



Emergency Preparedness and Response

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Measles Exposure at a Large Gathering in Kentucky, February 2023 and Global Measles Outbreaks



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Summary

The Centers for Disease Control and Prevention (CDC) is issuing this Health Alert Network (HAN) Health Advisory to notify clinicians and public health officials about a confirmed measles case at a large gathering. On February 24, 2023, the Kentucky Department for Public Health (KDPH) identified a confirmed case of measles in an unvaccinated individual with a history of recent international travel. While infectious, the individual attended a large religious gathering on February 17–18, 2023, at Asbury University in Wilmore, Kentucky. An estimated 20,000 people attended the gathering from Kentucky, other U.S. states, and other countries during February 17–18, and an undetermined number of these people may have been exposed. This Health Advisory also highlights other recent large global measles outbreaks and associated U.S. importations, and the importance of early recognition, diagnosis, and appropriate treatment. CDC recommends that clinicians be on alert for cases of measles that meet the [case definition](#).

Background

Measles is a highly contagious, acute viral illness that begins with a prodrome of fever, cough, coryza (runny nose), and conjunctivitis (pink eye), lasting 2–4 days prior to rash onset. The rash typically occurs 3–5 days after symptoms begin and usually appears on the face and spreads downward. Measles can cause severe health complications, including pneumonia, encephalitis, and death. The virus is transmitted by direct contact with infectious droplets or by airborne spread when an infected person breathes, coughs, or sneezes. Measles virus can remain infectious in the air and on surfaces for up to two hours after an infected person leaves an area. Infected people are contagious from 4 days before the rash starts through 4 days afterwards. The incubation period for measles from exposure to fever is usually about 10 days (range, 7 to 12 days), and from exposure to rash onset is usually about 14 days (range, 7 to 21 days).

With declines in measles vaccination rates globally during the COVID-19 pandemic, measles outbreaks are occurring in all World Health Organization (WHO) Regions. Large outbreaks (≥ 20 reported measles cases per million population over a period of 12 months) have been reported in the European, African, Eastern Mediterranean, and Southeast Asian Regions. The United States has seen an [increase in measles cases](#) from 49 in 2021 to 121 in 2022, all among children who weren't fully vaccinated, including outbreaks in Minnesota and Ohio.

Recommendations for Healthcare Professionals

- Consider measles as a diagnosis in anyone with a febrile illness and clinically compatible symptoms (e.g., rash, cough, coryza, or conjunctivitis) who:
 - attended the Kentucky event during the exposure dates of February 17 or 18 or has had contact with an attendee.
 - has recently traveled abroad, especially to countries with ongoing [outbreaks](#).
- Immediately notify local or state health departments about any suspected case of measles to ensure rapid testing and investigation.
- Recommend MMR vaccine for patients who are unvaccinated or not fully vaccinated.

- Do not allow patients with suspected measles to remain in the waiting room or other common areas of the healthcare facility; isolate patients with suspected measles immediately, ideally in a single-patient airborne infection isolation room (AIIR) if available.
- Follow [CDC's testing recommendations and collect](#) either a nasopharyngeal swab, throat swab, or urine specimen for Reverse Transcription Polymerase Chain Reaction (RT-PCR) as well as a blood specimen for serology from all patients with clinical features compatible with measles. RT-PCR is available at many state public health laboratories and through the [APHL/CDC Vaccine Preventable Disease Reference Centers](#) [↗](#). Nasopharyngeal or throat swabs are preferred over urine specimens.
 - Collect the first (acute-phase) serum specimen (IgM and IgG) as soon as possible upon suspicion of measles disease. If the acute-phase serum specimen collected ≤ 3 days after rash onset is negative and the case has a negative result for real-time RT-PCR (rRT-PCR), or one was not done, a second serum specimen collected 3–10 days after symptom onset is recommended because the IgM response may not be detectable until 3 days after symptom onset.
 - [HCP should use respiratory protection](#) (i.e., a respirator), that is at least as protective as a fit-tested, NIOSH-certified disposable N95 filtering facepiece respirator, regardless of presumptive evidence of immunity, upon entry to the room or care area of a patient with known or suspected measles.
 - Contact your state or local health department to determine where to submit specimens and how to ship them.
- Ensure all patients are up to date on [MMR vaccine](#) and other recommended vaccines.
- For people traveling 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.
- To potentially provide protection or modify the clinical course of disease among susceptible people, either administer MMR vaccine within 72 hours of initial measles exposure, or immunoglobulin (IG) within six days of exposure. For vaccine eligible people aged ≥ 12 months exposed to measles, administration of MMR vaccine is preferable to using IG, if administered within 72 hours of initial exposure. The following patient groups are at risk for severe disease and complications from measles and should receive IG: infants aged < 12 months, pregnant women without evidence of measles immunity, and severely immunocompromised people. IG can be administered to other people who do not have evidence of measles immunity, but priority should be given to people exposed in settings with intense, prolonged, close contact (e.g., household, daycare, and classroom). Do not administer MMR vaccine and IG simultaneously, as this practice invalidates the vaccine.

Recommendations for State and Health Departments

- State and local health departments have the lead in investigating measles cases and outbreaks.
- Measles is an immediately notifiable disease and should be reported promptly (within 24 hours) by the state health department to the CDC (measlesreport@cdc.gov) and through the [National Notifiable Disease Surveillance System \(NNDSS\)](#).
- Establish measles case reporting within hospitals and to public health authorities.
- Record and report details about cases of measles, including adherence to recommended precautions and facility location(s) of index and secondary cases.
- If measles is identified, conduct active surveillance for any additional cases and facilitate transportation of specimens immediately to confirm diagnosis.

Recommendations for the Public (including children) and Those Who Attended the Gathering

- If you attended the Asbury University gathering on February 17 or 18 and you are unvaccinated or not fully [vaccinated](#) against measles, you should quarantine for 21 days after your last exposure and monitor yourself for symptoms of measles so that you do not spread measles to others.
- If you attended the gathering and are not up to date on your measles vaccinations, talk to your healthcare provider right away about getting vaccinated after completing your quarantine.
- If you think that you have measles or have been exposed to someone with measles, isolate yourself from others and call your healthcare provider, urgent care, or emergency room **before** arriving to be tested. Do not arrive at a health care facility without giving advance notice.
- Measles is extremely contagious and can cause life-threatening illness. Anyone who is not protected against measles is at risk. An unvaccinated person can get measles when traveling abroad or in the U.S.
- Two doses of MMR vaccine provide better protection against measles than one dose.

For More Information

- [For Healthcare Professionals – Diagnosing and Treating Measles | CDC](#)
- [Interim Measles Infection Prevention Recommendations in Healthcare Settings | CDC](#)
- [Measles – Vaccine Preventable Diseases Surveillance Manual | CDC](#)
- [Plan for Travel – Measles | CDC](#)
- [Measles Lab Tools | CDC](#)
- [Measles Serology | CDC](#)
- [Measles Specimen Collection, Storage, and Shipment | CDC](#)
- [CDC Measles Toolkit for Health Departments](#)

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

HAN Message Types

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- **Health Advisory:** Provides important information for a specific incident or situation; may not require immediate action.
- **Health Update:** Provides updated information regarding an incident or situation; unlikely to require immediate action.
- **Info Service:** Provides general information that is not necessarily considered to be of an emergent nature.

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This message was distributed to state and local health officers, state and local epidemiologists, state and local laboratory directors, public information officers, HAN coordinators, and clinician organizations.

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