PENNSYLVANIA DEPARTMENT OF HEALTH
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Measles Guidance for Local Identification and Travel

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TO:	Health Alert Network
FROM:	Debra L. Bogen, MD, FAAP, Secretary of Health
SUBJECT:	Measles Guidance for Local Identification and Travel
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This transmission is a "Health Advisory" which provides important information for a specific incident or situation and may not require immediate action.	

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL**; EMS COUNCILS:** PLEASE DISTRIBUTE AS APPROPRIATE; **FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE **LOCAL HEALTH JURISDICTIONS**: PLEASE DISTRIBUTE AS APPROPRIATE; **PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP; **LONG-TERM CARE FACILITIES:** PLEASE SHARE WITH ALL MEDICAL, INFECTION CONTROL, AND NURSING STAFF IN YOUR FACILITY

Summary

- On March 7, 2025, the Centers for Disease Control and Prevention (CDC) released a Health Advisory informing the public of an increase in global and domestic measles cases, with a significant outbreak occurring in Texas and expanding into New Mexico, resulting in 2 deaths.
- Two confirmed cases of measles have been reported in Pennsylvania, one is in a Montgomery County resident and the other is a Philadelphia resident. Both became infected while traveling internationally.
- Health care providers should maintain a high index of suspicion for measles in patients presenting with fever and rash, especially those who are unvaccinated or have recent travel history.
- The Pennsylvania Department of Health (DOH) urges all Pennsylvanians to stay up to date on their MMR vaccinations; infants aged 6-11 months who are traveling internationally are encouraged to receive an early dose of MMR.
- Providers must **immediately report suspected measles** cases to local public health authorities or to DOH at 1-877-PA-HEALTH (877-724-3258).

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. Symptoms begin with fever, cough, runny nose, and conjunctivitis, followed by a rash that starts on the face and spreads downward. Infected individuals are contagious from four days before the rash appears to four days after its onset. Measles can lead to severe complications, including pneumonia, encephalitis, and death.

The best protection against measles is vaccination. Getting vaccinated is far safer than contracting measles, mumps, or rubella. While overall population immunity remains high in most U.S. communities, pockets of low vaccine coverage put certain areas at greater risk for outbreaks. Two doses of MMR

vaccine provide 97% protection against measles, compared to 93% with a single dose. Communities achieve herd immunity when at least 95% of residents are vaccinated, reducing the risk of widespread transmission.

In Pennsylvania, two confirmed cases of measles in young unvaccinated children who traveled internationally were reported since January 2025. Symptoms of measles were diagnosed within a week of each child's return to Pennsylvania. As of March 6, 2025, the United States reported 222 measles cases across 12 states, including Alaska, California, Florida, Georgia, Kentucky, New Jersey, New Mexico, New York City, Pennsylvania, Rhode Island, Texas, and Washington. The escalating Texas outbreak, which has now spread to New Mexico, resulted in two deaths where measles was the cause or a contributing cause. Most of these measles cases are among individuals who were unvaccinated or under-vaccinated. Health care providers should advise patients to watch for signs and symptoms of measles for 3 weeks after returning from domestic travel to an area with an ongoing outbreak or international travel.

When to suspect measles

Consider measles as a diagnosis in anyone with a febrile rash illness lasting three days or more, a temperature of 101ºF (38.3ºC) or higher, and clinically compatible symptoms (cough, coryza and/or conjunctivitis), **particularly 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.**

People with compromised immune systems may not exhibit rash or may exhibit an atypical rash. The incubation period for measles from exposure to rash onset is usually 14 days (range, seven to 21 days).

While most people are not at risk because they were immunized or had measles, the following groups of individuals are susceptible to becoming infected with measles:

- Anyone born after 1957 who has not received two doses of MMR vaccine, which would include infants too young to have been immunized; persons who were vaccinated with an inactivated vaccine, which was used from 1963 through 1967, and have not been re-vaccinated; and those who decline vaccination.
- Persons whose immune systems are compromised due to disease or medication.

Measles clinical manifestations & transmission

Measles is an acute viral disease that is spread through airborne transmission of the virus or by contact with items contaminated by oral or nasal secretions. The incubation period of measles from exposure to prodrome averages 11 to 12 days. The time from exposure to rash onset averages 14 days, with a range of seven to 21 days. Measles is highly communicable, with more than 90% secondary attack rates among exposed susceptible persons in close-contact settings. Measles is considered transmissible from four days before through four days after rash onset.

