Georgia Department of Public Health

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To: Georgia Universities and Colleges
From: Georgia Department of Public Health

Mumps Advisory for Colleges and Universities

Summary
In 2016, 5,311 mumps cases were reported to CDC, the highest number of cases in the U.S. since 2006 when 6,584 were reported. Many of these cases were associated with outbreaks in college/university settings. These outbreaks have ranged in size from a few to several hundred cases, are primarily among vaccinated individuals, and are likely due to a combination of factors including the intensity of the exposure setting coupled with behaviors that increase the risk of transmission, a lack of previous exposure to wild-type virus, and possible waning immunity. At this point, a small number of mumps cases have been identified on college/university campuses in Georgia by the Georgia Department of Public Health (DPH).

Winter break, spring break, sporting events and extracurricular activities may lead to mixing of students from different colleges and universities, including those from campuses where mumps outbreaks are occurring. As students return to campus from winter break and prepare for spring break, DPH urges college and university student health centers to remain vigilant and consider mumps in students with acute parotitis or other salivary gland swelling, orchitis or oophoritis, unexplained by another more likely diagnosis, regardless of vaccination history.

Mumps Epidemiology and Clinical Symptoms
Mumps is a contagious viral infection characterized by the acute onset of unilateral or bilateral, tender swelling of parotid or other salivary glands, often proceeded by a nonspecific prodrome which may include muscle aches, loss of appetite, malaise, headache, and fever. An estimated 30% of mumps infections have no apparent salivary gland swelling and may be asymptomatic or manifest primarily as a respiratory infection. In recent U.S. outbreaks, complications of mumps have included orchitis in up to 10% of adolescent and adult males, and oophoritis in ≤1% of adolescent and adult females. More rarely pancreatitis, meningitis, encephalitis, and deafness has occurred.

Mumps is spread by contact with infectious respiratory tract secretions and saliva. The incubation period is typically 16 to 18 days but can range from 12 to 25 days. In recent mumps outbreaks, the majority of cases had received two doses of MMR vaccine. Therefore, a history of appropriate vaccination does not rule out mumps in persons with compatible symptoms.

Reporting
Mumps is a notifiable disease and suspect mumps cases should be reported to the Georgia Department of Public Health (O.C.G.A. §31-12-2) as soon as possible. Report suspect cases to public health by calling your District Health Office or the DPH Acute Disease Epidemiology Section at 404-657-2588 during business hours Monday through Friday, or 1-866-PUB-HLTH after-hours on evenings and weekends. Do not await laboratory results before reporting.

Laboratory Testing
The preferred method for confirming acute mumps infection is detection of mumps virus from a buccal specimen by reverse transcriptase-polymerase chain reaction testing (RT-PCR). Collection of a buccal specimen within 1 to 3 days of parotitis onset is optimal, although virus may be detected for up to 9 days. Prior to obtaining the specimen, the parotid gland, which extends from in

front of the ear to the angle of the jaw line, should be massaged for 30 seconds. Detailed specimen collection guidance is available at the DPH mumps website.

Acute infection may also be laboratory confirmed by the presence of mumps IgM antibody or a significant rise in mumps IgG antibody titer between acute- and convalescent-phase serum specimens. However, interpretation of mumps IgM results should be made with caution, as response may be attenuated or absent in vaccinated persons, and disease processes may cause false positive IgM results due to cross-reactivity.

The Georgia Department of Public Health strongly recommends the **collection of serum for mumps IgM/IgG AND collection of two buccal swabs and a urine specimen to confirm a mumps case**. To coordinate specimen collection and laboratory submission, call your District Public Health Office or the DPH Acute Disease Epidemiology Section at 404-657-2588 during business hours Monday through Friday, or 1-866-PUB-HLTH after-hours on evenings and weekends. **Please do not send specimens directly to the Georgia Public Health Laboratory (GPHL) or the Centers for Disease Control and Prevention (CDC).**

Vaccination

Mumps-containing vaccine (MMR) remains the most effective prevention against disease. One dose is 78% effective, and two doses are 88% effective[†]. Although mumps immunity may wane over time and vaccinated individuals can still develop mumps, infections tend to be milder with a much lower incidence of complications.

It is important to ensure students and staff are up-to-date on their MMR vaccine; the first dose of MMR is recommended for children at 12 to 15 months of age with a second dose at 4 to 6 years of age.

Although a third dose of MMR has been selectively utilized as a control measure in a few recent large outbreaks, at this time the CDC recommends isolation measures as a first line in controlling mumps transmission in most outbreak settings among vaccinated individuals. **DPH does not recommend a 3rd dose of MMR at this time.**

Recommendations

The Georgia Department of Public Health (DPH) recommends that Georgia college and university student health centers take the following actions in anticipation of a possible mumps outbreak campus:

- Review the signs and symptoms of mumps and DPH testing guidance with student health staff. **Students suspected of having mumps should be excluded from classes and activities and be instructed to avoid close contact with others for five days following the onset of salivary gland swelling.**
- Report suspect cases to public health at the time of laboratory testing by calling your District Public Health Office or the DPH Acute Disease Epidemiology Program at 404-657-2588 during business hours Monday through Friday, or 1-866-PUB-HLTH after-hours on evenings and weekends.
- Increase awareness among students, faculty, and staff by providing educational materials about the signs and symptoms of mumps and where they can obtain medical evaluation
- A history of two doses of measles, mumps, and rubella (MMR) vaccine with at least 28 days between doses is considered the best protection against acquiring mumps infection and/or its complications. Students not previously vaccinated, or unsure whether they have received both doses should be brought up to date.
- Anticipate the possibility of a mumps outbreak on campus, by considering the availability of a facility that could be used to isolate cases while infectious, and the capacity for testing and vaccinating in such an event.

Mumps can spread very quickly on college/university campuses, even when most students have had two doses of MMR vaccine. We appreciate your efforts to protect the health of students and will update you if the situation in Georgia changes.

If you have any questions or concerns please contact Ebony S. Thomas, MPH (Ebony.Thomas@dph.ga.gov) or Jessica Tuttle, MD (Jessica.Tuttle@dph.ga.gov) at 404-657-2588.