

HEALTH ALERT NETWORK | HEALTH ADVISORY | May 2, 2025

First Case of Measles in North Dakota Since 2011

The North Dakota Department of Health and Human Services (HHS) has confirmed the state's first case of measles since 2011. The case involves an unvaccinated child from Williams County who is believed to have contracted the illness from an out-of-state visitor. The individual is currently isolating at home to avoid spreading measles to others. HHS is contacting those who may have been exposed and advising unvaccinated individuals how long to quarantine.

The current measles outbreak in the United States has now grown to [935 cases](#), with a majority of cases still centered in [Texas](#). In 2024, the United States experienced 285 cases, the majority of which were in children and unvaccinated, with 42% of the 2024 cases needing hospitalization.

Vaccination rates have declined in North Dakota with [81% of children age 19-35 months](#) and [90% of North Dakota kindergarteners](#) up-to-date with measles vaccination recommendations. Local rates vary greatly, with some areas more susceptible to outbreaks. Experts believe measles immunization coverage needs to be above 95% to prevent outbreaks of disease.

Health care providers should maintain a high awareness for measles among febrile patients with rash, especially in those without two documented doses of measles, mumps, and rubella (MMR) vaccine. If healthcare providers suspect measles, the case should be isolated following airborne precautions and reported to the ND HHS immediately. Suspected cases of measles should immediately be reported to the ND HHS Disease Control and Forensic Pathology Section by calling 1.800.472.2180 or 701.328.2378.

Diagnosis:

Measles is an acute disease typically beginning with fever, cough, coryza and conjunctivitis. Three to five days later, a maculopapular rash develops lasting more than three days. The rash begins on the face at the hairline and spreads downward to the rest of the body. Patients presenting clinical symptoms compatible with measles should be

asked about recent travel to areas with outbreaks in the United States, as well as abroad, and about any contact with returning travelers. Measles cases have been initially misdiagnosed as Kawasaki disease, dengue and scarlet fever, among other conditions, so health care providers should consider measles in the differential diagnosis of these diseases.

The clinical case definition for measles is:

- A generalized, maculopapular rash lasting \geq three days,
- A temperature $\geq 101^{\circ}\text{F}$, and
- Cough, coryza or conjunctivitis (the three Cs).

Transmission and Patient Management:

If measles is suspected, airborne infection control precautions should be followed stringently. Suspected measles patients (i.e., people with febrile rash illness) should be removed from emergency departments and clinic waiting areas as soon as they are identified and placed in a negative pressure room if one is available. If one is not available, the patient should be placed in a private room with the door closed and asked to wear a surgical mask. If possible, they should not be sent to other parts of the building for examination or testing purposes. Additionally, they should leave via a separate exit if possible.

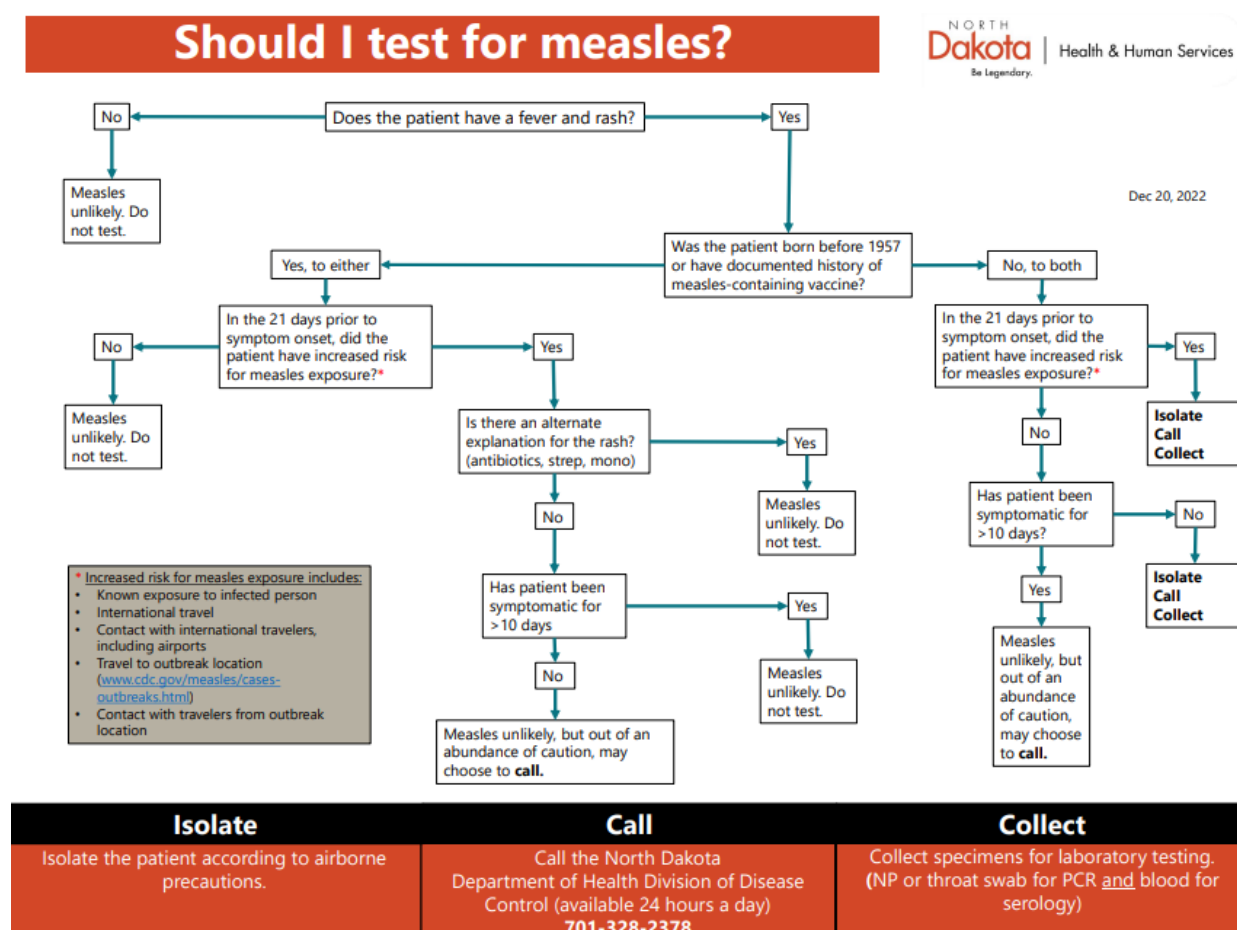
Measles transmission is primarily person to person via large respiratory droplets, but airborne transmission can occur. Respiratory droplets can remain infectious for approximately two hours in the environment. The incubation period for measles is usually eight to 12 days, although symptoms may occur as early as seven or late as 21 days after exposure. Infected individuals can spread measles from four days before through four days after the rash appears. They should be instructed to exclude themselves from any public settings during this time.

