



NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE
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Commissioner

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ALERT # 23: Update on Measles in New York City

- 1) Four cases of measles have been confirmed in NYC in July, resulting in hundreds of exposed persons.**
- 2) More measles cases may occur during the summer due to international travel.**
- 3) Screen for rash and fever at the point of entry into clinics and healthcare facilities and immediately isolate with airborne precautions.**
- 4) Report suspected cases immediately to the Health Department. Reports must be made at time of initial clinical suspicion. Do not wait for laboratory confirmation to report.**
- 5) Vaccinate infants aged 6 to 11 months with MMR before international travel.**

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

Dear Colleagues,

Four cases of measles have been confirmed in New York City (NYC) in July. Three cases were internationally imported from China, Djibouti, and Europe, and the fourth case acquired measles on the airplane from the passenger with measles that came from China. Two cases occurred in adults of whom one had unknown vaccination status and the other had documentation of having received two measles-containing vaccines. The other two cases were unvaccinated infants. Three cases were hospitalized. Complications included one patient with pneumonia and hepatitis and another with hepatitis. No cases died.

Delays in considering the diagnosis of measles and in instituting airborne isolation contributed to several hundred individuals being exposed in NYC. Measles is one of the most contagious infectious 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 typically presents in adults and children as an acute viral illness characterized by fever and generalized maculopapular rash. The prodrome may include cough, coryza, and conjunctivitis. Koplik's spots (punctate blue-white spots on the buccal mucosa) are occasionally 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. A person who had some degree of immunity to measles before infection (e.g. babies <1 year who passively acquired some maternal antibody and previously vaccinated persons who had waning immunity) may have more mild symptoms or certain classic symptoms may be absent. Complications may include diarrhea, otitis media, pneumonia, hepatitis, 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. Patients should be screened for rash with fever at the point of entry into a healthcare facility and should be isolated with airborne precautions immediately. If a negative pressure room is not available, place the suspect case in an exam room with a mask, and do not use that room for 2 hours after the patient has left.

Reporting

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

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, DOHMH 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 may need to be repeated before excluding the diagnosis. The IgM remains positive for about one month after rash onset. Reporting suspected cases of measles to the DOHMH enables access to rapid testing. 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 nonimmune 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 given intramuscularly (IGIM) (maximum dose = 15

mL). Pregnant women not immune to measles and immunocompromised persons 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.

Exposed people who are not immune to measles and who do not receive post-exposure prophylaxis must stay home through 21 days after last exposure, during the time that they are at risk for getting sick and being contagious. Because IG prolongs the incubation period, people who receive IG must stay home through 28 days after last exposure.

Evidence of Immunity

Presumptive evidence of 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 before 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 ensure 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 may be administered to children who are hospitalized for measles (see dosing for measles at www.redbook.solutions.aap.org).

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. Additional resources can be found at: www.nyc.gov/html/doh/html/diseases/immmea-hcp.shtml. As always, your cooperation is appreciated.

Sincerely,

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