



NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE

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Commissioner

Corrected Alert # 25: Measles in Brooklyn

- 1) 11 cases of measles have been identified in Brooklyn.**
- 2) All clinically suspect cases of measles (febrile illness accompanied by generalized maculopapular rash) must be reported immediately (prior to laboratory confirmation) to the New York City (NYC) Department of Health and Mental Hygiene (DOHMH) at (212) 676-2288 or -2313 (weekdays 9 am to 5 pm). After hours and weekends, please call Poison Control 212-764-7667.**
- 3) Suspect cases of measles must be placed in airborne isolation immediately.**
- 4) Appropriate clinical specimens should be sent to the NYC DOHMH Public Health Laboratories for testing.**
- 5) Children should receive their first dose of MMR vaccine at 12 months of age.**

Please Distribute to All Primary Care Staff, Infectious Disease, Emergency Medicine, Internal Medicine, Pediatrics, Family Medicine, Laboratory Medicine and Infection Control Personnel

July 2, 2009

Dear Colleagues

Since May 6, 2009, the New York City Department of Health and Mental Hygiene (NYC DOHMH) has confirmed 11 cases of measles and are currently investigating an additional suspect case. Cases have ranged in age from 8 months to 4 years, as well as two adults. Most of the cases have had close contact with each other, in one instance, transmission may have occurred in a physician's waiting room. All of confirmed cases have been either unvaccinated, or not fully vaccinated, against measles. None of the cases have a history of international travel or known exposure to travelers. Virus isolated from several cases has been identified as the same strain of measles virus currently circulating in Europe. All of the cases to date have occurred in the Williamsburg and Borough Park sections of Brooklyn. We are asking providers to consider measles when seeing patients with compatible illness, to immediately report suspect cases and immediately institute appropriate infection control measures.

Measles has not been endemic in the United States since 2000. In New York City, cases related to travel to other parts of the world, including the United Kingdom, where measles is still endemic are routinely identified. In 2008, New York City experienced its largest outbreak of measles since the early 1990s. This outbreak occurred predominately among children 12-15 months of age who had not yet been vaccinated.

Measles is an acute viral illness characterized by a prodrome of fever (101°–105°F), cough, coryza, and, or, conjunctivitis, followed by rash. The measles rash is erythematous, maculopapular and lasts 5-6 days. It usually starts on the face and proceeds down the body to involve the extremities last, including the palms and soles. The maculopapular rash is usually discrete but may become confluent on the upper body. The rash resolves in the same order that it

appeared. Koplik's spots (punctate blue-white spots on the bright red background of the buccal mucosa) may be present but are often not seen and are not required for the diagnosis of measles. Complications such as diarrhea, otitis media and pneumonia are frequent in young children.

The diagnosis is confirmed by the serologic testing (ELISA or EIA) of a blood sample for measles-specific IgM antibody. Because IgM may be negative in the first 72 hours after rash onset, negative IgM results in these patients should be repeated after 72 hours. The IgM response is detectable for approximately one month after rash onset; the IgG response persists for years. **We strongly recommend that IgM testing be submitted to the NYC DOHMH, Public Health Laboratory (PHL) for testing.** The PHL is capable of obtaining rapid IgM results, within 12-24 hours. By notifying NYC DOHMH, as required, we can facilitate obtaining rapid results and institution of control measures, if indicated. In clinically compatible cases the NYC DOHMH will arrange testing to isolate virus from nasopharyngeal aspirates or throat swabs.

Measles is spread via airborne transmission and direct contact with infectious droplets. **Cases of fever and rash illness should immediately be placed in airborne isolation.** If an airborne infection isolation room is not available, then the exam room used to isolate a suspect measles case should not be used for two hours after the case leaves the room. Measles vaccination should be administered to susceptible contacts of a measles patient within 72 hours of exposure and may offer some protection. Immune globulin is indicated for susceptible household or other close contacts of patients with measles, particularly contacts younger than 1 year of age, pregnant women and immunocompromised persons, for whom risk of complications is highest. Immune globulin should be given within 6 days of exposure, to prevent or modify measles. Note that immune globulin should not be given to household contacts who have received 1 dose of vaccine at 12 months of age or older unless they are immunocompromised; these contacts should receive a second dose of MMR. The recommended dose for immune globulin is 0.25mL/kg of body weight intramuscularly; immunocompromised children should be given 0.50 mL/kg. Use of immune globulin will necessitate delay in administration of live-virus vaccines (measles-mumps-rubella and varicella) for 5-6 months.

The successful initiation of measles post-exposure prophylaxis (PEP) requires rapid intervention. One of the major delays in institution of measles PEP is delayed reporting. **Clinically suspect cases of measles must be reported immediately to the NYC DOHMH.** Reports should be made at time of initial clinical suspicion. If you are considering the diagnosis of measles and are ordering diagnostic testing for measles then you should report the case at that time. This will allow NYC DOHMH to arrange for rapid measles IgM testing.

Specimens should be collected on all suspected cases and delivered to the NYC DOHMH Public Health Laboratory at 455 1st Ave, New York, NY 10016. During weekdays from 9 AM to 5 PM, the specimens should be dropped off at the Central Specimen Receiving and Shipping Unit, Room 136 (for questions about specimen collection call: 212-447-6112 or -6156). After business hours and on weekends, delivery of measles specimens should be done in conjunction with the DOHMH on-call physician reached via Poison Control 212-764-7667. Blood samples for testing should be drawn into red-topped vacutainer tubes (no additives) and centrifuged. They can be stored overnight in a refrigerator (not frozen!), if necessary. Urine samples, nasopharyngeal aspirates and throat swabs can also be refrigerated overnight.

Blood samples should be transported to the lab on ice. Shaking and thawing should be avoided because they lead to hemolysis. Notify the Bureau of Immunization at the numbers given below.

Fever/rash illness may also be caused by other infections that are also contagious and require isolation; two examples are rubella and varicella zoster virus infection. A high index of suspicion must be maintained to avoid transmission to other patients.

NYC DOHMH strongly recommends that children receive their first dose of MMR vaccine at 12 months of age. Delaying MMR vaccination prolongs the period that children are susceptible to measles infection and increases their risk of becoming infected. More than 80% of measles patients identified since May were eligible for measles vaccination, but had not been vaccinated and therefore, their infection could have been prevented. These children can in turn infect those who are not eligible for vaccination such as children < 12 months and the immunocompromised. Two doses of MMR are required to be considered fully vaccinated.

In summary:

- 1) Report all suspect measles cases (febrile illness accompanied by generalized maculopapular rash) immediately (DO NOT WAIT FOR LABORATORY CONFIRMATION) to the Bureau of Immunization at 212-676-2288, 212-676-2313, or if after hours to Poison Control 212-764-7667.**
- 2) Place all patients with suspected measles in airborne isolation immediately.**
- 3) Obtain clinical specimens for diagnostic testing from blood (for both IgM and IgG to measles), urine, nasopharyngeal aspirates, or throat swabs, and send for testing at the NYC DOHMH Public Health Laboratory.**
- 4) Offer measles vaccine or immune globulin to susceptible exposed contacts.**
- 5) Assure that all those eligible for MMR vaccine receive appropriate and timely vaccination.**

Please contact the Bureau of Immunization if you have any questions (during business hours: 212-676-2288; after hours, contact the Poison Control Center at 212-764-7667). As always, your cooperation is greatly appreciated.

Sincerely,

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