Because of the severity of the disease, people with measles commonly present to a physician's office or emergency room and pose a risk of transmission to other patients and healthcare personnel. Transmission risks can be minimized by ensuring that all healthcare personnel have evidence of measles immunity and that appropriate infection control practices are followed. Evidence of natural measles infection, measles immunity or receipt of two doses of measles vaccine should be documented for all healthcare

workers. Healthcare facilities should recommend a dose of MMR vaccine for unvaccinated workers born before 1957 who are at risk for occupational exposure to measles, and who do not have a history of measles disease or laboratory evidence of measles immunity.

Laboratory Testing:

Providers should order a [PCR](#) and [IgM](#) tests on patients for whom measles is suspected. IgM and PCR tests for measles are available from ND HHS Division of Laboratory Services. **Given the potential for long turnaround times at commercial laboratories for measles, providers are recommended to submit specimens to ND HHS Division of Laboratory Services.** Additional information concerning when to test for measles can be found on the diagram below.



Vaccination:

Vaccination status of patients should be verified. MMR vaccine is routinely administered at 12 to 15 months of age and 4 to 6 years of age. Children are required to be age-

appropriately vaccinated with MMR vaccine for entry into childcare, kindergarten through twelfth grade or have documentation of an exemption. Studies indicate that 97 percent of people who receive two doses of MMR vaccine are immune to measles. All adults born in 1957 and after should have documentation of at least one dose of MMR vaccine or other evidence of measles immunity. Birth before 1957 is considered acceptable evidence of immunity to measles for the general public.

Infants aged 6 – 11 months old are recommended to receive a dose of MMR early prior to any international travel or travel to an outbreak area. As the North Dakota case is currently an isolated event, there is no recommendation for infants not traveling outside of North Dakota to receive a dose of MMR early. If a child receives a dose of MMR prior to 12 months they should still receive two age-appropriate doses of MMR vaccine after their first birthday.

Susceptible individuals with a known or highly probable exposure, depending on timing and age, can be treated with MMR vaccine or immune globulin (IG) to prevent or modify measles. MMR vaccine, if administered within 72 hours of initial measles exposure, may provide some protection. IG is indicated for susceptible contacts of measles patients, particularly those with increased risk of complications and who cannot receive MMR vaccine (i.e., infants age six months or younger, pregnant women, or immunocompromised people). If administered within six days of exposure, IG can prevent or modify measles in a susceptible person.

Reporting:

Healthcare providers should heighten their suspicion of measles and report any suspect cases of measles immediately to the ND HHS. **Do not wait for laboratory results to report suspected cases of measles.** Timely reporting of suspected measles cases will allow the ND HHS to investigate cases and contacts and make recommendations to reduce transmission in the community. As mandated by North Dakota law, any incidence of measles must immediately be reported to the ND HHS by phone at 701.328.2378 or toll-free at 800.472.2180.

For more information about measles in North Dakota, please visit the North Dakota Immunization Unit website at <https://www.hhs.nd.gov/immunizations/measles>.