



# Department of Health

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October 22, 2018

**To:** Providers, Hospitals, Emergency and Primary Care Departments, and Local Health Departments

**From:** New York State Department of Health, Bureau of Immunization

## **HEALTH ADVISORY: MEASLES EXPOSURES IN NEW YORK STATE**

**Please distribute to the Chief Medical Officer, Infection Control Department, Infectious Disease Department, Pediatric Department, Director of Nursing, Emergency Department, Primary Care Clinics, and all patient care areas.**

### **UPDATE TO MEASLES ADVISORY**

- To date in October, New York City has identified 8 confirmed cases of measles in children in the Orthodox Jewish community of Williamsburg, Brooklyn. The initial case and one other case was associated with recent travel to Israel.
- To date, Rockland County has identified 11 confirmed cases of measles in both children and adults. Onsets of rash are between 10/1/18 and 10/16/18.
  - Six of the index cases are associated with travel to Israel since 9/28/18 where there is an ongoing outbreak and five are secondary cases associated with exposures in the community.
- The Rockland County Health Department staff is investigating multiple suspected cases and there is a high probability of additional cases.
  - Multiple exposure sites have been identified in the community including six schools where exposed and non-immune children have been excluded.
- **Due to the outbreak Rockland County healthcare providers should:**
  - Offer MMR vaccine at the earliest opportunity to all eligible patients 12 months and older who have no evidence of measles immunity as defined below.
  - Offer a second dose of MMR vaccine to eligible patients aged 1-3 years who have previously received one dose. The second dose must be a minimum of 28 days after the first dose.
  - Consider offering an MMR vaccine to all infants 6-11 months of age without contraindications. This dose will not count toward the routine 2-dose schedule. Child will need to be revaccinated at 12-15 months of age and again at 4-6 years of age for a total of 3 doses.
- Providers should remain vigilant for patients who present with fever and rash. Please see guidance below.

### **SUMMARY**

- Individuals who were exposed and not immune to measles, as defined below, could develop signs and symptoms of measles 7-21 days after exposure.
- Postexposure prophylaxis for measles is recommended for those without evidence of immunity as follows: MMR vaccine can be given to eligible exposed individuals within 72 hours of exposure OR immune globulin can be administered within 6 days of exposure.

- Healthcare providers should have **a high index of suspicion in patients who present with symptoms consistent with measles**. To expedite public health containment strategies, providers should implement appropriate infection control measures, including airborne isolation, when measles is suspected and NYS providers should **report immediately to the local health department (LHD)** where the patient resides to facilitate specimen collection and appropriate follow-up.
- Measles remains a common disease in many parts of the world and is introduced into the United States through frequent international travel. There are ongoing measles outbreaks occurring in multiple countries in South America, Europe, South America, Asia, and Africa. Healthcare providers should ensure that all patients are up-to-date with age appropriate MMR (measles, mumps, rubella) vaccination. **Providers should offer MMR vaccine to patients without documentation of vaccination or other evidence of measles immunity. This is important to provide protection from potential future exposure.**

## MEASLES EPIDEMIOLOGY

Measles can be severe and is highly infectious; following exposure, up to 90% of susceptible persons develop measles. It is spread by airborne contact with an infected person through coughing and sneezing. Measles virus can remain active and contagious for up to 2 hours in the air or on surfaces. The time from exposure to rash onset averages 14 days with a range of 7 to 21 days. Persons with measles are infectious from 4 days before to 4 days after rash onset.

## CLINICAL FEATURES

Measles is characterized by a prodrome of fever (101–105 degrees F) followed by cough, coryza, and/or conjunctivitis. An erythematous, maculopapular rash presents 2-4 days later and lasts 5-6 days. It usually starts on the face and proceeds down the body to involve the extremities last and may include the palms and soles. The rash is usually discrete but may become confluent on the upper body; it 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, often before the rash develops, but are often not seen and are not required for the diagnosis of measles.

## REPORTING DETAILS

**Health care providers should increase their index of suspicion for measles in clinically compatible cases. In NYS, the LHD should be notified of any suspect case immediately.** Reports should be made at the time of initial clinical suspicion. If the diagnosis of measles is being considered and diagnostic testing for measles is ordered, then the case should be reported at that time. LHDs should also be notified of discharge plans from the healthcare setting. This is especially important if the case lives in a multifamily dwelling, dormitory, group home or has young children at home.

