

Managing Measles Exposures in Health Care Workers

FOR EMPLOYEE HEALTH AND INFECTION PREVENTION STAFF

Report suspected measles cases

If you suspect measles in a patient:

- **Call MDH** immediately at 651-201-5414 or toll-free at 1-877-676-5414 to report
- **Collect specimens** for RT-PCR and serologic testing

Health care facilities are required to report suspect cases of measles immediately to facilitate case confirmation and ensure rapid public health response.

Measles is highly infectious. Although it is no longer endemic in the U.S., an imported case can spread rapidly to susceptible individuals or groups.

Evaluate health care workers' measles immune status

Health care workers (HCWs) include everyone working in a health care facility that has the potential for exposure to infectious materials. Workers providing direct, face-to-face patient care should be prioritized. Evidence of measles immunity for HCWs includes¹:

- Having had two doses of MMR vaccine, or
- Serologic evidence of immunity, or
- Birth before 1957, or
- Laboratory confirmation of disease.

If a person is not immune, they should be considered susceptible. History of disease is no longer considered adequate presumptive evidence of measles immunity for HCWs; laboratory confirmation of disease has been added as acceptable presumptive evidence of immunity².

For HCWs with 2 documented doses of MMR or other acceptable evidence of immunity to measles, serologic testing for immunity is not recommended.

- If a HCW has 2 documented doses of MMR, is tested serologically, and has negative or equivocal measles titer results, it is not recommended that the person receive an additional dose of MMR vaccine. They should be considered to have adequate presumptive evidence of immunity.
- If a HCW has 1 documented dose of MMR, they should receive a second dose at least 28 days after the first.

A secure system should be used to manage vaccination records for HCWs so records can be retrieved easily as needed².

Vaccination recommendations

HCWs without evidence of immunity should receive either:

- Two doses MMR vaccine, or
- Serologic immune status testing with follow-up vaccination of persons with negative or equivocal results.

In HCWs without evidence of immunity, serologic testing prior to vaccination is not recommended unless the facility deems it more cost-effective.

Priority for vaccination of staff should be based on risk of contact with measles cases (e.g., outpatient clinics, emergency departments), and patient population served (e.g., immunocompromised patients).

Age groups presumed immune to measles due to disease

Before measles vaccine was introduced in 1963, more than 90 percent of U.S. children were immune by age 15 years. Most persons born before 1957 are likely to have been infected naturally and may be presumed to be immune. However, birth before 1957 does not guarantee measles immunity.

For HCWs born before 1957 who lack evidence of measles immunity, health care facilities should consider vaccinating with 2 doses of MMR at the appropriate interval.

HCW exposure

Exposure is typically defined as having shared airspace at the same time or, in a closed area, up to two hours after a person with measles has occupied the area. If a case of measles is identified at your facility, the following should be done:

- Evaluate HCWs' measles immune status using criteria on page 1.
- Contact MDH to discuss post-exposure prophylaxis (PEP) and exclusion.

Post-exposure prophylaxis for exposed, non-immune HCWs

Measles (or MMR) vaccine is effective at preventing measles when administered to a susceptible person within 72 hours following exposure. Immune Globulin (IG) may prevent or modify measles disease in susceptible persons when given within 6 days following exposure.

- MMR should be offered unless medically contraindicated (e.g., pregnant or immunocompromised)
- IG is typically reserved for children <12 months, pregnant women, and immunocompromised persons for whom the risk of complications is highest. See [Measles Post-Exposure Prophylaxis for Non-Symptomatic Susceptible Contacts](http://www.health.state.mn.us/divs/idepc/diseases/measles/hcp/measlespep.pdf) (<http://www.health.state.mn.us/divs/idepc/diseases/measles/hcp/measlespep.pdf>).

Exclusion of exposed HCWs

- Susceptible HCWs should be excluded from work beginning 5 days through the 21st day following exposure. Exclusion is recommended regardless of whether the employee receives post-exposure vaccine or IG.
- A HCW who develops measles symptoms after exposure should be excluded from work until 4 days after rash onset, or until measles is ruled out.

Serologic testing

Persons immune to measles due to disease or immunization will likely test positive for measles serum IgG (immune globulin G).

- Serum IgG rises soon after infection or immunization and persists.
- Serum IgM should not be run on individuals for immunity testing. The IgM may be (falsely) positive in previously vaccinated, asymptomatic individuals.

Immune status testing may be performed post-exposure; however testing should be performed as soon after exposure as possible because IgG due to measles infection may rise prior to onset of symptoms.

References

1. CDC. Prevention of Measles, Rubella, Congenital Rubella Syndrome, and Mumps 2013. MMWR 2013;62(No. 4):1-40.
2. CDC. Immunization of Health-Care Personnel: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR November 25, 2011; 60(No. RR-07); 1-45.

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

To obtain this information in a different format, call: 651-201-5414.