

Enterovirus D68 – Testing Recommendations for Clinicians

Background

In mid-August, the CDC received reports of an increased number of cases of severe respiratory illness in children in two separate clusters occurring in Kansas City, Missouri and Chicago, Illinois (<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm63e0908a1.htm>). Some children have required admission to pediatric intensive care units (ICU).

The majority of hospitalized patients are <5 years of age, although some have been adolescents, and most have a history of asthma.

Patients have presented with:

- wheezing or difficulty breathing with hypoxia
- only ~20% of patients have been febrile
- chest radiographs frequently show perihilar infiltrates, often with atelectasis
- several patients have required mechanical ventilation or bilevel positive airway pressure ventilation (BiPap)
- one has required extracorporeal membrane oxygenation (ECMO).
- Initial testing at hospitals identified **enterovirus** or **rhinovirus**. Subsequent testing at CDC identified enterovirus D68 (EV-D68).

There are no available vaccines or specific treatments for EV-D68, and clinical care is supportive.

In California, influenza-like illness (ILI) activity, monitored through the Outpatient Influenza-like Illness Surveillance Network (ILINet), has remained low. Likewise, both San Mateo County Public Health and CDPH have *not* received reports of clusters of severe respiratory illness in young children. However, early identification of EV-D68 will help alert clinicians to the presence of the disease in San Mateo, and in California, and may assist with education, management of outbreaks, and containment strategies.

With this in mind, we are asking the facilities in San Mateo County to consider EV-D68 as a possible cause of acute, unexplained severe respiratory illness in children.

Testing

- In children under the age of 18 years with severe respiratory illness, especially with wheezing, respiratory specimens (e.g., nasopharyngeal swabs, throat swabs, endotracheal aspirates) should be collected and sent for polymerase chain reaction (PCR) testing for multiple viral pathogens, including influenza, rhinovirus and/or enterovirus. Testing for multiple viral pathogens is available at San Mateo County's public health laboratory, commercial laboratories, and certain large hospital laboratories.

- Specimens that test positive for rhinovirus or enterovirus by PCR at a commercial or hospital laboratory should be sent to San Mateo County's public health laboratory. Specimens should be accompanied by the following *Enterovirus D68 Surveillance Submittal Form* available at: <http://tinyurl.com/on94zl7>
- For all respiratory outbreaks, specimens should be collected and forwarded to the public health laboratory for influenza testing, and if negative, should be tested for enterovirus and rhinovirus.
- While EV-D68 is primarily associated with respiratory illnesses, if a patient with a non-respiratory syndrome (such as a neurologic syndrome) tests positive for enterovirus/rhinovirus, further testing of that specimen should occur.

Infection Control

- EV68 is only rarely associated with high fevers. Thus, presence of fever is not an effective question for screening visitors for illness. Therefore, facilities currently experiencing an outbreak of EV68 or an uptick in viral respiratory illnesses, may consider restricting access to visitors under the age 16 (the oldest confirmed case in the CDC report). Of course, exceptions should be made in certain situations.
- Standard and contact precautions are typically recommended for patients with enterovirus infections. However, because EV68 is predominantly a respiratory virus, droplet precautions may also be considered.
- Alcohol-based hand sanitizers have limited effectiveness against enteroviruses and are not recommended for hand hygiene by healthcare personnel providing care to EV68 patients.
- Healthcare personnel who are ill or suspect they might have a viral respiratory illness should follow their hospital policies concerning work attendance.

CDC is expected to issue a Health Alert this week that will provide additional information, including more specific infection control strategies. CDC's webpage for non-polio enteroviruses can be accessed at: <http://www.cdc.gov/non-polio-enterovirus/>