



OKLAHOMA

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Network Health Notification

Date: February 21, 2025

OKHAN_420-2025-02-21-ADV-N

Reference: n/a

Outbreak of Measles in Texas and New Mexico: Recommendations for Health Care Providers

Summary

On January 30, 2025, Texas Department of State Health Services (TX DSHS) announced two cases of measles in residents of Gaines County (West Texas). As of February 18, 2025, there are now 58 measles cases associated with the west Texas outbreak, and 13 (22%) of those individuals have been hospitalized. Impacted Texas counties include Gaines, Terry, Lynn, Yoakum, and Lubbock. In addition to the cases occurring in Texas, three measles cases have been identified in the bordering New Mexico county of Lea. There is concern for community transmission and a heightened risk of measles transmission in the outbreak area. The Oklahoma State Department of Health (OSDH) is advising clinicians in Oklahoma to consider measles among patients who are presenting with a febrile illness and clinically compatible symptoms (e.g., generalized maculopapular rash, cough, coryza, and conjunctivitis), especially those individuals who have recently returned from a destination experiencing an active measles outbreak (e.g., west Texas).

Measles is an immediately notifiable disease in Oklahoma, and it should be reported to the OSDH epidemiologist-on-call at **(405) 426-8710** (available 24/7) immediately upon clinical suspicion. Do not wait for positive lab results before reporting suspected cases. Due to the extremely contagious nature of measles, timely recognition, isolation, reporting, and testing are essential to control the spread in the community. At this time, there have been no confirmed cases of measles in Oklahoma during 2025.

Background

Measles starts with a fever. Soon after, it causes a cough, coryza, and conjunctivitis (the three “C”s). These early symptoms appear about 7-14 days after a person is infected, but it can take as long as 21 days to become symptomatic. Two to three days after symptoms begin, a pathognomonic enanthema known as Koplik spots (tiny white dots) may appear on the buccal mucosa. Three to five days after symptoms begin, a rash of tiny, red, flat spots appears, beginning at the hairline and spreading down the rest of the body over the next few days. Small, raised bumps may also appear on top of the flat, red spots. The spots may become joined together as they spread from the head to the rest of the body. When the rash appears, a person’s fever may spike to more than 104°F. Symptoms may last for one to two weeks.

Measles can cause severe health complications such as pneumonia, encephalitis, and death and increased risk for hospitalization in susceptible patients. Measles can be serious in all age groups; however, children younger than five years of age, adults over 20 years of age, pregnant women, and individuals with compromised immune systems are at the highest risk for severe illness and complications. Measles is almost entirely preventable through vaccination.

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Oklahoma State Department of Health / Infectious Disease Systems and Collaboration/

123 S Robert S Kerr Ave, Oklahoma City, OK 73102

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MMR vaccines are safe and highly effective, with two doses being 97% effective against measles (one dose is 93% effective). When more than 95% of people in a community are vaccinated most people are protected through community immunity. According to the Oklahoma Kindergarten Immunization Survey [2023-2024 Summary report](#), 91.8% of Oklahoma kindergartners had received the recommended two doses of MMR vaccine.

The virus can spread person-to-person through the air when an infected person coughs or sneezes. The virus can **remain in the air for up to two hours after an infected person leaves an area**, causing other people who breathe that air to become infected. Measles can also be spread by contact with nose and throat secretions from ill people or by touching a contaminated surface. Infected people can **spread the virus up to four days before their rash starts and four days after it appears**. As soon as measles is suspected, ill persons should isolate themselves at home and away from all public settings until after the health care provider has consulted with the health department.

