



Public Health

W. BRIAN BYRD, M.D., Local Health Authority & Health Director

CATHERINE A. COLQUITT, M.D., Medical Director

February 21, 2025



HEALTH ADVISORY

West Texas Measles Outbreak Health Advisory

The audience for this guidance is clinicians, healthcare providers, hospitals, home health, dialysis clinics, EMS personnel and clinical laboratories in Tarrant County. This advisory contains information regarding the measles (rubeola) outbreak in west Texas.

Key Messages:

- 90 measles cases with 16 hospitalizations in the South Plains region of Texas (west and south of Lubbock). 85 of the cases are unvaccinated, or their vaccination status is unknown.
- Cases are concentrated in and around Gaines County in west Texas.
- No cases of measles have been reported in Tarrant County in 2025.

Situational Summary as of February 21, 2025

The Texas Department of State Health Services (DSHS) is reporting an outbreak of measles in the South Plains region of west Texas. At this time, 90 cases have been identified with symptom onset within the last three weeks. Sixteen of the patients have been hospitalized. Five of the cases are vaccinated. 85 are unvaccinated, or their vaccination status is unknown. 77 cases have been 18 years old or younger.

The epicenter of the outbreak has been Gaines County with 57 cases. The six other counties that have had cases related to the outbreak are Dawson (6), Ector (1), Lubbock (1), Lynn (1), Terry (20) and Yoakum (4).

Due to the highly contagious nature of this disease, additional cases are likely to occur in Gaines County and the surrounding communities. DSHS is currently working with South Plains Public Health District and Lubbock Public Health to investigate the outbreak.

Disease Background

Measles is a highly contagious respiratory illness, where one infected person could infect **12–18** other susceptible persons. 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 in the air for several hours after an infected person leaves an area. The incubation period

from exposure to onset of prodromal symptoms is usually 8 to 12 days, with a range of 7 to 21 days. In family studies, the average interval from rash onset in the index case and subsequent cases is 14 days. Prodromal symptoms may include high fever, cough, coryza and conjunctivitis. Up to four days after prodromal symptoms begin, the telltale maculopapular rash begins on the head around the hair line and behind the ears, to the face, and then spreads down the neck, trunk and then centrifugally to the rest of the body. A person is contagious four days before the rash appears, the day of rash onset, to four days after for a total of nine days.

Measles complications include otitis media, bronchopneumonia, laryngotracheobronchitis (croup), diarrhea and most commonly occur in young children and immunocompromised people. Acute encephalitis occurs in approximately 1 per 1,000 cases. Case fatality rates, predominantly due to respiratory and neurologic complications, are 1 to 3 per 1,000 cases. Acute measles causes immune amnesia, which is the destruction of pre-existing immunity to other pathogens leading to vulnerability to secondary infections. Subacute Sclerosing Panencephalitis (SSPE) may occur months to years later with estimates from 1 in 600 in younger persons up to 2 of 10,000 infections.

The best way to prevent getting sick is to be vaccinated with two doses of the combination measles-mumps-rubella (MMR) vaccine. Two doses of the MMR vaccine are highly effective at preventing measles. Some vaccinated people can occasionally develop measles; however, they generally experience milder symptoms and are less likely to spread the disease to other people. DSHS and CDC's Advisory Committee on Immunization Practices (ACIP) recommend children receive one dose of MMR vaccine at 12 to 15 months of age and another at 4 to 6 years. Each MMR dose lowers the risk of infection and severity of illness if infected. Children too young to be vaccinated are more likely to have severe complications if they get infected with the measles virus.

Recommendations For Health Care Professionals:

Healthcare providers should consider measles in patients presenting with the following symptoms, particularly those who have traveled to areas with a measles outbreak or had contact with a known measles case:

- Fever $\geq 101^{\circ}\text{F}$ (38.3°C) AND
- Cough, runny nose, or conjunctivitis OR Koplik spots (bluish-white specks on a red-rose background appearing on the buccal and labial mucosa usually opposite the molars)
FOLLOWED BY
- Red, blotchy rash that begins at the hairline/scalp and behind the ears, then progresses down the body.
- Generalized maculopapular rash that appears after one or more of the symptoms listed above and lasting ≥ 3 days increases suspicion of measles.

When Considering Measles:

Isolate: Do not allow patients with a rash-fever illness to remain in the waiting room or other common areas of a healthcare 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. Healthcare providers should be adequately protected against measles and should adhere to standard and airborne precautions when evaluating suspect cases, regardless of their vaccination status. Healthcare providers without evidence of immunity should be excluded from work from day 5 after the first exposure until day 21 following their last exposure. Offer testing outside of facilities to avoid transmission in healthcare settings. Call ahead to ensure immediate isolation for patients referred to hospitals for a higher level of care.

Notify: Immediately report suspected measles cases to **Tarrant County Public Health at 817-321-5350**. If possible, please report while the patient is present to facilitate testing and public health investigation, including follow-up of potential exposure.

Diagnostic Testing

Collect either a nasopharyngeal swab, throat swab, and/or urine for reverse transcription polymerase chain reaction (RT-PCR) and a blood specimen for serology from all patients with clinical features compatible with measles. The optimal time for virus detection via PCR is during the prodromal stage (2-4 days) and up to three days after rash onset. While the virus may still be detectable for 10-12 days after the rash appears, a negative result does not exclude measles. People who have previously received an MMR vaccine will shed virus for a shorter period reducing the intensity and length of the infectious period as well the time when virus can be detected in clinical specimens.

