Managing Measles Exposures in Health Care Workers

For Employee Health and Infection Prevention Staff

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

Report Suspected Measles Cases

If you suspect measles in a patient

- Notify the local health jurisdiction (LHJ) immediately and arrange for measles testing at the Washington State Department of Health Public Health Laboratory.
- Follow the Suspect Measles Case Checklist to collect the appropriate specimens.

Measles is highly infectious. Although it is no longer endemic to 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 includes[1]:

- Having had two doses of MMR vaccine, or
- Serologic evidence of immunity, 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 immunity[2].

For HCWs with 2 documented doses of MMR, 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 when needed[2].

Vaccine Recommendations

HCWs without evidence of immunity should receive either:

- Two doses MMR vaccine (given a minimum of 28 days apart), OR
- Serologic immune status testing with follow-up vaccination of persons with negative or equivocal results. Note: Serologic testing prior to vaccination is not recommended unless the facility deems it more cost-effective.

For HCWs born before 1957 who lack evidence of measles immunity, health care facilities should consider vaccinating with 2 doses of MMR vaccine separated by at least 28 days.

Deciding which staff should be prioritized to receive vaccination is based on their risk of contact with measles cases (e.g., people who work in outpatient clinics, emergency departments), and the patient population served (e.g., immunocompromised patients).

Health Care Worker Exposure

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

- Evaluate the health care workers' measles immune status using criteria on page 1.
- Contact LHJ to discuss post-exposure prophylaxis (PEP) and exclusion.

Post-exposure prophylaxis for exposed, non-immune HCWs

- Measles (or MMR) vaccine is 83-100% 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.

Exclusion of Exposed Health Care Worker

- Susceptible HCWs should be excluded from work starting on the 5th day after exposure and continuing through the 21st day after exposure. Exclusion is recommended **regardless** of whether the employee receives appropriately timed post-exposure vaccine or IG.
- A HCW who develops measles symptoms after an exposure should be excluded from work at their onset of ANY symptoms through the 5th day after rash onset, or until measles is ruled out.
- Testing exposed staff for measles disease should be done only **after** a rash has developed.

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.

Additional Resources

Washington State Department of Health Resources

- Washington State Department of Health Suspect Measles Case Checklist
- Guidance for Outbreak Measles Testing Through Public Health
- Measles Public Health Laboratory Specimen Intake Form

CDC Resources

- Measles information for Healthcare Professionals
- Manual for the Surveillance of Vaccine Preventable Diseases; Chapter 7: Measles

Questions?
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