



MEMORANDUM

TO: Local Health Departments and Regional Offices of the Illinois Department of Public Health, Hospital Emergency Departments, Infectious Disease Physicians, Infection Control Professionals

FROM: Illinois Department of Public Health
Communicable Disease Control Section

DATE: February 11, 2015

SUBJECT: Measles Guidance for Clinicians

Current Situation

Ten cases of measles have been confirmed in Illinois this year. All cases reside in or are linked to a daycare in suburban Cook County. Onsets range from January 16 to February 7, 2015. Contacts to cases are being identified and actively monitored and additional cases may be identified. Since December 2014, measles infections have also been detected in several states throughout the country. The majority are associated with an ongoing measles outbreak linked to an amusement park in California. Currently, there is no evidence to suggest Illinois cases are linked to the ongoing outbreak in California. Healthcare providers should be aware of the potential for measles cases at their facility and the proper measles testing and isolation procedures.

Measles

Measles is a highly contagious respiratory disease caused by a virus, transmitted by direct contact with infectious droplets or by airborne spread when an infected person breathes, coughs, or sneezes. Measles virus can remain infectious on surfaces and in the air for up to two hours after an infected person leaves an area. Typically, measles starts with a fever, runny nose, cough, red eyes, and sore throat, and is followed by a rash that spreads all over the body. The symptoms of measles generally appear 7 to 14 days after a person is exposed; however, the incubation period ranges from 7 to 21 days. Patients are considered to be contagious from 4 days before to 4 days after the rash appears.

Consider measles in any patient with febrile rash illness and clinically compatible measles symptoms, who has recently traveled abroad, was born after 1957 and has not been vaccinated, or who has had contact with someone with a febrile rash illness. Immunocompromised patients may not exhibit rash or may exhibit an atypical rash. Photos of a patient's rash may be helpful in determining if it is characteristic of measles. Photos of measles and persons with measles can be found at <http://www.cdc.gov/measles/about/photos.html>.

What should clinicians do?

- Display signage in waiting rooms asking that all patients that come in with a fever and a rash alert the clinic staff immediately.
- Mask suspect measles patients immediately. If a surgical mask cannot be tolerated, other practical means of containment should be implemented (e.g., place a blanket loosely over the heads of infants and young children suspected to have measles when they are in common areas, such as hallways, as they are being placed in a room).
- Do not allow suspect measles patients to remain in the waiting area or other common areas; isolate them immediately in a negative pressure room if one is available. If such a room is not available, place patient in a private room with the door closed.
- For more infection prevention and control information see attached guidance document.
- Ask any patient with a febrile rash illness the following questions to assess risk:
 - Have you travelled outside of the country or has anyone visited you from outside the country?
 - Have you travelled anywhere in the United States? (*ask about domestic venues frequented by international travelers*)
 - Have you been exposed to anyone with measles in your community?
 - Have you received MMR vaccine before? (*for patients 6 months and older*)
- Notify your local health department immediately of any suspected case of measles. Measles testing can be performed at the Illinois Department of Public Health Laboratories in Springfield and Chicago, for highly suspected cases of measles. Your health department will arrange testing and advise on specimen collection and transport.
- Counsel patients suspected to have measles to remain at home with no visitors until testing is complete and they have been cleared by their physician. Note, patients who have had contact with a confirmed case and have symptoms consistent with measles should remain isolated regardless of lab results.
- Make note of the staff and other patients who were in the area during the time the suspect measles patient was in the facility and for two hours after the suspected case left the clinic. If measles is confirmed in the suspect case, exposed people will need to be assessed for measles immunity.

Reporting Recommendations

Clinicians should report suspected cases of measles to their local health department immediately by phone. The local health department should notify IDPH by phone as soon as possible, within 24 hours.

Testing Recommendations

Measles RT-PCR is the preferred method of testing for measles. It can be performed at the IDPH laboratory on respiratory specimens only and should be used in conjunction with serology testing at a commercial lab. Preauthorization from your local health department is required before submitting any specimen to IDPH for measles RT-PCR testing. Preferred specimens for measles RT-PCR testing include nasopharyngeal washes and nasopharyngeal or throat Dacron swabs collected in viral transport medium and stored at 4°C. Attempt to obtain the specimen as

soon as possible after the onset of the rash. Samples collected more than five days after rash onset have much lower chances of successful viral detection. Specimen collection and submission information can be found at http://www.dph.illinois.gov/sites/default/files/Manual_of_Services_OHP_LABS.pdf

Post-exposure Prophylaxis

People exposed to measles who cannot readily show that they have evidence of immunity** against measles should be offered post-exposure prophylaxis (PEP). MMR vaccine, if administered within 72 hours of initial measles exposure, or immunoglobulin (IG), if administered within six days of exposure, may provide some protection or modify the clinical course of disease.

