVISORY

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Summary and Action Items

1.) As of 12/17/2019, a total of 2,506 cases of E-cigarette, vaping associated lung injury (EVALI) have been reported across all 50 stathes to the Centers for Disease Control and Prevention (CDC), including 54 deaths. In Illinois, we have had over 200 cases reported since July 2019.

2.) On 12/20/2019, the CDC released two new Morbidity and Mortality Weekly Report's (MMWR) providing updated clinical guidance, and two studies were published in the New England Journal of Medicine (NEJM). Important updated information is provided below.

Background

An unprecedented outbreak of EVALI has impacted individuals in the United States, leading to over 2,506 cases nationwide. In Illinois, we have investigated 206 cases, including five deaths. The median age is 22 (range: 13-85), and the majority of cases are male. Nearly all cases have required hospitalization, and roughly 50% of cases have required intensive care management. Further details about the Illinois and national outbreaks can be found at IDPH's and CDC's websites, respectively. A recent study shows that this is a new outbreak, rather than a previously unrecognized clinical syndrome (NEJM Syndromic Paper).

Potential Exposures

Current data suggests that Vitamin E acetate (VEA) in THC based e-cigarette, vaping, products has played a significant role in this acute outbreak. Most cases report using THC-based vaping products, and VEA has been found in both THC containing vaping products, as well as clinical lung fluid samples from impacted patients. Further, VEA has not been identified in clinical lung fluid samples from control patients (NEJM BAL paper). While the peak of cases appears to have occurred in September, cases continue to be reported, and the baseline rate is not back to normal. Further, while it appears that VEA is associated with EVALI, there are many different substances and product sources that are being investigated, and there may be more than one cause.

Symptoms

Patients with EVALI present with acute to sub-acute onset of respiratory, gastrointestinal, and constitutional symptoms. Opacities are seen on lung imaging, and are most often bilateral. Over 95% of patients require hospitalization, and roughly 50% of patients require intensive care management. Further information can be found at: CDC healthcare provider page.

Diagnosis and Updated Clinical Guidance

EVALI remains a diagnosis of exclusion. If EVALI is suspected, a detailed history of the substance used, duration, devices, and sources should be obtained. Clinicians should test, and treat, for other potential etiologies, including influenza. A recent study showed that at least a quarter of re-admissions and deaths occurred within 48 hours of hospital discharge (Readmission MMWR). Hospitalized patients should be documented as clinical stable for 24-48 hours prior to discharge. Patients should receive a follow-up visit with a primary care provider or specialist, ideally with 48 hours of discharge (New CDC clinical guidance). Clinicians should continue to report suspect cases to their local health department.

Target Audience

LHD, Physicians, Hospital Emergency Departments, Infection Preventionists, Health Care Providers

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