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To: Hospitals, Local Health Departments (LHDs), Providers**From:** New York State Department of Health, Bureau of Immunization

MUMPS ADVISORY

Please distribute to the Infection Control Department, Emergency Department, Employee Health Service, Infectious Disease Department, Director of Nursing, Medical Director, Laboratory Service, and all patient care areas.

SUMMARY

- Since August 2009, the New York State Department of Health (NYSDOH) and the New York City Department of Health and Mental Hygiene (NYC DOHMH) have been investigating an outbreak of mumps that began among children who attended a summer camp for Orthodox Jewish boys in upstate New York.
- Cases of mumps have continued to occur with over 1000 confirmed or probable cases in New York City (NYC), 321 confirmed or probable cases in Rockland County, and 670 confirmed or probable cases in Orange County. More than 97% of cases have occurred among members of the Orthodox Jewish community.
- The Jewish religious holiday Passover will begin on the evening of Monday, March 29th, 2010 and will continue for 8 days until the evening of Tuesday, April 6th. It is anticipated that some members of this religious community may travel prior to and during this holiday. It is possible that mumps could be imported by travelers into areas not previously affected by the outbreak.
- NYSDOH is requesting that medical providers consider and test for mumps in patients with appropriate symptoms at their facilities, regardless of their vaccination status. Patients suspected to have mumps should be advised on isolation and advised not to travel for 5 days after onset of parotitis. Patients at risk of being exposed to mumps who are not fully immunized should be offered MMR vaccination prior to travel. If immunization status is not documented, then the patient should be considered susceptible to mumps and should be offered MMR vaccination.
- Any suspected case of mumps should be reported promptly to the local health department (LHD) where the patient resides. LHDs should notify the NYSDOH Bureau of Immunization to assist in arranging for appropriate testing for confirmation.

BACKGROUND

The NYSDOH was notified by the Sullivan County Health Department in August 2009 of a probable mumps outbreak in a summer camp attended by Orthodox Jewish boys from the Borough Park neighborhood in NYC. Mumps subsequently spread to multiple locations after the camp attendees returned home. As of February 26, 2010, there are over 1000 confirmed or probable cases in NYC and additional suspect cases are under investigation. 321 probable and confirmed cases have been reported in Rockland County, and 670 probable and confirmed cases have been reported in Orange County.

Sixty-seven per cent of New York State mumps cases have occurred in men or boys. Forty-one per cent of cases either did not have two doses of mumps containing vaccine or had unknown vaccination status, while the remaining 59% had two or more documented doses of mumps containing vaccine. More than 97% of mumps cases have occurred in members of the Orthodox Jewish community.

Mumps outbreaks have also been reported in New Jersey, Connecticut, Quebec, Canada, and Jerusalem, Israel in communities that have ties to the New York outbreaks. In recent history, mumps has been introduced to geographic locations not previously affected by the outbreak during times of travel and religious holidays. The Jewish religious holiday Passover will begin on the evening of Monday, March 29th, 2010 and will continue for 8 days until the evening of Tuesday, April 6th. It is anticipated that some travel may occur prior to and during this holiday.

MUMPS EPIDEMIOLOGY

Mumps is an illness characterized by acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary glands, lasting 2 or more days, and without other apparent cause. Rare complications of mumps include orchitis, mastitis, oophoritis, deafness, and encephalitis. The infectious period for mumps is from 2 days before onset of symptoms to 5 days after symptoms appear. The incubation period for mumps from exposure to onset of illness ranges from 12-25 days.

Mumps is spread via large respiratory droplets. A contact is an individual who had face-to-face contact, within three feet of a presumed mumps case, or an individual who had direct contact with the case's respiratory secretions.

Children who are not fully vaccinated against mumps are at the highest risk of infection. Individuals who have received two doses of mumps vaccine (preferably as MMR) are at significantly lower risk of developing mumps **but outbreaks have been seen among fully vaccinated individuals.**

Acceptable evidence of immunity includes two doses of mumps-containing vaccine (preferably MMR vaccine), *or* laboratory evidence of immunity (presence of mumps IgG antibodies on serological testing) *or* documentation of physician-diagnosed mumps for the following groups:

- School children age 4-18 years of age
 - The first dose is given at age 12-15 months
 - The second dose is given at age 4-6 years
- Adults attending university or other post-high school academic institutions
- Health care workers born on or after January 1, 1957