## INFECTION CONTROL

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 2 hours after the case leaves the room and the number of people entering and leaving should be minimized. When transporting a patient through the hospital, the

patient should be masked. If possible, elevators and corridors should not be used for two hours after the patient has passed through them. If possible, any procedures required for the patient should be performed in the patient's room or delayed until the patient is no longer infectious. **If a suspect measles case, being evaluated as an outpatient, needs to be sent to a hospital emergency room, the emergency room should be notified ahead so that appropriate infection control precautions can be implemented upon arrival.**

## LABORATORY TESTING

**Viral specimens (throat or nasal-pharyngeal swab and urine) and serology (IgM and IgG) should be obtained for diagnostic testing and confirmation.** Use of commercial laboratories for measles testing may take up to a week to obtain results. **Reporting suspected cases of measles enables access to rapid testing through the NYS Wadsworth Center Laboratory.** The LHD can assist in arranging testing at the Wadsworth Center Laboratory. Viral specimens that result in a positive PCR or culture will be forwarded to CDC for confirmation and genotyping.

## MEASLES POST-EXPOSURE PROPHYLAXIS (PEP)

The successful initiation of measles PEP requires rapid intervention. LHDs can assist with the proper PEP recommendations and infection control measures. Measles vaccination should be administered to susceptible contacts of a measles patient within 72 hours of exposure and may offer protection. Immune globulin is indicated for susceptible household or other close contacts of patients with measles, particularly those contacts younger than 1 year of age, pregnant women and/or immunocompromised persons, for whom risk of complications is highest. Immune globulin should be given within 6 days of exposure to prevent or lessen the severity of measles.

## MEASLES IMMUNITY

Acceptable presumptive evidence of immunity to measles includes:

- Born prior to 1957; or
- **Written documentation** of age-appropriate vaccination with 2 doses of measles-containing vaccine separated by at least 28 days for school-aged children (grades K-12) and adults at high risk for exposure and or transmission (i.e., healthcare personnel, students at post-high school educational institutions, and international travelers); or
- **Written documentation** of age-appropriate vaccination (i.e., aged  $\geq 12$  months) with at least 1 dose of measles-containing vaccine for preschool-aged children and adults who are not considered high risk; or
- Laboratory evidence of immunity; or
- Laboratory confirmation of disease.

## VACCINE RECOMMENDATIONS

### Children $\geq 12$ months, Adolescents, and Adults

- All children should receive an MMR vaccine at 12 – 15 months of age. The second dose of MMR is routinely administered at age 4 – 6 years typically before entering kindergarten but may be administered as soon as 28 days after the first dose. **Vaccination should be provided at the earliest opportunity** based on the ACIP recommended schedule.
- **Children over one year of age who have received one dose of MMR vaccine and who have recently been exposed to measles infection or are planning travel**

**outside the U.S. should receive a second dose as soon as possible, as long as 28 days have passed since the first dose.** Second doses of MMR are valid as long as they are administered after 12 months of age and at least 28 days after the first dose was administered.

- Anyone who lacks proof of measles immunity, as defined above, should receive at least one dose of MMR vaccine. Two appropriately spaced doses of MMR vaccine are recommended for health-care personnel, college students, and international travelers.

#### **Children 6–11 months of age who are traveling outside the U.S.**

- Should receive one dose of MMR vaccine prior to international travel.
- MMR vaccine given before 12 months of age should not be counted as part of the routine series. Children who receive MMR vaccine before age 12 months will need two more doses for a total of three doses, the first of which should be administered at 12 – 15 months of age and the second at least 28 days later (typically at age 4 – 6 years or before beginning kindergarten).

#### **RESOURCES:**

##### **Contact Information:**

- County Health Department contact information:  
<http://www.nysacho.org/i4a/pages/index.cfm?pageid=37>
- New York State Department of Health, Bureau of Immunization: 518-473-4437

##### **Additional Information:**

- Complete information on MMR vaccine recommendations:  
<http://www.cdc.gov/mmwr/pdf/rr/rr6204.pdf>
- 2018 Immunization Schedules: <http://www.cdc.gov/vaccines/schedules/>
- The NYSDOH Measles Fact Sheet is available at:  
[http://www.health.ny.gov/diseases/communicable/measles/fact\\_sheet.htm](http://www.health.ny.gov/diseases/communicable/measles/fact_sheet.htm)
- Destination specific travel immunization information is available on the CDC's Travelers' Health website at: <http://wwwnc.cdc.gov/travel/destinations/list>
- For additional information on measles outbreak control measures, clinical presentation and diagnostic tests please refer to the CDC website at:  
<http://www.cdc.gov/vaccines/pubs/surv-manual/chpt07-measles.html>
- The NYSDOH Outbreak Control Manual is available at:  
[http://www.health.ny.gov/prevention/immunization/providers/outbreak\\_control\\_guidelines.htm](http://www.health.ny.gov/prevention/immunization/providers/outbreak_control_guidelines.htm)
- CDC Measles Cases and Outbreaks: <http://www.cdc.gov/measles/cases-outbreaks.html>
- CDC Measles Elimination: <http://www.cdc.gov/measles/about/faqs.html#measles-elimination>
- Measles photos: <http://www.immunize.org/photos/measles-photos.asp>