



NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE
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Commissioner

February 24, 2014

ALERT # 4: Six Cases of Measles in New York City

- 1) **Six cases of measles have occurred in children and adults since February 5, 2014 in Manhattan.**
- 2) **A large number of exposures have occurred, and additional cases are expected.**
- 3) **Suspect measles and immediately institute airborne precautions for patients with fever and rash.**
- 4) **If you suspect measles, even if you do not have laboratory confirmation, report the case immediately to the Health Department.**
- 5) **If you suspect measles, collect specimens, and send to the Health Department for testing.**
- 6) **Ensure that all patients and health care workers are up to date with measles-mumps-rubella (MMR) vaccine.**

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

Dear Colleagues,

Six cases of measles have occurred in Manhattan since February 5, 2014. No cases have been hospitalized or died. Two cases were exposed to a known case of measles who was visiting from outside of New York. Four cases had no travel history or known exposures, suggesting unrecognized exposures and secondary spread. Cases include 3 children and 3 adults. Among the children, two were aged <1 year and, therefore, too young to have been vaccinated; one was unvaccinated due to parental refusal. The 3 adults ranged in age from 34 years to 63 years. Although the adults all thought that they had been vaccinated, they did not have documentation of their vaccination status.

Delays in considering the diagnosis of measles and in instituting airborne isolation have contributed to several hundred individuals being exposed in NYC. Measles is one of the most contagious diseases. Although most of the population is immune, even one case of measles puts non-immune individuals at risk for becoming infected, particularly young children and the immunocompromised, both of whom are at highest risk for severe complications.

Clinical Presentation

Always consider measles when evaluating patients with fever and rash. Measles presents in adults and children as an acute viral illness characterized by fever (>101°F) and generalized maculopapular rash. The prodrome may include fever, cough, coryza, and conjunctivitis. Koplik's spots (punctate blue-white spots on the buccal mucosa) are rarely seen. The rash

usually starts on the face, proceeds down the body, may include the palms and soles, and appears discrete but may become confluent. The rash lasts several days. Complications may include diarrhea, otitis media, pneumonia, encephalitis, and death.

Transmission and Infection Control

Measles is transmitted by airborne particles, droplets, and direct contact with the respiratory secretions of an infected person. Infected individuals are contagious from four days before rash onset through the fourth day after rash appearance. Suspect cases should be placed on airborne isolation immediately. If a negative pressure room is not available, place the suspect case in an exam room with a mask. No susceptible individuals should be allowed in that room for 2 hours after the patient has left. Contacts who are exposed and who are not immune to measles must stay home through 21 days after the last exposure during the time that they are at risk for getting sick and being contagious.

Reporting

Suspected cases of measles should be reported immediately to the Department of Health and Mental Hygiene (DOHMH) at 866-692-3641. Reports should be made at time of initial clinical suspicion. **If you are considering the diagnosis of measles and are ordering diagnostic testing, then you should report the case at that time.** Do not wait for laboratory confirmation to report.

Laboratory Testing

Collect blood for measles IgM and IgG, and collect a nasopharyngeal or throat swab for measles PCR. When you call DOHMH to report the suspected case, we will arrange pick-up and transport of the specimens to the DOHMH laboratory. Measles IgM results from blood specimens collected within the first 72 hours after rash onset may be falsely negative and should be repeated before excluding the diagnosis. The IgM remains positive for about one month after rash onset. **Reporting suspected cases of measles enables access to rapid testing through the DOHMH laboratory.** Collect blood in red, red-speckled, or gold-top blood collection tubes, and if possible, centrifuge and separate. Swabs should be synthetic (non-cotton) in liquid, viral transport media. Refrigerate specimens after collection and transport on ice.

Post-exposure Prophylaxis

Non-immune individuals aged 6 months and older who are eligible for vaccination should receive MMR vaccine within 72 hours of exposure to prevent disease. MMR given to infants aged 6 to 11 months will not count as a valid dose; such infants will need to be revaccinated at age 12 months, as long as 28 days has passed since the last dose. Persons who received 1 dose of measles-containing vaccine before exposure should receive a second dose, provided it has been at least 28 days since the previous dose.

Immune globulin (IG), not MMR vaccine, should be given as post-exposure prophylaxis to non-immune individuals who are exposed to measles and at high-risk for complications, including: infants aged <6 months, infants aged 6 to 12 months who did not receive MMR within 72 hours of exposure, pregnant women who are not immune to measles and severely immunocompromised persons. IG should be given as soon as possible and no later than 6 days after exposure to prevent or modify measles. The recommended dose for IG for infants aged <12 months is 0.5 mL/kg of body weight of IG given intramuscularly (IGIM) (maximum dose = 15 mL). Pregnant women not immune to measles and immunocompromised persons and should

receive 400 mg/kg of IG given intravenously (IGIV). Administration of MMR or varicella vaccines needs to be delayed by 6 months after the administration of IGIM and by 8 months after IGIV.

Evidence of Immunity

Immunity to measles includes: documented receipt of two measles containing vaccines, a positive measles IgG titer, or birth prior to 1957. Self-reported vaccination does not constitute evidence of immunity.

All health-care providers are required to have documented evidence of immunity to measles. Consider administering 2 doses of MMR to unvaccinated healthcare workers born prior to 1957 who lack laboratory evidence of measles immunity.

MMR is routinely recommended for children at 12 months of age with a second dose at 4 to 6 years of age. A second dose can be administered as early as 28 days after a previous dose. MMR is contraindicated in immunocompromised individuals and pregnant women as well as those who have a history of previous severe allergic reaction to a previous dose of MMR or vaccine components. **Allergy to eggs is not considered a contraindication to MMR vaccine.** Women who are breastfeeding may receive MMR vaccine.

Travel recommendations

Providers should assure that adults and children aged greater than 12 months who are traveling outside the U.S. have documented immunity to measles. Adults who believe they received their childhood vaccinations but who do not have documented immunity to measles should be vaccinated against measles prior to travel. Children between 6 and 12 months of age who will be travelling internationally are also recommended to receive a dose of MMR vaccine before travel, although this dose does not count towards completion of the routine schedule.

Treatment

In general, supportive measures are sufficient. Vitamin A supplementation may be considered for children 6 month to 2 years of age who are hospitalized for measles.

Contact DOHMH at 866-692-3641 if you have questions or to report a case. For immediate consultation regarding a case, you can also call 347-396-2402 during business hours. As always, your cooperation is appreciated.

Sincerely,

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