Mumps outbreaks continue in the US: consider mumps in patients with acute parotitis

As of November 7, 2016, at least 45 states and the District of Columbia have reported mumps infections in 2,879 people (preliminary data) to CDC. Five states have reported more than 100 cases this year: AR, IA, IN, IL and MA. An ongoing mumps outbreak in NW Arkansas concentrated in an underimmunized community of Marshallese has so far totaled over 1,200 cases. Although Tennessee has reported only 4 probable (not confirmed) isolated mumps cases to date in 2016, there is risk as long as outbreaks are ongoing elsewhere. For example, the University of Missouri is experiencing an outbreak of mumps on campus; Mizzou’s football team plays UT in Knoxville this weekend. Consider mumps in the differential diagnosis of patients with acute parotitis or other salivary gland swelling, lasting at least two days.

Epidemiology/ Vaccine Effectiveness

- Mumps is transmitted through contact with respiratory secretions or saliva.
- The measles-mumps-rubella vaccine (MMR) prevents most, but not all, cases. Effectiveness of 2 doses of MMR is about 88% (range 66-95%), and the one-dose effectiveness is about 78% (range 49-91%).
- All children in Tennessee schools and full-time college students are required to have provided their school or college with documentation of 2 doses of MMR vaccine or with a religious or medical exemption.
- Despite these precautions, outbreaks in communities with high vaccination rates may occur where prolonged close contact to cases can occur (e.g., schools, colleges, camps).

Signs and Symptoms of Mumps Illness

- The incubation period from exposure to illness is 16-18 days (range 12-25 days).
- Prodrome: Nonspecific; 3-4 days of body aches, loss of appetite, headache, and fever
- Parotitis, the inflammation of salivary glands on one or both sides of the face, starts a few days after the prodrome and lasts for 2-10+ days.
- Less commonly, patients can present with other glandular swelling (such as testicular swelling).
- Patients without classic parotitis symptoms are generally recommended for mumps testing only if exposure is known or strongly suspected as part of an outbreak.
- More details of clinical features of mumps can be found at: http://www.cdc.gov/mumps/hcp.html

What to Do if You Suspect Mumps

- Contact your local health department and promptly follow guidance.
  - If after hours, call the on-call senior epidemiologist at the Department of Health (615-741-7247).
  - The TN Immunization Program will consult with local public health and provide guidance for lab testing.
- Laboratory Testing: RT-PCR or culture from a buccal swab within 3 days of the onset of parotid or other glandular swelling. Only Dacron or synthetic swabs in viral transport media should be used and delivered to the TDH Laboratory Services within 48 hours. Cotton swab should NOT be used.
- Caution: serologic test results for IgG and IgM are difficult to interpret in previously vaccinated persons. A negative IgM result cannot rule out acute mumps in a previously vaccinated person.
- Public health will follow up immediately to assess any possible exposure to mumps.
- Patients with suspected mumps should stay isolated at home until 5 days after parotid swelling onset or until mumps has been ruled out (whichever comes first) to reduce the risk of infecting others.

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Tennessee Department of Health