Measles disease is characterized by:

- Fever, cough, runny nose (coryza) and red, watery eyes (conjunctivitis);
- Koplik spots, which may appear on the buccal mucosa within two or three days;
- A characteristic red, blotchy rash that appears on the face and then spreads body-wide in days three through seven after symptoms onset.
- Other symptoms may include anorexia, lymphadenopathy, and diarrhea (especially in infants).
- Possible complications of measles include otitis media, pneumonia, febrile seizures, and encephalitis.

Infection control considerations for suspected cases of measles

DOH requests that all health care providers maintain a high index of suspicion for measles in persons with a febrile rash illness. Because measles is highly infectious and the virus can remain airborne for up to two hours, providers should take precautions to minimize exposure if one of their patients is suspected of being infected.

Providers should consider measles as a diagnosis in anyone with fever (≥101°F or 38.3°C) and a generalized maculopapular rash with cough, coryza, or conjunctivitis who was recently abroad, especially in countries with ongoing outbreaks or domestic areas with ongoing outbreaks. When considering measles:

- **Isolate:** Do not allow patients with suspected measles to remain in the waiting room or other common areas of a health care facility; 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. Health care providers should be adequately protected against measles and should adhere to the interim infectious prevention and control recommendations for measles when evaluating suspect cases, regardless of their vaccination status. Health care providers without evidence of immunity should be excluded from work from day five after the first exposure until day 21 following their last exposure. Offer testing outside of facilities to avoid transmission in health care settings. Call ahead to ensure immediate isolation for patients referred to hospitals for a higher level of care .Do not forget to include the healthcare workers who might have been prior isolation and during the patient encounter for assessment of the need for Post exposure prophylaxis and monitor for the development of symptoms.
- **Notify:** Immediately notify local public health authorities or the DOH at 877-PA-HEALTH (877-724-3258) about any suspected case of measles to ensure rapid testing and investigation. DOH will report measles cases to CDC.
- **Test:** Follow CDC's testing recommendations and collect a nasopharyngeal swab/throat swab and urine for reverse transcription polymerase chain reaction (RT-PCR) and a blood specimen for serology from all patients with clinical features compatible with measles. Additional details are in the measles testing section below.
- **Manage:** In coordination with local or state health departments, provide appropriate measles post-exposure prophylaxis (PEP) as soon as possible after exposure to close contacts without evidence of immunity, either with MMR (within 72 hours) or immunoglobulin (within six days). The choice of PEP (post exposure prophylaxis) is based on elapsed time from exposure or medical contraindications to vaccination.
- **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. According to the American Academy of Pediatrics, vitamin A may be used as part of supportive care for infants and children diagnosed with measles in the United States. For children with severe illness, particularly those requiring hospitalization, vitamin A supplementation is recommended under the supervision of a health care provider. **However, vitamin A is not a replacement for vaccination.** Excessive intake of vitamin A can result in toxicity, potentially harming the liver, bones, central nervous system, and skin. Pregnant women should avoid high doses, as it has been associated with severe birth defects.

Measles testing

The PA Bureau of Laboratories recommends a collection of a nasopharyngeal or oropharyngeal swab, a urine specimen, as well as a blood (serum) specimen from all patients with clinical features compatible with measles.

- Guidance on collection of these specimens is provided below. Nasopharyngeal or oropharyngeal swab for rRT-PCR testing
    - Send specimen in viral or universal transport media (VTM/UTM)
    - Ship on cold packs
- Urine for rRT-PCR testing
    - Collect minimum of 50 mL in sterile container
    - Ship on cold packs in leak-proof container
- Serum for measles IgM and IgG testing
    - Acute phase serum as soon as possible and convalescent serum 2-3 weeks later
    - Collect minimum of 5 mL of blood in a red-top or serum-separator tube (SST)

For expedited testing through the DOH Lab, providers should contact the DOH at 877-724-3258 or their local health department. Specimen testing may be delayed if DOH is not contacted prior to specimen submission to the state public health laboratory. to the state public health laboratory.

