

Adult Measles Vaccination

Due to the current increase in measles cases in the United States (www.cdc.gov/mmwr/volumes/68/wr/mm6817e1.htm), the Centers for Disease Control and Prevention has developed the following summary for vaccination of adults against measles with measles, mumps, rubella (MMR) vaccine. **Recommendations for vaccination and assessing immunity in adults have not changed** since publication of the Advisory Committee on Immunization Practices (ACIP) recommendations for the Prevention of Measles, Rubella, Congenital Rubella syndrome, and Mumps in June 2013 (www.cdc.gov/mmwr/preview/mmwrhtml/rr6204a1.htm).

What adult providers need to know:

Providers do not need to actively screen and recall all adult patients for measles immunity.

This is because of high population immunity and low risk of disease among adults in non-outbreak areas in the U.S.

Providers should make sure patients have measles protection before international travel.

U.S. residents traveling internationally are at high risk for acquiring measles abroad. They can also transmit measles to susceptible persons, such as infants, when they return home.

Serologic testing for measles immunity is not recommended. However, if measles immunity is unknown (i.e., born after 1957 and no documented vaccination or history of disease) give a dose of MMR, unless there are contraindications. Additionally, there are no concerns about MMR vaccine supply despite increased demand.

Currently, there are no changes to the MMR schedule in Minnesota.

Measles is an acute viral illness characterized by a prodrome of fever, cough, coryza, and conjunctivitis, followed by a maculopapular rash. The rash spreads from the head to trunk to the lower extremities. Measles is usually a mild or moderately severe illness; however, measles can result in complications such as pneumonia, encephalitis, and death.

Most adults in the U.S. are at low risk for measles. In general, providers do not need to actively screen low-risk adult patients for measles immunity in non-outbreak areas in the U.S.

From 2001-2015, the annual reported incidence for adults ≥ 18 years of age was $< 0.5/1,000,000$ population (Clemmons et al, JAMA 2017). Further, seroprevalence of measles immunoglobulin G (IgG) in the U.S. for persons 20-49 years of age ranges from 87.9% to 93.3%, suggesting high immunity among U.S. adults (Lebo et al., OFID 2017). From Jan. 1 to May 10, 2019, 839 cases were reported to CDC. Of these, 218 (26%) measles cases were reported in adults ≥ 18 years of age. Among all adult cases, 65% were associated with outbreaks in underimmunized close-knit communities in two states (NY and WA).

Certain adults are considered to be at high risk for either acquiring measles and/or transmitting disease to vulnerable persons. **High-risk adults need written documentation of two doses of MMR vaccine (each dose separated by at least 28 days), or other presumptive evidence of immunity.**

High-risk adults include:

- Students at post-high school educational institutions.
- Health care personnel.
- International travelers to any country outside the United States.

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Other presumptive evidence of measles immunity includes:

- Birth before 1957.
- Laboratory evidence of immunity.
- Laboratory confirmation of disease.

Health care facilities should consider vaccination of health care personnel born before 1957 with two doses of MMR who lack laboratory evidence of immunity or laboratory confirmation of disease.

Currently, there are no changes to the MMR schedule in Minnesota. However, other states are experiencing outbreaks and health departments in those states may provide additional recommendations to protect their communities. The at-risk population is defined by local and state health departments, depending on the epidemiology of the outbreak. Thus, if the outbreak is affecting adults with community-wide transmission and ongoing risk of exposure to adults, a second dose should be considered for adults in these affected areas (including visitors) who have previously received one dose. During an outbreak of measles in a health-care facility, or in health care facilities serving a measles outbreak area, two doses of MMR vaccine are recommended for health care personnel regardless of birth year who lack other presumptive evidence of measles immunity. There are no recommendations to receive a third dose of MMR vaccine during measles outbreaks.

One dose of MMR vaccine, or other presumptive evidence of immunity (listed above), is sufficient for other U.S. adults. Some adults may have received a killed measles vaccine during the 1960s. The killed measles vaccine was available from 1963 to 1967 and administered to less than 5% of adults. The ACIP recommendation is to re-vaccinate anyone who received the killed vaccine or vaccine of unknown type. However, this only affects a very small proportion of adults who were vaccinated during those years. There is no recommendation for a catch-up program among adults for a second dose of MMR (e.g., persons born before or after 1989).

If a patient's measles immunity is unknown, providers should vaccinate with MMR, unless there are contraindications. Contraindications to MMR vaccination include a history of severe allergic reaction to any component of the vaccine, pregnancy, and immunosuppression. MMR vaccine is safe, even if given to persons who were previously vaccinated or had prior disease. IgG serologic testing to assess measles immunity is NOT recommended during this period of increased measles activity. IgM testing should ONLY be used for patients suspected to have measles.

Additional information can be found on [Measles Information for Health Professionals](http://www.health.state.mn.us/diseases/measles/hcp/index.html) (www.health.state.mn.us/diseases/measles/hcp/index.html).

Vaccine Preventable Disease Section
625 Robert St. N., PO Box 64975
St. Paul, MN 55164-0975
651-201-5414
www.health.state.mn.us/measles

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