

Enterovirus D68 infections: Information for Healthcare Providers

Enteroviruses are a very common cause of illness, especially among infants and children. There are more than 100 types of enteroviruses. Many cases are mild or asymptomatic. The EV-D68 strain has previously caused sporadic cases of illness, although CDC has reported on clusters of this illness that have occurred in the past several years, some involving severe respiratory illnesses. In August and September 2014, hospitals in Missouri and Illinois reported admitting more children than usual with severe respiratory illness caused by enterovirus D68. Several other states are investigating clusters of children with severe respiratory illness, possibly due to enterovirus D68. Clusters of illness caused by EV-D68 seemed to be relatively infrequent until recently. It is unknown why this is the case; it may have to do with actual increases in illness or changes in laboratory technology that allow some labs to test for enteroviruses using PCR.

CDC and state and local health departments are monitoring this situation.

Individual cases of enterovirus are not reportable, so there are no estimates of how many cases occur in Oregon each year. We have not identified any cases of EV-D68 infection, nor have we received reports of unusually high numbers of respiratory infections over the summer. Typically, respiratory illness season occurs in the fall, winter, and spring months (generally peaking in winter); however, enterovirus infections are most common in summer and fall.

Healthcare providers should consider enterovirus D68 in young children with severe respiratory illness, and report unusual increases in cases to the local health department. In particular, enterovirus D68 has been associated with severe presentation in children with pre-existing asthma or other chronic lung conditions. Outbreaks of any respiratory illness are reportable, even if the pathogen that is causing the outbreak is unknown.

Laboratory Testing

Few labs test for enterovirus D68, and testing through the state health department would be conducted through CDC. Requests for testing need approval from the Oregon Public Health Division. Healthcare providers should consider testing for other common respiratory pathogens (e.g., RSV, influenza, adenovirus, etc.) among patients with severe respiratory illness, especially as influenza season unfolds. Routine PCR testing is unlikely to detect EV-D68.

Criteria for testing at OSPHL or CDC:

- Hospitalized patient age 0-17 years; and
- Pediatric ICU status; and
- Illness marked by dyspnea, respiratory distress; and
- Illness of undetermined etiology or positive solely for rhinovirus/enterovirus by PCR; and
- Available fresh or frozen sample from NP or OP swabs, washes or aspirates, or lower respiratory specimens that were obtained within one week of symptom onset [stool obtained during the second or third week post-onset can also be tested]
- In addition, enterovirus D68 testing will be considered for clusters of 1) severe respiratory illness requiring hospitalization in pediatric patients, when no other etiology has been found, or previous testing is positive solely for rhinovirus by PCR, and 2) for any patients ≤ 21 years with sudden onset of limb weakness and an MRI showing abnormalities in the nerve tissue in the spinal cord.

Contact your local health department in these situations to discuss testing:

<https://public.health.oregon.gov/DiseasesConditions/CommunicableDisease/ReportingCommunicableDisease/Documents/reportdisease.pdf>

See the OSPHL website for specific instructions:

<http://public.health.oregon.gov/LaboratoryServices/SubmittingSamples/Pages/EV-D68.aspx>

Note that we will not accept specimens without prior approval from The Oregon Public Health Division.

Treatment and Prevention

There is no vaccine for enterovirus infection and no specific treatment for it. People with mild illness caused by enterovirus infection usually don't require treatment and they recover completely. However, some cases can be severe enough to require hospitalization and require supportive care.

Instructions for patients about preventing enterovirus infection:

- Wash hands often with soap and water and avoid close contact, such as touching and shaking hands, with people who are sick.
- Don't depend on alcohol hand sanitizer to prevent enterovirus infection. It is not a replacement for washing with soap and water.
- Avoid touching eyes, nose, and mouth with unwashed hands.

- Cover your mouth and nose with a tissue when coughing or sneezing, and toss the tissue in the nearest waste can after use. If no tissue is available, use your sleeve.
- As the respiratory virus season approaches, be sure your patients are vaccinated against flu and up to date on pertussis vaccination.

Infection Control in the Healthcare Setting

- Standard and contact precautions should be used in outpatient settings; standard, contact, and droplet precautions should be used for hospitalized patients.