Centers for Disease Control and Prevention
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Press Release

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CDC Develops a New, Faster Lab Test for Enterovirus D68

Confirmed cases will appear to rise as agency accelerates specimen testing; Changes in case counts due to faster testing will not represent a real-time influx of new cases

The Centers for Disease Control and Prevention (CDC) has developed and started using a new, faster lab test for detecting enterovirus D68 (EV-D68) in specimens from people in the United States with respiratory illness. This test will allow CDC to more rapidly test remaining specimens received from states since mid-September.

Every year, enteroviruses and rhinoviruses cause millions of respiratory illnesses in children. This year, EV-D68 has been the most common type of enterovirus identified, leading to increases in illnesses among children and affecting those with asthma most severely. Other rhinoviruses and enteroviruses continue to be detected as well.

CDC expects, as with other enteroviruses, that EV-D68 infections will likely begin to decline by late fall. The real-time lab results combined with data on hospital admissions will help us understand when and where the EV-D68 outbreak is ending. CDC has received informal reports from some hospitals and states who are seeing signs of decreasing EV-D68 infections. CDC is gathering more information from states and assessing whether this represents a national trend.

"CDC has received substantially more specimens for enterovirus lab testing than usual this year, due to the large outbreak of EV-D68 and related hospitalizations," said Anne Schuchat, MD, assistant surgeon general and director of CDC's National Center for Immunization and Respiratory Diseases. "When rare or uncommon viruses suddenly begin causing severe illness, CDC works quickly to develop diagnostic tests to enhance our response and investigations. This new lab test will reduce what would normally take several weeks to get results to a few days."

Since the outbreak of EV-D68 began in August, CDC has tested 1163 specimens submitted by hospitals and from 45 states. Of the specimens tested by the CDC lab from August 1 to October 10, about half have tested positive for EV-D68. About one third have tested positive for a rhinovirus or an enterovirus other than EV-D68. The new lab test will allow us to process the approximately one-thousand remaining specimens at a much faster rate.

Testing for EV-D68 is not used to determine treatment for a particular patient. Treatment for patients with EV-D68 is supportive therapy, such as oxygen therapy. The outcome of the EV-D68 test is to collect surveillance data to help public health officials target our responses to the outbreak, not to determine the treatment plan for a specific patient. CDC prioritized testing for the most severe cases since the outbreak began in August to get a better understanding of the disease.

As CDC tests the remaining specimens it has received since mid-September, the number of confirmed EV-D68 cases will likely increase substantially in the coming days. These increases will not reflect changes in real time or mean that the situation is getting worse. Ultimately, faster testing will help to better show the trends of this outbreak since August and to monitor changes that are occurring now. CDC expects to complete testing of the remaining specimens that were received since mid-September within about seven to 10 days; going from testing about 40 specimens per day to testing up to 180 per day. This will allow us to then test and report results for new specimens within a few days of receiving them.
CDC's new lab test is a "real-time" reverse transcription polymerase chain reaction, or rRT-PCR, and it identifies all strains of EV-D68 that we have been seeing this summer and fall. The new test has fewer and shorter steps than the test that CDC and some states were using for the EV-D68 outbreak. Also, the new test allows more specimens to be tested at the same time. The previous test, which CDC used for about nine years, is very sensitive and can be used to detect and identify almost all enteroviruses; however, it requires multiple, labor-intensive processing steps and cannot be easily scaled up to support testing of large numbers of specimens in real time that is needed for the current EV-D68 outbreak.

Many viruses, including influenza viruses, cause respiratory illnesses. While there is not a vaccine to prevent illness from enterovirus infection, the single best way to protect against the flu is to get vaccinated each year. The timing of flu seasons can vary but activity usually begins to increase in October. CDC recommends everyone age 6 months and older get an annual flu vaccine. Flu vaccination is especially important for those at high risk, such as children with asthma. To help stop the spread of germs and prevent respiratory illnesses, wash hands often with soap and water and practice good health habits.

For more information on EV-D68 in the U.S., visit: http://www.cdc.gov/non-polio-enterovirus/outbreaks/EV-D68-outbreaks.html (http://www.cdc.gov/non-polio-enterovirus/outbreaks/EV-D68-outbreaks.html).
Overview of EV-D68: http://www.cdc.gov/non-polio-enterovirus/about/EV-D68.html (http://www.cdc.gov/non-polio-enterovirus/about/EV-D68.html).
EV-D68 information for parents: http://www.cdc.gov/features/evd68/ (http://www.cdc.gov/features/evd68/)
EV-D68 for Healthcare Professionals: http://www.cdc.gov/non-polio-enterovirus/hcp/EV-D68-hcp.html (http://www.cdc.gov/non-polio-enterovirus/hcp/EV-D68-hcp.html)

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