Up to 20% of IgM tests will be negative in the first 72 hours after rash onset. For patients who have a negative IgM and rash lasting more than 72 hours, the IgM should be repeated. IgM will remain detectable at least one month after rash in un-vaccinated people but might be absent or transient in people vaccinated with 1 or 2 vaccine doses. Therefore, IgM testing should not be used to rule out measles in vaccinated people.

Testing for measles should be done for all suspected measles cases at the time of the initial medical visit:

- Measles PCR and serology (IgG and IgM) can be performed at the Texas DSHS laboratory and at some commercial laboratories.
- For patients with a known exposure, recent international travel or symptoms highly suggestive of measles, TCPH encourages providers to submit specimens for PCR testing to the DSHS laboratory due to shorter turnaround and the genotyping capabilities that can be performed on positive PCR specimens, which can be helpful during outbreaks.
- Call TCPH to coordinate testing at the DSHS laboratory to ensure specimens are submitted correctly and meet testing requirements. Unless coordinated in advance, specimens may only be received at the state lab during normal business hours Monday through Friday.
- The DSHS Laboratory can perform PCR testing on throat swabs (preferred), or nasopharyngeal swabs placed in viral transport media and serology on serum specimens.

Manage: 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 6 days). The choice of PEP is based on elapsed time from exposure or medical contraindications to vaccination.

Infection Control and Prevention

Patients are contagious from 4 days before onset of rash, day of rash onset, to 4 days after appearance of rash, for a total of 9 days. If a patient presents with measles symptoms, isolate the patient with airborne isolation precautions, if possible.

All healthcare facilities should ensure that they have updated documentation of measles immunity status for all staff—not just healthcare providers. Documentation of immunity includes written record of receipt of two MMRs, positive serological titers, or birth prior to 1957 (although healthcare facilities should consider vaccinating unvaccinated personnel born before 1957 who do not have laboratory evidence of measles immunity). During an outbreak of measles, unvaccinated healthcare workers regardless of birth year who lack laboratory evidence of immunity should receive 2 doses of MMR vaccine given at least 28 days apart. Exclude healthcare personnel without evidence of immunity from duty from day 5-21 after last exposure, regardless of post-exposure prophylaxis.

People suspected of having measles should be told to stay home from work, school, daycare, public conveyances, and any public outings (e.g., church, grocery store) until four days after rash onset have passed.

Those who have been exposed to measles and are not immune and did not receive PEP should be advised to stay home from day 5-21 after exposure.

Postexposure Prophylaxis (PEP) Recommendations

MMR vaccine is recommended for the following potentially exposed groups:

- Exposed persons (6 months and older and not otherwise contraindicated) without evidence of immunity to measles –**administer MMR within 3 days of exposure**. If a child <12 months old is vaccinated for a potential exposure, they should be revaccinated with 2 additional doses of MMR according to schedule.

Immune globulin

IMIG 0.5 mL/kg of body weight (maximum dose = 15 mL) is recommended for the following potentially exposed groups:

- Infants 0-6months **within 6 days of exposure**.
- Any susceptible, immunocompetent, exposed individual (except pregnant women), if the window for MMR PEP has passed and it is still **within 6 days of exposure**.

- Priority for IG should be given to infants, household contacts, anyone at risk for complications, and anyone with prolonged, close contact.

IVIG 400 mg/kg is recommended for the following potentially exposed groups **within 6 days of exposure**:

- Severely immunocompromised persons
- Pregnant women without evidence of measles immunity

Any nonimmune person exposed to measles who received IG should subsequently receive MMR vaccine, which should be administered no earlier than 6 months after IMIG administration or 8 months after IVIG administration provided the person is then aged ≥ 12 months and the vaccine is not otherwise contraindicated.

Routine Vaccination

All patients should be kept current with measles vaccination. Check the vaccination history of all patients and offer vaccine to anyone that is not up to date with the vaccine schedule.

Maintaining high two-dose MMR vaccination coverage in communities remains the most effective way to prevent outbreaks.

Selected References:

Zipprich, J, Schechter, R, Hacker, J, Preas, C, Cherry JD, Glaser, C (2016). "Subacute Sclerosing Panencephalitis: The Devastating Measles Complication Is More Common Than We Think". Open Forum Infectious Diseases. 3. doi:10.1093/ofid/ofw194.81.)

M. J. Mina, T. Kula, Y. Leng, M. Li, R. D. de Vries, M. Knip, H. Siljander, M. Rewers, D. F. Choy, M. S. Wilson, H. B. Larman, A. S. Nelson, D. E. Griffin, R. L. de Swart, S. J. Elledge, Measles virus infection diminishes preexisting antibodies that offer protection from other pathogens. Science 366, 599-606 (2019).

American Academy of Pediatrics. Red Book: 2021-2024 Report of the Committee on Infectious Diseases. Kimberlin DW, Barnett ED, Lynfield R, Sawyer MH, eds. 32nd ed. Itasca, IL: American Academy of Pediatrics; 2021

	Alert:	Conveys the highest level of importance; warrants immediate action or attention
	Advisory:	Provides important information for a specific incident or situation; may not require immediate action.
	Update:	Provides update information regarding an incident or situation; unlikely to require immediate action.
	Information:	Provides general information that is not necessarily considered to be of an emergent nature.

EEllis; MLueke; RJones; WThorpe; PNweke; JBillarreal

