

April 19, 2024

Measles Exposure at The Children's Museum of Indianapolis

Summary

The Indiana Department of Health was notified of a measles exposure on April 8, the day of the Total Solar Eclipse, at the Children's Museum of Indianapolis. Clinicians should be vigilant for additional cases of measles and immediately report suspected cases of measles to the IDOH.

Measles is a highly contagious viral illness. Symptoms generally occur between 7 and 14 days. Exposed individuals who do not have evidence of immunity to measles should be encouraged to be vaccinated and should quarantine and monitor for signs and symptoms for 21 days after exposure (April 29). Appropriate infection control practices should be implemented in healthcare facilities when caring for patients suspected of having measles.

Reporting Cases of Measles

Per Indiana's Communicable Disease Rule, providers, hospitals, and laboratories must report measles **immediately upon suspicion**. Reports of measles can be made to the IDOH Infectious Disease Epidemiology and Prevention Division at 317-233-7125 during business hours (Monday – Friday, 8:15 a.m. – 4:45 p.m.) or 317-233-1325 after hours.

Transmission

- The measles virus spreads easily through contact with respiratory droplets and via airborne spread.
- The virus can remain airborne for up to 2 hours after an infectious person leaves an area.
- Measles is highly contagious. Up to 90% of susceptible people who have contact with someone with measles will develop measles.
- Patients are contagious starting 4 days before through 4 days after rash onset (with rash onset date being day zero).
- Anyone with measles should isolate during that time except to seek necessary medical care. If medical care is required, patients should call to notify the facility of their diagnosis in advance.

Symptoms

- Measles typically begins with prodromal symptoms of fever, malaise, and cough, coryza, or conjunctivitis (the "three C's") about 11-12 days after exposure (range: 7-21 days).
- Small spots of the buccal mucosa (Koplik spots) may develop about 2-3 days after symptoms first start.
- 3-5 days after prodromal symptoms begin, patients develop a maculopapular rash that usually begins on the face near the hairline and spreads down across the entire body. The rash may become confluent as it progresses and typically persists for 5-6 days before fading in the order it appeared.
- The patient's fever may spike to >104°F at the time the rash appears.

Laboratory Testing

Measles testing should be performed for patients who:

- Meet the clinical case definition for measles (generalized maculopapular rash; **and** fever $\geq 101^{\circ}$ F; **and** cough, coryza, or conjunctivitis) **AND**
- Within the 21 days prior to symptom onset, had an elevated risk of exposure to measles including:
 - Had a known exposure to measles, or
 - Traveled internationally or to an area with known measles cases, or
 - Had contact with someone with a febrile rash illness, particularly if those individuals had traveled internationally or to an area with known measles cases.

Clinicians should consult public health authorities regarding testing if:

- Measles is strongly suspected based on clinical presentation in patients with no known increased risk of measles exposure, particularly if the patient has no [evidence of immunity](#) to measles.
- Patients have had a known measles exposure and present with atypical signs or symptoms.

To avoid false positive results, testing is discouraged for patients with clinical presentation inconsistent with measles and no known increased risk of exposure to measles.

Testing for measles is available through the IDOH Laboratories **with prior authorization**. To request testing authorization, clinicians and laboratories should contact the IDOH Infectious Disease Epidemiology and Prevention Division at 317-233-7125 during business hours (Monday – Friday, 8:15 a.m. – 4:45 p.m.) or 317-233-1325 after hours.

Providers pursuing measles testing should collect specimens for both PCR testing (either a nasopharyngeal or throat swab) and serology (IgM, IgG). IDOH laboratory specimen collection and submission guidance is available at the links below:

- [Measles PCR](#)
- [Measles Serology](#)

Clinical Guidance

- There is no specific antiviral therapy for measles. Medical care is supportive to relieve symptoms and address complications. Severe measles cases among children, such as those who are hospitalized, should be treated with vitamin A per [CDC guidelines](#).
- For people exposed to measles who are not immune, MMR vaccine given within 72 hours of exposure or immunoglobulin (IG) given within 6 days of exposure may prevent or reduce the severity of measles infection. Recommendations and dosage vary by age and underlying health conditions. Clinicians should refer to [CDC guidance](#) for up-to-date post-exposure prophylaxis recommendations.
- Except in healthcare settings, unvaccinated persons who receive their first dose of MMR vaccine within 72 hours postexposure may return to childcare, school, or work. Exposed, susceptible individuals who do not receive MMR vaccine within 72 hours of exposure should quarantine for 21 days after exposure.



- All individuals exposed to measles should monitor for signs and symptoms for 21 days after last exposure. If symptoms develop, patients should seek medical attention and should call ahead before visiting a healthcare facility so that appropriate infection control precautions can be taken.

Infection Control

- Patients suspected of having measles should immediately be masked, if tolerated, and placed in an airborne infection isolation room (AIIR).
 - If an AIIR is not available, patients should be immediately placed in a single patient room with the door closed.
 - The room should not be used for at least 2 hours after the patient has left and should be disinfected before use by another patient.
- Facility infection prevention staff should be notified immediately of any suspected measles cases. If patients suspected of having measles must be transferred to another facility, contact the facility in advance so that appropriate infection control measures can be implemented.
- Staff caring for patients suspected of having measles should follow airborne precautions, including wearing an N95 respirator. Only healthcare providers with evidence of immunity to measles should provide care to patients suspected of having measles. Presumptive evidence of immunity for healthcare providers includes:
 - Written documentation of vaccination with 2 doses of live measles or MMR vaccine administered at least 28 days apart,
 - Laboratory evidence of immunity, or
 - Laboratory confirmation of disease

Clinician and Health Department Resources

Additional measles resources are available on the [IDOH website](#) and [CDC website](#).

Questions about measles may be directed to vaccine-preventable disease epidemiologists Makayla Culbertson (mculbertson@health.in.gov or 812-929-3361) or Tom Loftus (tloftus@health.in.gov or 317-914-2211).