MMR vaccine as post-exposure prophylaxis

If MMR vaccine is not administered within 72 hours of exposures as PEP, MMR should still be offered at any interval following exposure to the disease in order to offer protection from future exposures. People who receive MMR vaccine or IG as PEP should be monitored for signs and symptoms consistent with measles for at least one incubation period.

Except in healthcare and childcare settings, unvaccinated people who receive their first dose of MMR vaccine within 72 hours after exposure may return school or work. In childcare settings, unvaccinated people may not return to the daycare for 21 days after exposure, unless otherwise instructed by their local health department. Children vaccinated before their first birthday should be revaccinated when they are 12-15 months old and again when they are 4-6 years old, or at least 28 days after the first dose that was received after 12 months.

Immune Globulin (IG) as Post-Exposure Prophylaxis

People who are at risk for severe illness and complications from measles, such as infants younger than 12 months of age, pregnant women without evidence of measles immunity, and people with severely compromised immune systems, should receive IG. Intramuscular IG (IGIM) should be given to all infants younger than 12 months of age who have been exposed to measles. For infants aged 6 through 11 months, MMR vaccine can be given in place of IG, if administered within 72 hours of exposure. Because pregnant women might be at higher risk for severe measles and complications, intravenous IG (IGIV) should be administered to pregnant women without evidence of measles immunity who have been exposed to measles. People with severely compromised immune systems who are exposed to measles should receive IGIV regardless of immunologic or vaccination status because they might not be protected by MMR vaccine.

Please see attached immune globulin guidelines from IDPH for additional details.

Post-exposure Prophylaxis for Healthcare Personnel

If a healthcare provider without evidence of immunity is exposed to measles, MMR vaccine should be given within 72 hours, or IG should be given within 6 days when available. Exclude healthcare personnel without evidence of immunity from duty from day 5 after first exposure to day 21 after last exposure, regardless of post-exposure prophylaxis.

Healthcare Personnel Vaccination Recommendations

All persons who work in health-care facilities should have presumptive evidence of immunity to measles. This information should be documented and readily available at the work location.

Presumptive evidence of immunity to measles for persons who work in health-care facilities includes any of the following:

- Written documentation of vaccination with 2 doses of live measles or MMR vaccine administered at least 28 days apart
- Laboratory evidence of immunity (titer),
- Laboratory confirmation of disease, or
- Birth before 1957*

*Although birth before 1957 is considered as presumptive evidence of immunity, for unvaccinated HCP born before 1957 that lack laboratory evidence of measles immunity or laboratory confirmation of disease, health care facilities should consider vaccinating personnel with two doses of MMR vaccine at the appropriate interval.

Measles Vaccination

The best prevention for measles is vaccination; current CDC and ACIP guidelines for vaccination are as follows:

1. Administer a 2-dose series of MMR vaccine at ages 12-15 months and 4-6 years. The second dose may be administered before age 4 years, provided at least 28 days have elapsed after the first dose.
2. For those who travel abroad, CDC recommends that all U.S. residents older than 6 months be protected from measles and receive MMR vaccine, if needed, prior to departure.
 - a. Infants 6 through 11 months old should receive 1 dose of MMR vaccine before departure.
 - b. Children 12 months of age or older should have documentation of 2 doses of MMR vaccine (separated by at least 28 days).
 - c. Teenagers and adults without evidence of measles immunity, should have documentation of appropriately spaced doses of MMR vaccine.
3. Infants who receive a dose of MMR vaccine before their first birthday should receive 2 more doses of MMR vaccine, the first of which should be administered when the child is 12 through 15 months of age and the second at least 28 days later.

Additional Resources

For more information, including guidelines for patient evaluation, diagnosis and management, visit: <http://www.cdc.gov/measles/hcp/>

For additional infection control information, please see the CDC "Guideline for Isolation Precautions" at: <http://www.cdc.gov/hicpac/2007IP/2007isolationPrecautions.html>

For more information on healthcare personnel vaccination recommendations, visit: <http://www.cdc.gov/mmwr/pdf/rr/rr6007.pdf>

For more information on measles post-exposure prophylaxis, visit: <http://www.cdc.gov/measles/hcp/>