



Clinical Update

For Telephone Triage Nurses

September 2014

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Respiratory Distress Severity in Children

Mild: no SOB at rest, mild SOB with walking, speaks normally in sentences, can lay down flat, no retractions

Moderate: SOB at rest, speaks in phrases, prefers to sit (can't lay down flat), mild retractions

Severe: severe SOB at rest, speaks in single words, struggling to breathe, severe retractions

Respiratory Arrest

Imminent: Struggling to breathe, unable to speak, gasping for breath, drowsy or confused

Enterovirus-D68 Associated with Severe Respiratory Illness in Children

Currently, there is an outbreak of respiratory illness caused by Enterovirus-D68 (EV-D68, also called HEV 68). In certain states, this virus is causing higher than normal hospitalization rates in August/September of children with respiratory distress and hypoxia. As of this time, there are multiple states reporting illness clusters with similar symptoms in hospitalized patients thought to be caused by this virus. This is not a new virus; it's been reported since 1962.

Symptoms

EV-D68 causes primarily respiratory symptoms. It starts out like a common cold with runny nose, sneezing and coughing. The illness can range from mild to severe requiring hospitalization for hypoxia, wheezing, severe coughing and respiratory distress. While some hospitalized children had fever, the majority did not. (1)

Who's at Risk?

Anyone with chronic illness is at higher-risk for developing complications, especially those with underlying respiratory illness or immunosuppressed patients. The majority of hospitalized patients had asthma or a previous history of wheezing. (1) However, children with no underlying respiratory illness have been hospitalized as well. (1) Young children are also considered higher-risk, but teens can also develop complications. EV-D68 has caused severe illness more so in children, although adults can be affected too (2). This population may be more susceptible because they haven't built up immunity yet from previous enterovirus exposure. At this time, no deaths have been reported.

Treatment and Reassurance

As of now, there are no specific treatments. There are no anti-viral medicines recommended to treat this virus. Care for symptoms is supportive. There is no vaccine to treat EV-D68. (It's different than flu!) Most healthy children will have mild-moderate illness (cough, cold symptoms) and will recover without any complications. Remember not everyone who is sick with this virus is tested. Testing is reserved for those with serious illness of unknown etiology.

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Telephone Triage

Triage remains focused on identifying respiratory distress in patients with coughing and cold symptoms. Use extra caution with young children and those that are high-risk patients (those with underlying disease, asthma, or have new-onset wheezing). As an extra precaution in states where this illness is occurring, the nurses can opt to send in now any non-distressed patient with confirmed new-onset of wheezing (no prior history). Triage for asthmatics remains unchanged, although the nurses can upgrade any disposition using their judgment for any high-risk patient. Illness progression and clinical deterioration can be rapid, so good call-back information is critical. Care advice can be given based on the primary respiratory symptom identified. Our current triage guidelines should deal adequately with this outbreak.

Infection Precautions

EV-D68 is thought to spread by close contact just like the common cold. The virus shares features with rhinoviruses - HRV (2). The usual incubation period for enteroviruses is 3-6 days. (3)

The ID experts at Children's Hospital Colorado recommend common-sense precautions, such as those for influenza. These include:

- Frequent hand washing with soap and water for 20 seconds.
- "Cover your Cough" precautions - Cover the mouth and nose when coughing with a tissue and discard. If not available, cough into your sleeve or elbow area.
- Stay home for 24 hours after the fever is gone.
- Clean and disinfect surfaces that are touched regularly. (e.g., doorknobs, phones, keyboards, remote controls, tabletops, toys, etc.)
- Avoid shaking hands, hugging, kissing, and sharing eating utensils/cups with anyone sick.
- Avoid touching the face with unwashed hands if you are not sick.

Since this remains an evolving outbreak, information may change. Check the CDC and the American Academy of Pediatrics websites for ongoing information and recommendations.

As always, please contact us with any questions.

References

1. CDC. Severe respiratory illness associated with Enterovirus D68 – Missouri and Illinois. MMWR Sept 2014: 63 (early release): 1-2.
2. CDC. Clusters of acute respiratory illness associated with human Enterovirus 68 – Asia, Europe, and United States 2008-2010. MMWR 2011;60:1301-1304.
3. AAP Committee on Infectious Disease. Enteroviruses. In Pickering L, ed. 2012 Red Book. 29th ed. Elk Grove Village, IL: 2012.

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