The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
William A. Hinton State Laboratory Institute
305 South Street, Jamaica Plain, MA 02130

DEVAL L. PATRICK
GOVERNOR

JOHN W. POLANOWICZ
SECRETARY

CHERYL BARTLETT, RN
COMMISSIONER

Bureau of Infectious Disease
Tel: (617) 983-6550
Fax: (617) 983-6925
www.mass.gov/dph

Clinical Advisory

To: Massachusetts Clinicians and Clinical Laboratory Directors

From: Alfred DeMaria, Jr., M.D.
Medical Director, Bureau of Infectious Disease

Michael Pentella, PhD
Director, Bureau of Laboratory Sciences

Date: September 11, 2014

Re: Enterovirus D68

Enteroviruses cause respiratory and gastrointestinal illness, rash, and neurologic illnesses, such as aseptic meningitis and encephalitis. While most infections cause mild or no symptoms, some can be severe. There are over 100 types reported which cause approximately 10 to 15 million infections in the United States each year. They typically occur in the summer and fall.

In August 2014, enterovirus D68 (EV-D68) was identified in children ill with severe respiratory illness in Kansas City, Missouri and Chicago, Illinois. EV-D68 was first identified in California in 1962, but had been reported only rarely in the US in the last 40 years. To date, no cases EV-D68 have been identified in Massachusetts, but it is likely that cases will be seen here. Other enteroviruses may also circulate at this time of year. EV-D68 and other more common enteroviruses are all capable of causing the full spectrum of clinical presentation that is typical of enterovirus infections, although the current outbreak of EV-D68 has been predominantly associated with respiratory disease and not nervous system infection.

No antiviral medications are currently available for treating of EV-D68 infections. Many infections will be mild and self-limited, requiring only treatment of the symptoms. Some people with severe respiratory illness caused by EV-D68 may need to be hospitalized and receive intensive supportive care. There are no licensed vaccines for protection against enterovirus infection.

Testing

The Massachusetts Department of Public Health (MDPH) is advising clinicians to consider EV-D68 as a potential cause of illness in children and adults, and to pursue laboratory diagnosis in

cases of severe respiratory illness without other explanation, particularly in young children. The Hinton State Laboratory Institute (HSLI) will accept nasopharyngeal specimens to test for enteroviruses in cases of severe lower respiratory infections, as well as spinal fluid and stool in cases of aseptic meningitis, flaccid paralysis and outbreaks of otherwise unexplained respiratory illness. Collecting specimens during the first week of illness is ideal. A specimen set collected in the second week of illness should include a rectal swab or stool sample.

Nucleic acid testing at HSLI will be able to identify infection as human "enterovirus/rhinovirus" species without subtype differentiation of this Picornaviridae family member. Subtype identification (enterovirus species D serotype 68) by sequencing can be performed by the Centers for Disease Control and Prevention (CDC). For those hospitals able to isolate enteroviruses, isolates can be sent to HSLI for forwarding to CDC for typing.

Infection control

Soap and water is the most effective method for hand hygiene, as hand sanitizers are less effective against enteroviruses. Standard precautions should be used for suspected and confirmed cases of enterovirus infections, with contact precautions for diapered or incontinent children for the duration of illness and to control institutional outbreaks. Since EV-D68 is similar genetically to rhinovirus and causes similar respiratory symptoms, adding droplet precautions could be considered in the hospital setting. Bleach is recommended for environmental cleaning. (http://www.cdc.gov/hicpac/pdf/isolation/isolation2007.pdf)

Advice for parents and patients

- Wash hands often with soap and water for 20 seconds, especially after changing diapers
- Avoid touching eyes, nose and mouth with unwashed hands
- Avoid kissing, hugging, and sharing cups or eating utensils with people who are sick
- Disinfect frequently touched surfaces, such as toys and doorknobs, especially if someone is sick

Reporting

Single cases of infections due to non-polio enteroviruses are not reportable to the local health department or MDPH. However, any illness believed to be part of a suspected or confirmed cluster or outbreak is reportable to the local board of health, health department or to MDPH, if the local board of health cannot be contacted.

Please call the Division of Epidemiology and Immunization at (617) 983-6800 for general questions about enteroviruses or EV-D68 or if you want to submit specimens for testing. Technical questions regarding testing can be directed to the HSLI Molecular Diagnostics; 617-983-6411 or Virus Isolation: 617-983-6382.

Guidance from CDC at: http://www.cdc.gov/non-polio-enterovirus/about/EV-D68.html