



UTSW/BioTel EMS TRAINING BULLETIN

November 2014

EMS TB 14-011

Enterovirus D68

Purpose:

To provide infection control and patient management guidance to UTSW/BioTel EMS Providers about Enterovirus D68.

Background:

1. Enterovirus typically causes a mild respiratory illness similar to the common cold.
2. This year, however, Enterovirus D68 has caused more severe disease, especially in infants, children and teenagers. This has resulted in increased numbers of Emergency Department visits and hospitalizations.
3. From mid-August to early November 2014, the Centers for Disease Control and Prevention (CDC) and State public health laboratories have confirmed more than 1100 cases in 47 states and the District of Columbia. Enterovirus D68 infections may decline later this fall and winter.
4. Given this year's severe outbreak, all EMS Providers need to be aware of this illness.

Risk Factors and Prognosis:

1. In general, infants, children, and teenagers are most likely to become infected with Enteroviruses (such as Enterovirus D68) and to become clinically ill. That's because they do not yet have immunity from previous exposures to these viruses and because their smaller airways are more susceptible to respiratory illnesses.
 - a. Children with asthma may have a higher risk for severe Enterovirus D68 illness.
2. Adults infected with Enteroviruses, are more likely to have no or mild symptoms.
3. Most patients recover completely from the acute illness.
4. This year, however, Enterovirus D68 has been associated with several cases of paralysis and weakness in children, although a direct causal role has not yet been established. There have been at least two pediatric deaths directly attributed to the virus.

Signs & Symptoms:

1. The signs and symptoms of **mild** Enterovirus infection may include fever, runny nose, sneezing, cough, and body and muscle aches.
 - a. NOTE: Many children infected with Enterovirus D68 do NOT have fever!
2. The **severe** symptoms include wheezing and severe respiratory distress or failure.

Diagnosis:

1. In general, Enterovirus infection is a clinical diagnosis based on a careful history and physical examination.
2. For those patients with severe symptoms who are admitted to the hospital, Enterovirus D68 diagnostic confirmation requires specific lab tests performed on specimens from the patient's nose and throat.

Treatment:

1. Although some patients can become extremely ill with this virus, current treatment relies on supportive care.
2. There is no vaccine, no antiviral medication, and no specific treatment available for Enterovirus D68.
3. Mild symptoms may be treated with over-the-counter medications for pain and fever.
 - a. However, aspirin should **not** be given to children, and **neither** decongestants **nor** anti-histamines should be to young children without a doctor's advice.
4. All patients with significant respiratory symptoms, wheezing or abnormal vital signs shall be treated according to the [UTSW/BioTel EMS System Guidelines for Therapy](#), especially the **Adult** and **Pediatric Respiratory Care Guidelines**.
 - a. Remember that children with asthma are at especially high risk for severe symptoms related to Enterovirus D68.

- **All patients with significant respiratory symptoms, wheezing or abnormal vital signs should be transported to a hospital Emergency Department.**

General Infection Prevention Measures:

1. Use rigorous hand hygiene, washing hands before and after EVERY patient contact for at least 20 seconds with soap and water or alcohol-based hand gel.
2. Avoid touching eyes, nose and mouth with unwashed hands.
3. Avoid close contact (e.g. kissing, hugging, or sharing cups/eating utensils) with persons who are experiencing cold symptoms or fever.
4. Cover your coughs and sneezes with a tissue or shirt sleeve, not your hands.
5. Clean and disinfect frequently-touched surfaces especially in areas where ill persons have come into contact. Examples include: ambulance steering wheel, door handles, stretcher rails, and jumpseat; stethoscope and other medical equipment; and computer keyboards.
6. When ill, try to avoid public places and travel, and stay home, if possible.

EMS PPE and Infection Control Guidelines:

1. ALWAYS use rigorous hand hygiene: wash hands with soap and water, or cleanse with alcohol-based gel for at least 20 seconds, both before **and** after EVERY patient contact.
2. For contact with **all** patients with acute respiratory illness, and possible Enterovirus D68 infection (**with or without fever**), Standard, Contact & Droplet Precautions shall be used. This includes (**at least**):
 - a. Disposable gloves;
 - b. Eye protection (goggles or face shield);
 - c. Respiratory protection (surgical mask or higher);
 - d. Surgical mask for the patient, if tolerated;
 - i. For mildly ill patients requiring supplemental oxygen, nasal cannula oxygen, plus a surgical mask, may be used
 - ii. For severely ill patients, advanced airway management may be needed
 - e. Fluid impermeable gown (if needed);
 - f. Proper disinfection of all ambulance surfaces and equipment;
 - g. Proper removal (doffing) and disposal of all PPE;
 - h. Hand hygiene after PPE removal.
3. Refer to the [UTSW/BioTel EMS Guidelines for Therapy](#), and to TB 14-007 (PPE) and TB 14-008 (DECON) for further details and guidance.

➤ **EMS Providers are encouraged to contact their EMS Supervisor or BioTel at any time with questions or concerns.**

CDC Resources (accessed 5 November 2014):

<http://www.cdc.gov/non-polio-enterovirus/about/ev-d68.html>

<http://www.cdc.gov/non-polio-enterovirus/hcp/EV-D68-hcp.html>

<http://www.cdc.gov/non-polio-enterovirus/outbreaks/EV-D68-outbreaks.html>

<http://www.cdc.gov/HAI/settings/outpatient/basic-infection-control-prevention-plan-2011/transmission-based-precautions.html>