



NEW YORK CITY DEPARTMENT OF  
HEALTH AND MENTAL HYGIENE  
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*Commissioner*

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**ALERT # 9: Measles in New York City**

- 1) **Five cases of measles occurred in Borough Park, Brooklyn in the past month. A large number of exposures occurred in the community, and additional cases are expected to be identified.**
- 2) **Providers are reminded to consider the diagnosis of measles in clinically compatible cases, immediately report and isolate suspect cases, and vaccinate children and adults.**

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

Dear Colleague:

Five confirmed cases of measles were reported to the New York City (NYC) Department of Health and Mental Hygiene (DOHMH) over the past month. A large number of exposures occurred in the community and additional suspected cases are being investigated. All confirmed cases were from Borough Park, Brooklyn and were unvaccinated. Cases ranged in age from 10 months to 23 years. The index case was imported from London.

DOHMH reminds providers to:

- Consider measles in patients of any age presenting with fever and rash
- If you see a patient who may have measles, report the case to the Health Department **immediately** at 347-396-2402 weekdays 9-5 pm or to 212-764-7667 after hours. Note that you should not wait for laboratory confirmation before reporting.
- Collect specimens for diagnostic testing from suspect cases.
- Institute immediate airborne precautions for patients with febrile rash illness.
- Ensure that all children and adults are up to date with measles-mumps-rubella (MMR) vaccine. Vaccinate children routinely with the first dose of MMR at age 12 months and the second dose at age 4 to 6 years. Do **not** delay vaccination. Delaying initiation of MMR vaccination increases the number of susceptible individuals, puts children at unnecessary risk of infection, and increases the likelihood of measles outbreaks.
- Identify patients in your practice who are not up to date for MMR and recall those over 12 months of age who have not yet received a dose of MMR vaccine.
- Ensure all health care workers are immune to measles.

Clinical Presentation

Providers should consider measles when evaluating patients with febrile rash illness. In both adults and children, measles presents clinically as an acute viral illness characterized by fever (>101°F) and generalized macular papular 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 lasts 5-6 days, usually starts on the face and proceeds down the body (including the palms and soles), and begins as discrete lesions but may become confluent. Complications may include diarrhea, otitis media, pneumonia, encephalitis, and death.

### Transmission and Infection Control

Measles is transmitted via airborne droplets and through 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 in 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 DOHMH at 347-396-2402 (weekdays 9 am to 5 pm) or to Poison Control: 212-764-7667 (after hours and weekends). Reports should be made at time of initial clinical suspicion. **If you are considering the diagnosis of measles and are ordering diagnostic testing, then report the case at that time.** Do not wait for laboratory confirmation to report.

### Laboratory Testing

A positive measles IgM titer is sufficient for confirming the diagnosis. Specimens collected within the first 72 hours after rash onset may be falsely negative for measles IgM and should be repeated prior to excluding the diagnosis. The IgM remains positive for about one month after rash onset; the IgG response persists for years. Most measles IgM testing in NYC is sent to outside laboratories and may take up to a week for results. **Reporting suspected cases of measles enables access to rapid testing through the DOHMH Public Health Laboratory.** Collect blood in red, red-speckled or gold-top blood collection tubes, and if possible, centrifuge and separate. The blood can be refrigerated overnight. In clinically compatible cases, DOHMH can arrange for PCR and viral culture testing from nasopharyngeal aspirates, nasopharyngeal swabs, or throat swabs. 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 as post-exposure prophylaxis 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.

Recommendations for use of immune globulin (IG) have recently changed. IG should be given within 6 days to susceptible individuals exposed to measles and who are at high-risk for complications, including: infants aged <6 months, infants aged 6 to 12 months who do not receive MMR within 72 hours, immunocompromised persons, and pregnant women who are not immune to measles. IG prevents or modifies measles. The recommended IG dose for infants

aged <12 months is 0.5 mL/kg of body weight of IG given intramuscularly (IGIM) (maximum dose = 15 mL). Immunocompromised persons and pregnant women not immune to measles 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 to children at 12 months of age with a second dose at 4-6 years of age. A second dose can be administered as early as 28 days after a previous dose. MMR is contraindicated in immune compromised 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 six and twelve months of age who will be travelling internationally are also recommended to receive a dose of MMR vaccine prior to 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 hospitalized for measles.

Please call the DOHMH if you have questions (business hours: 347-396-2402; after hours, contact the Poison Control Center at 212-764-7667). As always, your cooperation is appreciated.

Sincerely,

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