Recommendations for Health Care Providers

Assess Client Immunity Status:

- Health care providers should assess all clients for presumptive evidence of measles immunity and offer [MMR vaccine](#) when appropriate.
 - Children not traveling internationally should receive their first dose of MMR at age 12 to 15 months and their second dose at 4 to 6 years.
- All U.S. residents older than age 6 months without evidence of immunity who are planning to travel internationally should receive MMR vaccine prior to departure.
 - Infants aged 6 through 11 months should receive one dose of MMR vaccine before departure. Infants who receive a dose of MMR vaccine before their first birthday should receive two more doses of MMR vaccine, the first of which should be administered when the child is 12 through 15 months and the second at least 28 days later.
 - Children aged 12 months or older should receive two doses of MMR vaccine, separated by at least 28 days.
 - Teenagers and adults without evidence of measles immunity should receive two doses of MMR vaccine separated by at least 28 days.
- At least one of the following is considered evidence of measles immunity for international travelers: 1) birth before 1957, 2) documented administration of two doses of live measles virus vaccine (MMR, MMRV, or other measles-containing vaccine), or 3) laboratory (serologic) proof of immunity or laboratory confirmation of disease.
- The OSDH will work with individuals exposed to measles and, based on their immunity status, will advise on whether quarantine is needed.
- If you are a health care provider without access to the MMR vaccine, a local county health department may be able to help. Please call the nearest health department for availability.

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Assess Health Care Provider Immunity Status:

- People who work in health care facilities (including volunteers, trainees, nurses, physicians, technicians, receptionists, laboratorians, and other clerical and support staff) are at an increased risk of exposure to measles and increased risk of transmission to people at high risk of severe measles. All people who work in such facilities, in any capacity, should have evidence of immunity to measles. Presumptive evidence of immunity to measles for personnel in health care settings includes any one of the following:
 1. **Written documentation** of vaccination with two doses of live measles or MMR vaccine given at least 28 days apart; OR
 2. **Written documentation** of laboratory evidence of immunity (positive measles IgG); OR
 3. **Written documentation** of laboratory confirmation of measles disease in the past (by providing a test report of positive measles IgM or another confirmatory laboratory testing from that previous episode)

IMPORTANT NOTE: During a measles investigation in Oklahoma, birth before 1957 is NOT accepted as evidence of immunity. In the event of a measles case, exposed personnel unable to provide items 1, 2, or 3 above will be excluded from the facility from the fifth day after the first exposure through the 21st day after the last exposure, regardless of whether they received vaccine or intramuscular immune globulin as post-exposure prophylaxis. They can return to work immediately if they are able to provide documentation of immunity, such as a positive IgG test result.

Consider Measles as a Diagnosis:

- **IDENTIFY:** Consider measles in a differential diagnosis in anyone with a febrile illness and clinically compatible symptoms (e.g., generalized maculopapular rash, cough, coryza, or conjunctivitis) who:
 - lives in or has recently traveled to an area within the U.S. where [measles cases are occurring](#).
 - has recently traveled abroad, especially to countries with ongoing measles [outbreaks](#).
 - has exposure to someone who recently traveled abroad or to an area within the U.S. with an ongoing measles outbreak.
 - was exposed to a person with a febrile rash illness.

IMPORTANT NOTES: While it is possible that vaccinated individuals can become infected with measles, the risk is much lower than unvaccinated individuals. Measles should move up your differential diagnosis if the patient has not been vaccinated with an MMR vaccine.

- Patients with suspected measles should be evaluated by health care providers in the appropriate setting. Patients should not be referred to county health departments for evaluation and treatment of measles.
- Attached to this OK-HAN is a measles clinical provider flowsheet to help determine when to suspect measles and notify the OSDH epidemiologist (epi)-on-call. This flowsheet is intended for use by Oklahoma health care providers while local transmission is not occurring in Oklahoma.

