PENNSYLVANIA DEPARTMENT OF HEALTH
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Guidance for Clinicians on Mumps Diagnosis, Testing and Reporting

DATE:	May 4, 2018
TO:	Health Alert Network
FROM:	Rachel Levine, MD, Secretary of Health
SUBJECT:	**Guidance for Clinicians on Mumps Diagnosis, Testing and Reporting**
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This transmission is a "Health Advisory": provides important information for a specific incident or situation; may not require immediate action.

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, INFECTION CONTROL, NURSING, AND LABORATORY STAFF IN YOUR HOSPITAL**; EMS COUNCILS:** PLEASE DISTRIBUTE AS APPROPRIATE; **FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE**; LOCAL HEALTH JURISDICTIONS:** PLEASE DISTRIBUTE AS APPROPRIATE; **PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP

Summary

- Mumps virus continues to circulate in several communities in PA, including Centre and Chester counties.
- Occurrence of mumps cases is also currently documented in many other states and countries.
- The Pennsylvania Department of Health (DOH) is sharing information about mumps with providers to encourage continued awareness of the potential of infection, review specimen collection and recommend 5-day isolation for patients who present with parotitis for which there is no other likely diagnosis.
- The DOH also reminds providers to report suspected cases of mumps to local public health authorities or to the DOH at 877-PA-HEALTH (877-724-3258)

Recommended specimen collection for patients with parotitis for which there is no other likely cause (collection and transport details are below):

- **Oral or buccal swab** after parotid massage for polymerase chain reaction (PCR) testing
- **Urine** for PCR testing
- **Serum** for mumps IgM & IgG testing
- **Nasopharyngeal swab** for PCR testing of respiratory viral pathogens (to include influenza and parainfluenza); parotitis has sometimes been reported in persons who are infected with another respiratory virus

Mumps clinical manifestations & transmission

Mumps is an acute viral disease characterized by swelling of the salivary glands that lasts at least two days; it is transmitted by direct contact with or by inhaling droplets that contain the virus. Many of those infected may be asymptomatic; if symptoms occur, they generally begin 16-18 days after infection and can include:

- Swelling and tenderness of one or both salivary glands, usually the parotid glands located just below the front of the ear/jaw;
- Fever;
- Headache;
- Muscle Aches;
- Tiredness; and
- Loss of appetite.

Complications, which are more commonly reported in adults, occasionally occur and include orchitis, encephalitis, meningitis, oophoritis, mastitis and deafness.

Suspected cases of mumps should be isolated for 5 days after onset of parotitis.

Mumps testing

The DOH urges providers to obtain the following specimens from patients who present for care with parotitis (swelling of their salivary glands) for which there is no other likely diagnosis:

- Oral or buccal swab after parotid massage for polymerase chain reaction (PCR) testing
  - Synthetic swabs are preferred (alginate or cotton swabs will be rejected)
  - Use viral transport media
  - Maintain at 4^0 C and ship on cold packs within 24 hours of collection
  - May be negative if collected a prolonged time after parotitis
- Urine for polymerase chain reaction testing
  - Collect minimum of 50 mls in sterile container
  - Centrifuge for 15 minutes at 4^0 C
  - Re-suspend sediment in viral transport media and ship on cold packs within 24 hours of collection or
  - Freeze at -70^0 C and ship on dry ice
  - Not as useful as oral specimens
  - May not be positive until >4 days after symptom onset
- Serum for mumps IgM and IgG testing
  - Acute phase serum as soon as possible and convalescent serum 2-3 weeks later
  - Collect 7–10 ml of blood in a red-top or serum-separator tube (SST)
  - Mumps IgM may be negative due to either previous vaccination of disease
  - Because mumps IgG may be positive after initial draw, convalescent sera collection should be considered
- Nasopharyngeal swab for polymerase chain reaction testing of respiratory viral pathogens (to include influenza and parainfluenza)
  - Parotitis has sometimes been reported in persons who are infected with influenza and other viruses (https://www.cdc.gov/flu/about/season/health-care-providers-parotitis.htm)

Note: negative laboratory results do not rule out mumps

Mumps prevention and control

- Vaccination against mumps remains the best method to prevent infection
  - Recommended childhood schedule is two doses of mumps-containing vaccine, given at 12-15 months and 4-6 years of age

- Because vaccine is not 100% effective, people who are fully vaccinated can become infected.
- A contact of a case who does not have evidence of immunity should be offered MMR vaccine.
    - Evidence of immunity includes physician diagnosis or laboratory evidence of mumps infection, birth before 1957 or one dose of mumps-containing vaccine.
    - Because mumps vaccine post-exposure prophylaxis has not been shown to be effective and an interval of 2-4 weeks after vaccination may be required for the vaccine's full immunogenicity to be achieved, newly vaccinated contacts may develop mumps disease up to a month after vaccination.
    - Persons ≥12 months of age who previously received ≤2 doses of mumps-containing vaccine and are identified by public health authorities to be at increased risk during a mumps outbreak should receive a dose of mumps-virus containing vaccine.

Categories of Health Alert messages:
Health Alert: conveys the highest level of importance; warrants immediate action or attention. **Health Advisory**: provides important information for a specific incident or situation; may not require immediate action.
Health Update: provides updated information regarding an incident or situation; no immediate action necessary

This information is current as of May 4, 2018, but may be modified in the future. We will continue to post updated information regarding the most common questions about this subject.