Pennsylvania Department of Health

Measles: Infection Prevention and Control Quick Response Guide for Health Care

Measles Response Guidance for Health Care

BACKGROUND

Measles is a highly contagious viral illness that is transmitted by direct contact with infectious droplets and by airborne spread when an infected person breathes, coughs, or sneezes. The virus remains infectious in the air and on surfaces for up to two hours after the infected person leaves the area. The time from exposure to rash onset averages 14 days, with a range of seven to 21 days. Symptoms include fever, cough, runny nose (coryza), and red watery eyes (conjunctivitis), followed by a rash that often starts on the face and spreads downward. Infected individuals are contagious from four days before the rash appears through four days after its onset. This document is intended to provide a quick reference for health care facilities on identifying, isolating, managing, and reporting suspected and confirmed measles cases. More information is available from the Pennsylvania Department of Health.

PATIENT EVALUATION

Health care providers should maintain a high index of suspicion for measles in persons with a febrile rash illness. Since measles is highly infectious, providers should take precautions to minimize exposure if a patient is suspected to have measles.

Providers should consider measles as a diagnosis in anyone with a febrile rash illness and clinically compatible symptoms (cough, coryza, conjunctivitis, or Koplik spots on the buccal mucosa), **especially if the patient was potentially exposed to a person with measles or recently traveled to a domestic area** or an **international area** with an **ongoing measles risk**. Koplik spots are an early and highly specific sign of measles, often appearing 1-2 days before the rash when present. People with compromised immune systems may not exhibit a rash or may exhibit an atypical rash. Additional information on the signs and symptoms can be found on the Centers for Disease Control and Prevention (CDC) website Measles Symptoms and Complications.

To minimize exposure to others, health care facilities should facilitate the training of front desk and triage staff on how to recognize and isolate suspected cases of measles:

- When scheduling an appointment by phone, provide specific instructions for those with measles symptoms, including which entrance to use and the need to wear a mask.
- Instruct Emergency Medical Services to notify the receiving facility or accepting physician when transporting a patient with known or suspected measles.
- Place signs at entrances to alert staff, patients and visitors about signs and symptoms of measles. Patients with measles symptoms should be asked to wear a surgical mask before entering the facility, if feasible and age appropriate (age 2 or older).

INFECTION CONTROL RECOMMENDATIONS

HCP should be up to date with the MMR vaccine or be otherwise immune to measles, per the CDC criteria for health care personnel.

1. **Isolate:** Isolate patients with suspected measles immediately, ideally in a single-patient airborne infection isolation room (AIIR) if available, or in a private room with a closed door until an AIIR is available. Limit transport of patients with suspected or confirmed measles to essential purposes, using preplanned routes when needed to minimize exposure to other individuals. Patient should remain masked during transport. Patient movement and visitor access must be managed within the facility.
2. **Personal Protective Equipment (PPE):** Health care personnel (HCP) should adhere to standard and airborne precautions for patients with suspected or confirmed measles. Airborne precautions include wearing a

respirator that is at least as protective as a fit-tested, National Institute for Occupational Safety and Health (NIOSH)-certified disposable N95 respirator upon entry to the room or care area of a patient with known or suspected measles. N95 respirators should be worn regardless of immunity status. Standard precautions should also be used based on the anticipated exposure (i.e., gloves, gown, eye protection, or face shield). Additional information on the appropriate use of PPE can be found within the CDC Isolation Precautions Guideline.

3. **Notify Public Health:** Immediately notify local public health authorities or the Pennsylvania Department of Health (DOH) at 877-PA-HEALTH (877-724-3258) about any suspected case of measles to ensure appropriate specimen collection, rapid testing and investigation. DOH will report confirmed measles cases to the CDC.
4. **Test:** Follow specimen collection guidance and collect either a nasopharyngeal swab or oropharyngeal swab, and urine for reverse transcription polymerase chain reaction (RT-PCR) testing and a blood specimen for serology from all patients with clinical features compatible with measles. Nasopharyngeal or oropharyngeal swabs are preferred over urine specimens. Additional guidance on specimen collection is available from the PA Bureau of Laboratories (BOL) Measles Virus PCR and Serology Test Collection Guidance. Note that prior approval from the state or local health department is needed before specimens are sent to BOL. Health care facilities sending specimens to commercial laboratories should contact them directly for additional guidance on specimen collection.
5. **Manage Health Care Personnel:** HCP should be up to date with the MMR vaccine or be otherwise immune to measles, per the CDC. Consider vaccinating HCP who only have a single MMR dose with a second MMR dose to align with the Advisory Committee on Immunization Practices (ACIP) Recommendations for HCP. HCP without evidence of immunity should be excluded from work from day five after the first exposure through day 21 following their last exposure, regardless of whether they receive post-exposure prophylaxis (PEP). Offer HCP testing, if indicated, outside of facilities to avoid transmission in health care settings. Assess the need for PEP for HCP and monitor for the development of symptoms. Refer to CDC Special Populations for recommendations on the management of pregnant HCP.
6. **Protect the Exposed:** Health care facilities must identify individuals who were exposed to a suspected or confirmed measles case and evaluate for presumptive evidence of immunity. In coordination with local or state health departments, provide appropriate measles post-exposure prophylaxis (PEP) as soon as possible after exposure in persons without evidence of immunity. This may include patients, visitors, and HCP. PEP includes either receipt of the MMR vaccine (within 72 hours) or immunoglobulin (within six days); both should not be administered simultaneously. The choice of PEP is based on elapsed time from exposure or medical contraindications to vaccination. Refer to the CDC Interim Infection Prevention and Control Recommendations for Measles in Healthcare Settings for additional details on appropriately managing exposed persons.
7. **Supportive care:** There is no specific antiviral treatment for measles; therefore, medical care focuses on alleviating symptoms and managing complications such as pneumonia and secondary bacterial infections.
8. **Environmental Cleaning:** Standard health care cleaning and disinfection procedures are adequate for measles virus environmental control. This includes cleaning surfaces prior to applying disinfectants and keeping surfaces wet with disinfectant for the stated contact time. Use an EPA-registered disinfectant for health care settings, per manufacturer's instructions. Detailed information on environmental cleaning in health care settings can be found in CDC Environmental Infection Control Guidelines. After the patient leaves the room, it should remain vacant for the appropriate time (up to 2 hours) to allow for 99.9% of airborne-contaminant removal for suspected or confirmed measles.
9. **Waste management:** Manage used, disposable PPE and other patient care items for measles patients as regulated medical waste according to federal and local regulations.

Photos of measles rashes on the human body are available from CDC and may be viewed here.