If testing is being ordered to determine measles immunity, commercial IgG testing is recommended. Do NOT order measles IgM if the patient is asymptomatic or recently vaccinated with MMR.

Presumptive evidence of immunity

People presumed to be immune to measles are those with:

- Written documentation of adequate vaccination:
    - One or more doses of a measles-containing vaccine administered on or after the first birthday for preschool-age children and adults not at high risk
    - Two doses of measles-containing vaccine for school-age children and adults at high risk, including college students, health care personnel, and international travelers
- Laboratory evidence of immunity
- Laboratory confirmation of measles
- A birthdate before 1957*

*For unvaccinated health care personnel born before 1957, who lack laboratory evidence of measles immunity or laboratory confirmation of disease, health care facilities should consider vaccinating personnel with 2 doses of MMR vaccine at the appropriate interval, particularly during an outbreak of measles.

Vaccination recommendations

Health care providers should ensure all patients without evidence of immunity are up to date on MMR vaccination per routine ACIP recommendations.

Children are recommended to receive 2 doses of MMR. Additionally, adults at high exposure risk (including students at post-secondary institutions, health care workers, and international travelers) should have two documented doses.

Two doses of MMR vaccine provide 97% protection against measles, compared to 93% with a single dose. Communities achieve herd immunity when at least 95% of residents are vaccinated, reducing the risk of widespread transmission.

- Children are recommended to receive 2 doses of MMR. The first dose is given at 12–15 months of age and the second is given at four–six years of age before school entry.
- Infants six months of age or older can receive MMR prior to international travel or in outbreak settings. MMR is not licensed for children <six months of age. Children who are vaccinated before age 12 months for travel are still recommended to have two additional doses of the MMR vaccine as above.
- Adults not at high risk of exposure are recommended to have at least one documented dose of MMR in their lifetime, or other evidence of immunity (e.g., positive measles immunoglobulin G (IgG)).
- Adults at high exposure risk, including students at post-secondary institutions, health care workers, and international travelers, should have two documented doses.

People who previously received a dose of measles vaccine in 1963–1967 and are unsure which type of vaccine it was, or are sure it was inactivated measles vaccine, should be revaccinated with either one (if low-risk) or two (if high-risk) doses of MMR vaccine.

Post-exposure prophylaxis for people with known exposure to a measles case

- MMR vaccine given to nonimmune individuals within 72 hours of exposure can prevent measles disease:
    - For adults and children without contraindications who have not previously received two doses of MMR if at least one month has elapsed since the most recent dose.
    - For infants between six and 11 months of age, a dose of MMR vaccine can be given but will not count as part of the primary series.
- Immune globulin given within six days of exposure for high risk and/or nonimmune exposed individuals can reduce the likelihood of measles disease and complications.

Recommendations for parents and international travelers

- Even if not traveling, ensure that children receive all recommended doses of MMR vaccine. Two doses of MMR vaccine provide better protection (97%) against measles than one dose (93%). Getting MMR vaccine is much safer than getting measles, mumps, or rubella.
- Anyone who is not protected against measles is at risk of getting infected when they travel internationally. Before international travel, check your destination and CDC's Global Measles Travel Health Notice for more travel health advice, including where measles outbreaks have been reported.
- Parents traveling internationally with children should consult with their child's health care provider before travel to ensure that they are current with their MMR vaccinations at least 2 weeks before travel. Infants aged six to 11 months should have one documented dose and children aged 12 months and older should have two documented doses of MMR vaccine before international travel and to areas with active measles outbreaks. Depending on where you are going and what activities you plan, other vaccines may be recommended, too.
- After international travel, watch for signs and symptoms of measles for three weeks after returning to the United States. If you or your child get sick with a rash and a high fever, call your health care provider. Tell them you traveled to another country and whether you or your child have received MMR vaccine.

For questions, please call your local health department or DOH at 1-877-PA-HEALTH (877-724-3258).

DOH reminds providers to immediately report suspected cases of measles to local public health authorities or to DOH at 877-PA-HEALTH (877-724-3258).

Individuals interested in receiving future PA-HANs can register here.

Categories of Health Alert messages:
Health Alert: conveys the highest level of importance; warrants immediate action or attention.
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.

This information is current as of March 13, 2025, but may be modified in the future.