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- **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.
 - Provide face masks for the patient (2 years of age and older) and people accompanying them.
 - Health care providers should be adequately [protected against measles](#) and adhere to standard and airborne precautions when evaluating suspect cases, regardless of their vaccination status.
 - Review the [Interim Infection Prevention and Control Recommendations for Measles in Healthcare Settings](#).
- **NOTIFY:** Immediately notify the OSDH epidemiologist-on-call at 405-426-8710 about any clinically suspected case of measles to ensure rapid testing and investigation.
 - Information that will be needed during the consultation is:
 - ◆ Patient demographics
 - ◆ Detailed description of the acute symptoms and clinical progression
 - ◆ Vaccination status
 - ◆ Travel history during the last 21 days
 - ◆ High-risk setting exposure (health care, daycare, school, university, etc.)
- **TEST:** The OSDH epidemiologist-on-call will advise on the epidemiologic risk for measles and whether testing is recommended to ensure rapid public health response. If measles is suspected, the OSDH will facilitate testing to ensure timely, actionable test results for the patient, health care provider, and appropriate public health response. Laboratory confirmation is essential for all sporadic measles cases and all outbreaks.
 - Detection of measles-specific IgM antibody in serum and measles RNA by polymerase chain reaction (PCR) in a respiratory specimen (throat swab preferred) are the most common methods for confirming measles infection. Urine samples may also contain virus, and when feasible to do so, collecting both respiratory and urine samples can increase the likelihood of detecting measles RNA by PCR.
 - The OSDH epidemiologist-on-call will advise on whether specimens should be collected and sent to the Oklahoma Public Health Laboratory (PHL). If the epidemiologist-on-call does not recommend testing, a health care provider may test the patient using a reference laboratory.

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Resources:

Measles Clinical Provider Flowsheet (OSDH See attachment to this OK-HAN)

- [Measles One-Pager for Healthcare Providers \(Project Firstline and AAP\)](#)
- [Immunization Schedules \(CDC\)](#)
- [Safety Information for Measles, Mumps, Rubella \(MMR\) Vaccines \(CDC\) For Healthcare Professionals – Diagnosing and Treating Measles \(CDC\) Rubeola / Measles \(CDC Yellow Book 2024\)](#)

References:

- [Interim Infection Prevention and Control Recommendations for Measles in Healthcare Settings](#)
- [Measles – Vaccine Preventable Diseases Surveillance Manual \(CDC\)](#)
- [Oklahoma Kindergarten Immunization Survey 2023-2024 Summary report \(OSDH\)](#)
- [Measles Outbreak Declared in Lea County, New Mexico](#)
- [Measles Outbreak – Feb. 18, 2025 \(TX DSHS\)](#)

This message has been distributed to Primary Care and Infectious Disease Physicians, Family Medicine Physicians, Obstetricians, Pediatricians, Pulmonologists, Infection Preventionists, Laboratorians, Urgent Care Centers, Emergency Departments, and State and Local Health Officials

The Oklahoma State Department of Health (OSDH) Acute Disease Service (ADS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

Categories of Health Alert messages:

Health Alert

Provides vital, time-sensitive information for a specific incident or situation; warrants immediate action or attention by health officials, laboratorians, clinicians, and members of the public and conveys the highest level of importance.

Health Advisory

Provides important information for a specific incident or situation; contains recommendations or actionable items to be performed by public health officials, laboratorians, and/or clinicians; may not require immediate action.

Health Update

Provides updated information regarding an incident or situation; unlikely to require immediate attention.

Health Info/Event

Provides general public health information; unlikely to require immediate action.

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Evaluating a patient presenting with rash when there is no local measles transmission¹



Contact the OSDH Epi-on-Call with questions or for further guidance 24/7 at 405.426.8710.

START HERE

Needs ALL 3:

- Fever²
- Generalized, maculopapular rash
- No vesicular lesions / vesicles³

No

Measles unlikely. If vesicular rash, consider varicella or alternative cause of rash.

Yes

Epidemiologic risk for measles in the 21 days before rash? ANY of the following:

- International travel in last 21 days
- Domestic travel in last 21 days to an area with known measles transmission
- Known exposure to measles

No

Measles clinical criteria?⁴

- Fever² and rash AND
- Cough, runny nose, OR conjunctivitis

Measles unlikely. If measles still suspected, contact state or local health department for guidance.

Yes

Received MMR vaccine in the last 21 days?

Yes

Likely a reaction to MMR vaccination⁵

No

Prior measles vaccination?

