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To: North Carolina Clinicians  
From: Zack Moore, MD MPH, State Epidemiologist

**Alert: Increase in Mumps Cases (2 pages)**

The North Carolina Division of Public Health (NC DPH) is working with local health departments to investigate recently reported mumps cases. This memo is intended as a reminder regarding reporting, testing, prevention and control measures for mumps and immunity documentation requirements for healthcare workers.

In general, mumps is an uncommon cause of sporadic parotitis in the United States. From year to year, the number of reported mumps cases can range from roughly a couple hundred to a couple thousand. However, a higher number of cases have been reported recently, including >5,700 during 2016 and approximately 2,000 already in 2017 (as of March 25). Three mumps cases have been reported in NC during the month of April. These cases occurred in both college-aged and elementary-aged persons with no known epidemiologic links to each other. One of the cases was likely exposed out of state.

Mumps is a reportable condition in North Carolina. If you suspect a patient is infected with mumps, we urge you to contact your local health department communicable disease staff as soon as mumps is suspected, or contact the NC DPH Communicable Disease Branch (CDB) epidemiologist on call available 24 hours at 919-733-3419.

**Diagnosis:**

**The preferred mumps tests are RT-PCR and viral culture** performed on a swab of the mouth near the affected gland, collected no later than 8 days after the beginning of parotitis/swelling. These tests are available through the State Laboratory of Public Health (SLPH) with prior approval or through commercial or hospital-based laboratories. To request approval for mumps testing at SLPH, contact the CDB epidemiologist on call (919-733-3419) or your local health department.

Clinicians can also use serologic tests to diagnose mumps. However, these results can be difficult to interpret, particularly if the person is vaccinated.

Failure to detect mumps by laboratory testing does NOT rule out mumps as a diagnosis. The likelihood of detecting mumps is dependent on the timing of collection and quality of the clinical sample.

**Prevention:**

Vaccination is the best way to prevent mumps. MMR vaccine should be administered to persons without evidence of immunity and everyone should be brought up to date with age appropriate vaccination (one or two doses). Persons born before 1957 are considered immune based on likely exposure during childhood.

It is important to recognize that mumps can occur in vaccinated people. During mumps outbreaks in highly vaccinated communities, the proportion of cases that occur among people who have been vaccinated may be high. This should not be interpreted as meaning that the vaccine is not effective; people who have not been vaccinated against mumps usually have a much greater attack rate than those who have been fully vaccinated.

**Control:**

Persons with mumps are considered infectious from two days before until 5 days after the onset of parotitis. Those with suspected or confirmed mumps should stay at home from work or school during this period and stay in a separate room from other people if possible. Respiratory isolation precautions should be used to avoid transmission in healthcare settings.

**Clinicians should ensure that all healthcare personnel in their facilities have presumptive evidence of immunity, defined as:**

- Written documentation of vaccination with two doses of MMR vaccine administered at least 28 days apart;
- Laboratory evidence of immunity;
- Laboratory confirmation of disease; or
- Birth before 1957.

Healthcare personnel who lack evidence of immunity and have unprotected exposures to mumps (i.e., being within three feet of a patient with a diagnosis of mumps without the use of proper personal protective equipment) will face exclusion from work from the 12th day after the first unprotected exposure through the 25th day after the last exposure.

Additional information including information about clinical and epidemiologic features of mumps and surveillance and reporting is available at <http://www.cdc.gov/mumps/> and <http://epi.publichealth.nc.gov/cd/diseases/mumps.html>.