

Health Alert

Mumps at a University in Philadelphia: Diagnosis and Prevention Guidance

November 22, 2019

The Philadelphia Department of Health (PDPH) is working closely with Drexel University's Student Health Center to investigate mumps cases among undergraduate students. Since early November, 3 confirmed mumps cases have been reported, and all are associated. A 4th confirmed case in a student from another university is also linked to this cluster. Drexel University has promptly offered a 3rd dose of measles, mumps, and rubella (MMR) vaccine to close contacts (e.g., roommates, intimate partners) and those at-risk of exposure (e.g., persons in the same social and activity groups as the cases). With approaching Thanksgiving and Winter breaks, area healthcare providers should consider mumps for patients presenting with parotitis, particularly university students.

Recognition, Testing, and Management: Mumps is a viral illness spread by respiratory secretions. Symptoms develop 12

to 25 days after exposure and the clinical presentation is characterized by acute onset of unilateral or bilateral tender, swelling of the parotid or other salivary glands without other apparent cause. Less common, but more serious manifestations of mumps include viral meningitis, orchitis, and oophoritis.

When mumps is suspected, providers should:

- Place patients with suspected mumps on droplet precautions, which includes the use of surgical masks for healthcare workers with close patient contact.
- Collect the following specimens from patients with parotitis:
 - **Buccal swab for mumps polymerase chain reaction (PCR) testing.** Please contact PDPH at (215) 685-6742 to arrange for testing coordination with the state public health laboratory.
 - **Serum for mumps IgM and IgG testing if ≥3 days from parotitis onset**, which can be ordered through commercial laboratories.
 - **Nasopharyngeal swab for influenza or respiratory PCR panel testing** to evaluate for other potential causes of parotitis or salivary gland swelling.

Please note that recommendations for serum collection have changed, and urine specimen collection is now only recommended for those with complications. Additional mumps testing guidance is attached.

- Advise patients who have suspected or confirmed mumps infections to self-isolate, avoid travel, and limit close contact with others **for 5 days following onset of parotitis**. Specifically, university students should:
 - Isolate in a private room and not allow visitors to avoid exposing others.
 - Arrange for food delivery to avoid spending time in common areas.
 - Wash hands with soap and water often.
 - Not share food, drinks, vaping or smoking items, utensils, cellphones, computers, or tablets.
 - Not attend classes, school, work, or social events.
- Notify PDPH of any patient with suspected or confirmed mumps infection. To report, call (215) 685-6742 during business hours or (215) 686-4514 (after hours, ask for Division of Disease Control on-call staff).

Mumps Vaccination: MMR vaccine is the best way to prevent mumps infection. During outbreaks, all persons who are unvaccinated or only have received one dose should receive MMR vaccine. A third MMR dose should be given to persons who are at-risk of exposure to cases and have previously received the 2-dose series.

SUMMARY POINTS

- Providers suspecting mumps, should:
 - Use droplet precautions.
 - Collect a buccal swab and if ≥3 days from onset, serum for mumps testing along with a nasopharyngeal swab for respiratory virus testing.
 - Advise patients to self-isolate for 5 days.
 - Notify PDPH [business hours: (215) 685-6742, after hours: (215) 686-4514].
- A 3rd dose of MMR vaccine is recommended for close contacts (e.g., roommates, intimate partners) and those at-risk of exposure (e.g. persons in the same social and activity groups as the cases).



Suspect MUMPS?

Wait! This patient might not need to be tested if they are linked to another mumps patient or outbreak. Refer to outbreak guidance from Philadelphia DOH.

Remember to also collect a nasopharyngeal swab for respiratory panel testing. Be sure to use swabs with viral transport media for mumps and respiratory virus testing.

Does patient have parotitis or other salivary gland swelling?

YES

Has it been ≤ 3 days since symptom onset?

YES

Collect a buccal specimen for RT-qPCR



NO

Collect a buccal specimen for RT-qPCR and serum specimen for IgM



YES

Collect a buccal and urine specimen for RT-qPCR and serum specimen for IgM



NO

Does the patient have:

- orchitis/oophoritis,
- mastitis,
- pancreatitis,
- hearing loss,
- meningitis, or
- encephalitis?

NO

Is patient part of a group at increased risk for mumps as defined by public health authorities?

Is testing available at your facility?

YES

Coordinate with your facility for specimen transport instructions

NO

Serum specimens should be sent to commercial lab for IgM Testing. Coordinate with PDPH for buccal/urine pick up

YES

Give third dose of MMR

NO

Make sure patient is up to date on MMR and educate on signs and symptoms

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U.S. Department of Health and Human Services
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