Under *routine* conditions, one dose of mumps-containing vaccine *or* laboratory evidence of immunity *or* documentation of physician-diagnosed mumps is acceptable evidence of immunity for the following groups:

- Children age 1-4 years
 - *Under outbreak conditions*, an early second dose can be offered for children age 1-4 years who may have been exposed to mumps and lack other evidence of immunity to mumps
- Adults age 19 years or older who were born on or after January 1, 1957
 - *Under outbreak conditions*, a second dose should be considered for adults who may have been exposed to mumps and have only ever received 1 dose of MMR and lack other evidence of immunity
- Health care workers born prior to 1957
 - *Under outbreak conditions*, a second dose is recommended for health care workers born prior to 1957 who may have been exposed to mumps and have only ever received 1 dose of MMR and lack other evidence of immunity

Adults born before 1957 that are not health care workers are presumed to be immune to mumps under routine conditions. However, *under outbreak conditions*, a first dose of mumps containing vaccine should be considered for adults born before 1957 who may have been exposed to mumps and lack evidence of immunity.

MUMPS DIAGNOSIS

The diagnosis of mumps is usually suspected based on clinical manifestations, in particular the presence of parotitis. Though other viruses can cause parotitis, in an outbreak setting the cause is almost always mumps. Serology is the most common method used to diagnose mumps.

Diagnosis is made by finding a positive mumps IgM antibody or a significant increase in IgG antibody between acute and convalescent specimens. In those who are previously immunized against mumps, a positive IgM may not be seen. Mumps virus can be isolated from the buccal mucosa, the preferred clinical specimen. If virus isolation is attempted, the specimen should be collected within the first 5 days of illness.

Lab specimens should be collected to confirm mumps. Serology specimens for mumps IgM and IgG titers should be collected at the acute presentation. Convalescent serum samples for mumps may need to be collected 2-3 weeks after symptom onset. A buccal swab should also be collected as a viral specimen at the time of acute presentation and within the first 5 days of illness after the onset of parotitis. Please note, serum IgM may be negative in up to 50-60% of acute serum samples among patients who have been previously immunized. **A diagnosis of mumps in a vaccinated person should not be ruled out on the basis of a negative IgM alone.**

RECOMMENDATIONS

NYSDOH is requesting that medical providers be alert to the possibility of the importation of mumps into areas not previously affected by this outbreak.

- Providers should consider and test for mumps in patients with appropriate symptoms at their facilities and affiliated clinics, regardless of their vaccination status. Patients who present with signs and symptoms consistent with mumps (i.e., parotitis, jaw pain, fever, orchitis) should be isolated for 5 days and testing for mumps should be sent. Such

patients should be specifically advised not to travel for 5 days following onset of symptoms. Careful history, including travel abroad or to NYC, New Jersey, Connecticut, Quebec or exposure to travelers should be obtained.

- Patients who may be at risk of being exposed to mumps through travel and are not fully immunized against mumps should be offered MMR vaccination prior to travel.
- Susceptible close-contacts who work in or attend schools or day cares should be excluded for 25 days after exposure or until they are vaccinated. Although mumps vaccination does not prevent mumps in persons already infected, it will prevent infection in those persons who are not yet infected.
- In healthcare settings, suspect mumps cases should be given a mask to wear; healthcare providers should institute standard and droplet precautions. Exposed healthcare workers who have never been vaccinated against mumps and do not have evidence of immunity prior to exposure should stay home from days 9 through 25 after exposure, even if they receive a 1st dose of mumps containing vaccine after exposure to mumps. Those healthcare personnel who previously received only one dose of mumps containing vaccine may continue working following an unprotected exposure to mumps. Such workers should receive a 2nd dose as soon as possible, but no sooner than 28 days after the first. Healthcare personnel who have evidence of immunity do not need to be excluded from work following an unprotected exposure.

REPORTING

Clinically suspect cases of mumps must be reported to the LHD. Reports should be made at time of initial clinical suspicion. If you are considering the diagnosis of mumps and are ordering diagnostic testing for mumps, then you should report the case at that time. By notifying the LHD, as required, the LHD can facilitate obtaining rapid results and institution of control measures, if indicated.

ADDITIONAL INFORMATION

For additional information on mumps outbreak control measures, clinical presentation and diagnostic tests please refer to the CDC website at:

<http://www.cdc.gov/vaccines/vpd-vac/mumps/outbreak/default.htm#faq>

For any additional questions, please call your local health department or the NYSDOH Bureau of Immunization at 518-473-4437.