- Age ≤6 years: 1 dose MMR*
- Age >6 years: 2+ doses MMR

No

Suspect measles. Immediately contact local or state health department to discuss testing options. See Testing Recommendations.

Yes

Measles uncommon among people with age-appropriate vaccination. Measles can occur among vaccinated people, but generally during intense exposure (e.g., daycare or household exposure).

If measles suspected based on clinical presentation or severity of illness, contact state or local health department for guidance.

*or other measles-containing vaccine

Notes

1. This testing algorithm is intended to be used by bedside providers in settings where there is not local measles transmission. This assumes that the pre-test probability for most people without known epidemiologic risk for measles and who do not meet case criteria will be low. In settings with active measles transmission, the threshold at which to pursue testing may be lower, and a more permissive algorithm could be considered.
2. Either a measured or patient/family-reported fever is adequate; fever may not be measured at the time of healthcare evaluation due to normal fluctuation or to use of antipyretics (e.g., ibuprofen).
3. A vesicular rash is not consistent with measles, and should prompt consideration for other causes of rash (e.g., varicella/chickenpox)
4. Measles clinical criteria (per CSTE* case definition) include ALL of the following:
 - Generalized maculopapular rash
 - Fever
 - Cough, coryza (runny nose), or conjunctivitis (also known as the “3 C’s”)
5. Up to 5% of MMR recipients will get a short-lived, mild febrile rash. This is more common with the first dose of MMR. People who experience this vaccine reaction are not contagious to others around them. If a person has received MMR within 21 days before rash onset, but also has epidemiologic risk for measles, then specialized testing may be required and should be discussed with local or state public health authorities.

*CSTE: Council of State and Territorial Epidemiologists: <https://ndc.services.cdc.gov/case-definitions/measles-2013/>

Testing Recommendations

- The OSDH epidemiologist-on-call will advise on the epidemiologic risk for measles and whether testing is recommended to ensure rapid public health response. The OSDH will facilitate testing to ensure timely, actionable test results for the patient, health care provider, and appropriate public health response. Laboratory confirmation is essential for all sporadic measles cases and all outbreaks.
 - Detection of measles-specific IgM antibody in serum and measles RNA by real-time polymerase chain reaction (RT-PCR) in a respiratory specimen (throat swab preferred) are the most common methods for confirming measles infection. Urine samples may also contain virus, and when feasible to do so, collecting both respiratory and urine samples can increase likelihood of detecting measles RNA by RT-PCR.
 - The OSDH epidemiologist-on-call will advise on whether specimens should be collected and sent to the Oklahoma Public Health Laboratory (PHL). If the epidemiologist-on-call does not recommend testing, a health care provider may decide to test the patient using a reference laboratory.

Measles Characteristics

- Classic symptoms
 - Fever (up to 105F) + generalized maculopapular rash + one of the “3 C’s”
 - 3 C’s: Cough, coryza (runny nose), conjunctivitis
 - Clues to measles:
 - Prodrome of fever and at least 1 of 3 C’s often starts 2–4 days before rash
 - Rash starts on head or face and spreads downwards
 - Fever continues through onset of rash, often peaking around the time when the rash starts
- Measles is rare in vaccinated people, especially with 2 prior doses of MMR
 - 1 dose generally provides 93% protection, and 2 doses provides 97% protection from measles infection

Other common causes of febrile rash in children

- **Parvovirus B-19 (“Fifth Disease”)**
 - Classic “slapped cheek” rash
 - More common in school-aged children than infants
- **Human Herpesvirus 6 (HHV-6, “Sixth Disease”, “Roseola”)**
 - Common cause of febrile rash in infants
 - Rash commonly starts on trunk (measles rash starts on face/hairline)
 - Fever often resolves before start of rash (measles fever peaks around time of rash onset)
- **Enteroviruses**
 - Common cause of Hand/Foot/Mouth, rash can involve hands/feet which are generally spared in measles
 - Rash can be urticarial, which is not typical for measles



“Slapped Cheek” rash



HFM