



**New Jersey Department of Health
Vaccine Preventable Disease Program
MEASLES EXPOSURE GUIDANCE
Date: January 2015**

Exposure

Measles transmission is primarily person to person via respiratory droplets. Airborne transmission has been documented in closed areas (e.g., office examination room) for up to 2 hours after a person with measles occupied the area. Measles is highly communicable, with greater than 90% secondary attack rates among susceptible persons. Measles may be transmitted from 4 days before to 4 days after rash onset. An exposure occurs when a person is in the same space (e.g. room, office, waiting room, building depending on the ventilation system) with someone who has measles, or occupies this space for up to 2 hours after the infected person has left.

Proof of Immunity

General population (excluding health care personnel)

Acceptable presumptive evidence of immunity against measles includes at least **one** of the following:

- Written documentation of adequate vaccination:
 - One or more doses of a measles-containing vaccine administered on or after the first birthday for preschool-age children and adults not at high risk
 - Two doses of measles-containing vaccine for school-age children and adults at high risk, including college students, health care personnel, and international travelers
- Laboratory evidence of immunity (equivocal IgG results should be considered negative)
- Laboratory confirmation of measles
- Birth before 1957
 - Adults born before 1957 are likely to have had measles disease as a child and are generally (but not always) considered not to need vaccination

Note: Health care providers should not accept verbal reports of vaccination without written documentation as presumptive evidence of immunity.

Health care personnel

Health care facilities may want to review their current policies regarding acceptable proof of immunization of health care personnel.

All persons who work in health care facilities should have presumptive evidence of immunity to measles. This information should be documented and readily available at the work location. Recently vaccinated health care personnel do not require any restriction in their work activities.

Presumptive evidence of immunity to measles for persons who work in health care facilities includes **any** of the following:

- Written documentation of vaccination with 2 doses of live measles or MMR vaccine administered at least 28 days apart
- Laboratory evidence of immunity (equivocal IgG results should be considered negative)
- Laboratory confirmation of disease

Facilities should vaccinate health care personnel born before 1957 who lack laboratory evidence (e.g., blood test) of measles, mumps, and rubella immunity or laboratory confirmation of previous disease with MMR vaccine. These facilities should vaccinate health care personnel with MMR during an outbreak of any of the diseases, regardless of birth date.

Please view the MMWR for the ACIP/CDC current recommendations:
<http://www.cdc.gov/mmwr/pdf/rr/rr6007.pdf>

Laboratory Confirmation of Immunity

General population

If a person has no proof of immunity (as described on page 1), you may order a measles IgG test to determine if your patient has immunity to measles. People without proof of immunity who have been exposed to measles will need to stay at home (quarantine) from day 5 from first exposure through day 21 following last exposure (or until a positive measles IgG test result is available). Please see the “Exclusions” section on page 3.

Health care personnel

Ordering serology to check for immunity in health care providers with documentation of 2 doses of MMR administered in accordance with ACIP guidelines is not recommended.

These employees have adequate presumptive evidence of immunity as documented age-appropriate vaccination supersedes the results of subsequent serologic testing. If serologic testing is done and an employee with 2 documented doses has a negative serologic assay for measles, they should not be given a 3rd dose of vaccine, as they already have presumptive evidence of immunity by having 2 doses of measles-containing vaccine administered in accordance with ACIP recommendations.

Post Exposure Prophylaxis

General population & health care personnel

Measles-containing vaccine (e.g. MMR) and immune globulin may prevent or lessen the severity of disease if given in a timely manner.

Measles-containing vaccine (e.g. MMR)

MMR may prevent or lessen the severity of disease if given within 72 hours of first exposure to non-immune individuals aged 6 months and older who are eligible for vaccination. MMR given to infants aged 6 to 11 months will not count as a valid dose; such infants will need to be revaccinated at age 12 months, as long as 28 days have passed since the last dose. People who had received one dose of measles-containing vaccine before exposure should receive a second dose, provided it has been at least 28 days since the previous dose.

Immune globulin (IG)

IG, not MMR vaccine, should be given as post-exposure prophylaxis as soon as possible but no later than 6 days after first exposure to the following groups:

- Infants aged less than 6 months old (intramuscular IG or IGIM);
- Infants aged 6 to 12 months who did not receive MMR within 72 hours of exposure (IGIM);
- Pregnant women who are not immune to measles (intravenous IG or IGIV);
- Severely immunocompromised persons regardless of prior immunity to measles (IGIV).

For additional guidance, see www.cdc.gov/mmwr/preview/mmwrhtml/rr6204a1.htm

Exclusions Based on Immune Status and Post Exposure Prophylaxis

UNKNOWN IMMUNITY/NON-IMMUNE

General population & health care personnel

People without proof of immunity who have been exposed to measles will need to stay at home (quarantine) from day 5 from first exposure through day 21 following last exposure (or until a positive measles IgG test result is available). Exact dates depend on the date(s) of exposure. For example, if a person was exposed on 8/3/14 only, he/she will need to stay at home from 8/8 through 8/24. Your local health department can assist you with determining correct dates for quarantine.

Quarantine reduces the risk of exposure to disease by separating and restricting the movement of persons who are not yet ill but who have been exposed to an infectious agent and might become infectious. Persons infected with measles may be contagious from four days before rash onset through four days after rash onset. Therefore, if a person ends up developing measles symptoms, he or she could spread the virus **before** developing any symptoms. In order to protect the public's health and to prevent further spread of the disease, an exposed person without proof of immunity to measles must not continue regular activities in the community until one full incubation period from last exposure has passed.

EXPOSED PERSONS WHO RECEIVED POST-EXPOSURE PROPHYLAXIS

General population

Except in health care settings, unvaccinated people who receive their first dose of measles-containing vaccine or IG within the recommended timeframe generally may return to childcare, school, or work. Factors such as immune status, intense or prolonged contact, and presence of populations at risk should be taken into consideration before allowing people to return. