OKLAHOMA
State Department of Health

Guidance for Measles in a School Setting

As of May 2025, there is ongoing uncontrolled community-wide transmission of measles in certain parts of Texas and New Mexico. Measles cases have also been reported in Oklahoma and nearby states. As long as uncontrolled spread from the Texas and New Mexico outbreak continues, there will be a risk for increased measles cases in Oklahoma. Due to the complexity and scale of the outbreak, it is anticipated to take time for it to be under control.

To ensure the health and safety of students, staff, and community members, the Oklahoma State Department of Health (OSDH) is providing information to schools to help them prepare for and respond to measles-related incidents that may impact schools during extracurricular activities, school field trips, or on the school campus.

Measles situation updates are being provided weekly by Texas, New Mexico, Kansas, and Oklahoma.

To support a prompt public health response to measles, schools should immediately contact the OSDH Epidemiologist-on-Call at 405-426-8710 (available 24/7/365) to report suspected measles illnesses or measles exposure concerns. The OSDH will verify whether there is a public health concern prior to implementing a public health response.

Measles background:

- Measles is a very contagious disease that can cause severe illness, complications and death, especially in children under five years, pregnant women, and people with weakened immune systems.
- Since the 1990's, measles activity in the U.S. decreased significantly. By 2000, measles was declared eliminated from the U.S., meaning it was no longer routinely circulating in our communities. After that, the only measles cases occurred from individuals exposed internationally and returning to the United States while infectious. Between 1993 and 2024, Oklahoma investigated a total of 10 measles cases.
- Measles can spread quickly in a school setting when an infected person coughs, talks, or sneezes. The virus can remain in the air for up to two hours after that person leaves the area and can cause susceptible people breathing that air to become infected.

- Infected people can be contagious with measles four days before their rash starts through four days after the rash appears. In most cases, measles is not suspected until the rash appears, meaning they have been infectious for multiple days by the time it's suspected.
- Measles is so contagious that one infected person can infect 12 – 18 people who are not protected from measles by immunity (previously vaccinated or previously infected).
- Measles cases in schools and other institutions where close contact exists require rapid public health response. In settings where a high proportion of students and staff are unvaccinated, the potential risk of spread is high. Generally, 95% two-dose MMR coverage is needed to reduce the risk of spread to other people.

Comparison of measles to common respiratory viruses in school settings:

- *How symptoms compare*:
  Initial symptoms of measles mimic many other common respiratory viruses including COVID-19 and influenza. Early symptoms may include cough, runny nose, red/watery eyes and high fever. The measles full body rash that generally occurs is its distinguishing feature.

- *When someone is contagious*:
  Measles differs from other respiratory viruses by being contagious for a longer period of time prior to routine diagnosis. Measles is contagious during the four days prior to rash onset, which is usually when diagnosis occurs compared to 1 – 2 days prior to symptom onset for COVID-19 and influenza. Individuals with measles continue to be contagious until the fifth day after the rash started.

- *How many people get sick from one person*:
  Measles is one of the most contagious human infections. One person can infect between 12 to 18 susceptible people. By comparison, a person infected with COVID-19 can infect between 1.5 to 6.5 susceptible people and influenza between 1 to 2 susceptible people.

- *How these viruses spread*:
  Measles differs from the majority of respiratory viruses in how they transmit from person to person. Routine respiratory viruses leave an infectious individual as large droplets and fall to the ground in the 3 – 6 feet around them. However, measles virus enters the air as very small particles that float in the air for up to two hours after an infectious individual leaves the room.

- *Prevention measures for the public*:
  The differences in how viruses are transmitted impact prevention measures that are used to control spread. Prevention measures for COVID-19 and influenza include hand hygiene, personal distancing and masking. However,

measles is much harder to control as viruses are often unknowingly floating in the air when susceptible individuals encounter them.

- *Vaccine availability and effectiveness*:
  Due to the unique way measles is transmitted, the primary prevention measure is vaccination. One dose is expected to be 93% protective and two doses 97% protective at preventing measles infection. Protection from measles vaccine is also considered to be lifelong. This contrasts with vaccines for COVID-19 and influenza that, while very beneficial at offering protection against infection and severe illness, may wane over time.

- *Length of symptoms and onset after exposure*: While symptoms of viral respiratory infections, including measles, can last up to two weeks, the time between exposure and symptom onset is typically longer for measles (7 – 21 days) compared to other common viruses such as COVID-19 (2 – 14 days) and influenza (1 – 4 days).

- *Hospitalizations*: One key difference of measles compared to other viral respiratory infections is the percentage of infections that require hospitalization. Measles infection can result in hospitalization of approximately 20% of infections compared to lower percentages among common infections like COVID-19 (less than 1% recently) and influenza (1 – 2% between 2011 and 2024).

- *Secondary complications:* Most respiratory viruses, including measles, are capable of leading to complications such as pneumonia, secondary bacterial infections, swelling of the brain, and death. Measles can also cause a phenomenon called immune amnesia, in which the infected person's immune system memory is reduced by 70%. This immune amnesia can then leave them vulnerable to other infections for which they had previously developed immunity.

- *Neurological complications:* While neurological complications can occur with all respiratory viruses, including measles, a unique neurological complication that is fatal can occur 7 – 10 years after a measles infection and is most common in children who were infected before 2 years of age.

- *Individuals at highest risk for complications*: Individuals at highest risk for severe complications from measles includes more individuals compared to other viral respiratory infections and includes children less than five years of age (especially younger than one year of age), adults older than 20 years of age, immunocompromised individuals, and pregnant women.

How to prepare

- Ensure students are age-appropriately vaccinated with the MMR vaccine(s) or have an approved exemption on file (O.S. § 1210.191 and 1210.192). Ensure these records are easily accessible to help facilitate timely exclusion recommendations (when applicable) during public health response activities. Review this Oklahoma State Immunization Information System (OSIIS) tip sheet for assessing immunization records for your school.

Communicate with Families

- Inform families with exemptions on file that measles has been identified in Oklahoma and surrounding states, emphasizing the importance of vaccination and exclusion should measles be identified within the school community.
- Communicate information provided in the "Measles background" section with families, students, and staff. Resources to assist with this communication can be found on the OSDH measles webpage or in the "Resource" section within this document.

Communicate with Staff

- Encourage staff to verify they have received the MMR vaccine or have immunity to measles (positive IgG serology or positive lab result of a previous infection). Information on how to check immune status can be found here. Schools are encouraged to have accurate and current information on staff immunity status for measles to help facilitate timely exclusion recommendations during public health response activities.

Promote Vaccination

- Regularly communicate with families and staff about the importance of staying current on immunizations.
- Reinforce that two doses of the MMR vaccine are expected to be 97% effective at preventing measles.
- Consider offering a vaccination clinic for interested families and staff.
- Consider ways to help staff verify immune status if they are having difficulty locating documentation of past MMR vaccination (e.g., work with a health care provider to arrange for IgG titer checks).

Strengthen General Health Messaging

- Encourage proper respiratory hygiene, including covering coughs and sneezes.
- Promote frequent handwashing with soap and water; if unavailable, use hand sanitizer.
- Remind families and staff of your sick policy and to stay home when sick.
- Regularly disinfect high-touch surfaces, such as doorknobs and tables.

Monitor for Symptoms and Prepare for Action

- Know the signs and symptoms of measles. Review your district's current sick policy. Also, review Oklahoma Administrative Code (OAC) 310:520-1-4, which addresses symptoms that can cause students to be excluded from school.
    - Symptoms of measles may include fever, cough, runny nose, red eyes and rash.
- Identify a private room where symptomatic students can wait for parent/guardian pickup.
- If measles is suspected, advise families to contact their health care provider or medical facility before arriving to prevent further spread.

Develop a Plan to Identify Exposed Contacts, Including Visitors

- If an individual with measles is in the school setting, this will result in a public health response that involves identification of exposed contacts.
- Develop a plan to generate a list of exposed students, staff, and visitors after working with public health to determine exposure dates, times, and locations within the school setting.

Actions to Take Immediately if a Student or Staff Member Has Measles or is Suspected of Having Measles

If the ill individual is identified while at school:

- Immediately isolate them while waiting for parent/guardian pick up.
- Then notify the Oklahoma State Department of Health (OSDH) Epidemiologist-on-Call at 405.426.8710. The OSDH can assist by following up with the ill individual or their parent/guardian to determine the risk for measles and recommend next steps.
- Exclude the ill individual until cleared by a health care provider and/or OSDH.
    - The ill person is recommended to stay home and away from others, avoiding all public spaces, including school, daycare, work, social gatherings, sports, and recreational activities.
    - Exclusion should continue until the individual is no longer contagious, typically until the fifth day after rash onset.

If the ill individual calls in absent from school:

- Notify the Oklahoma State Department of Health (OSDH) Epidemiologist-on-Call at 405.426.8710. The OSDH can assist by following up with the ill individual or their parent/guardian to determine the risk for measles and recommend next steps.
- Exclude the ill individual until cleared by a health care provider and/or OSDH.
    - The ill person is recommended to stay home and away from others, avoiding all public spaces, including school, daycare, work, social gatherings, sports, and recreational activities.

    - Exclusion should continue until the individual is no longer contagious, typically until the fifth day after rash onset.

If the OSDH determines a measles case is associated with a school setting:

- For a case that attends a school setting, the OSDH will ask that you assist with identifying exposed students and staff along with their immune status.
    - Exposure is defined as sharing airspace with a measles case or being in that space within two hours after the infected person left.
- For staff and students exposed to a measles case outside of the school setting (e.g., field trip, extracurricular activity, etc.), the OSDH will ask that you assist in providing a list of exposed staff and students along with their immune status.
- All exposed, non-immune students and staff are recommended to exclude themselves from school and other public settings.
    - This is necessary due to the extremely contagious nature of measles. Up to ninety percent of non-immune individuals exposed to measles will develop an infection.
    - Exclusion means students and staff are unable to attend school, child care, clubs, sports, or school-related activities until 21 days have passed from their last date of exposure. If multiple cases occur in the school, the 21-day exclusion period resets with each new case, potentially extending the exclusion period.
- Exceptions to Exclusion of Exposed, Non-Immune Individuals (Post Exposure Prophylaxis)
    - Students and staff with zero doses of MMR vaccine may return to school immediately if they receive their first documented dose within 72 hours of exposure. A second dose of the vaccine is strongly recommended at least 28 days after the first dose.
    - Students and staff who believe they are immune to measles, but are unable to provide documentation, are recommended to exclude until 21 days have passed from their last date of exposure. However, they can return to school immediately if they are able to provide documentation of immunity, such as a positive measles IgG test result.
    - Students and staff with one documented MMR dose may remain in school without exclusion. However, students are strongly recommended to receive their second dose of vaccine at least 28 days after the first dose.
    - Staff born before 1957, who are unable to provide documentation of immunity, are able to remain in school without exclusion. This is due to the majority of people born before 1957 having a measles infection that provided presumed life-long immunity.
- Monitor the School Community
    - All students and staff, regardless of immune status, should monitor for measles symptoms for 21 days after the last known exposure.
    - Schools should remind families and staff to remain vigilant in recognizing symptoms early to prevent further spread.

Working with the Health Department

Please notify the Oklahoma State Department of Health (OSDH) **immediately** if someone with measles has been at the school or if staff/students are exposed to measles while participating in school activities off campus (e.g., field trips, extracurricular activities, etc.) or during personal time outside of school.

1. Contact the Epidemiologist-on-Call (Epi-on-Call) if someone with measles may have been at your school or if staff/students were exposed to measles by calling 405.426.8710 (available 24/7/365).
2. Provide name and contact information for the person with measles and any other information the Epi-on-Call deems necessary for follow up of this report. The Epi-on-Call will use this information to verify the individual truly has measles and was infectious while at school, or they will use the information to verify a measles exposure occurred off-campus. This may require following up with the diagnosing health care provider or other state health departments. The Epi-on-Call will let you know whether there is a need for any further public health intervention after consultation with the health care provider.
3. If there is a need to proceed with a public health response, the OSDH will coordinate with you on public messaging to ensure it is accurate and actionable by the school community.
4. *In the event of a measles case within the school setting*, the Epi-on-Call will work with you to determine when the measles case was infectious while in the school setting.
5. Review the attendance records for all students and staff during the identified infectious timeframe. For each individual, collect:
    a. Student/staff first and last name
    b. Parents' first and last names (for students only)
    c. Address
    d. Phone number
    e. Date of birth
    f. Classroom of the student/staff or other exposure location
    g. MMR vaccination date(s) (if applicable)
    h. Other evidence of immunity (if applicable)
6. The OSDH will provide guidance for the ill individual and all exposed individuals and documentation necessary to excuse any necessary absences.
7. The OSDH will work with the school to monitor all exposed individuals for symptoms during the 21-day monitoring period.
8. *In the event of a measles exposure off campus*, the Epi-on-Call will work with you to collect a list of exposed individuals. For each individual, provide:
    a. Student/staff first and last name
    b. Parents' first and last names (for students only)
    c. Address
    d. Phone number
    e. Date of birth
    f. MMR vaccination date(s) (if applicable)

g. Other evidence of immunity (if applicable)

9. The OSDH will provide guidance for all exposed individuals and documentation necessary to excuse any necessary absences.
10. The OSDH will work with the school to monitor all exposed individuals for symptoms during the 21-day monitoring period.

References:

- Chapter 7: Measles | Manual for the Surveillance of Vaccine-Preventable Diseases | CDC

Resources:

- Measles Quick Facts Flyer (OSDH) English | Measles Quick Facts Flyer (OSDH) Spanish
- Measles in Schools (OSDH) English | Measles In Schools (OSDH) Spanish
- Measles Fact Sheet (OSDH) English | Measles Fact Sheet (OSDH) Spanish
- Measles Situation Update, Information and Fact Sheets (OSDH)
- Measles (CDC)
- Good Health Handbook 623.pdf

Appendix Table: Comparison of measles to common respiratory viruses in school settings

	Measles	Common Respiratory Viruses, such as COVID-19 and Influenza
How Symptoms Compare	• Initial symptoms of measles mimic many other common respiratory viruses including COVID-19 and influenza. • Early symptoms may include cough, runny nose, red/watery eyes and high fever. • The measles full body rash that generally occurs is its distinguishing feature.	• Typically includes cough, runny nose, red/watery eyes • Fever • Rash may occur
When someone is contagious:	• Measles is contagious for a longer period of time prior to routine diagnosis (i.e., four days prior to rash onset, which is usually when diagnosis occurs).	• Typically 1-2 days prior to symptom onset
How many people get sick from one person:	• Measles is one of the most contagious human infections. • One person can infect between 12 to 18 susceptible people	• COVID-19 can infect between 1.5 to 6.5 susceptible people • Influenza between 1 to 2 susceptible people.

How these viruses spread:	• Measles virus enters the air as very small particles that float in the air for up to two hours after an infectious individual leaves the room.	• COVID-19, influenza, and most other respiratory viruses leave an infectious individual as large droplets, falling to the ground in the 3 – 6 feet around them.
Prevention measures for the general public:	• The differences in how viruses are transmitted impact prevention measures that are used to control spread. • Measles is harder to control as viruses are often unknowingly floating in the air when susceptible individuals encounter them.	• Typically includes hand hygiene, personal distancing and masking.
Vaccine availability and effectiveness:	• Due to the unique way measles is transmitted, the primary prevention measure is vaccination. • One dose is expected to be 93% protective and two doses 97% protective at preventing measles infection. • Protection from measles vaccine is also considered to be lifelong.	• Vaccines for COVID-19 and influenza, while very beneficial at offering protection against infection and severe illness, may wane over time.
Length of symptoms and onset after exposure:	• Measles symptoms can last up to two weeks • Time between exposure and rash onset is typically 7 – 14 days but can take up to 21 days.	• Typically symptoms last up to two weeks • Time between exposure and symptom onset is 2 – 14 days for COVID-19 and 1 – 4 days for influenza.
Hospitalizations:	• One key difference of measles compared to other viral respiratory infections is the percentage of infections that require hospitalization. • Measles infection can result in hospitalization of approximately 20% of infections.	• Hospitalizations occur in less than 1% of recent COVID-19 infections and 1 – 2% of influenza infections between 2011 and 2024.
Secondary complications:	• Measles is capable of leading to complications such as pneumonia, secondary	• In severe cases, these viruses may lead to complications such as

	bacterial infections, swelling of the brain, and death. • Measles can also cause a phenomenon called immune amnesia, in which the infected person's immune system memory is reduced by about 70%. This immune amnesia can then leave them vulnerable to other infections for which they had previously developed immunity.	pneumonia, secondary bacterial infections, swelling of the brain, and death.
Neurological complications:	• Neurological complications can occur with measles, similar to all respiratory viruses. • Measles also can cause unique neurological complication that is fatal and can occur 7 – 10 years after a measles infection. It is most common in children who were infected before 2 years of age.	• Neurological complications can occur across many viral respiratory infections.
Individuals at highest risk for complications:	• Individuals at highest risk for severe complications from measles includes children less than five years of age (especially younger than one year of age), adults older than 20 years of age, immunocompromised individuals, and pregnant women.	• Typically children less than five years of age, adults 65 years of age and older, individuals with certain underlying conditions, and pregnant women.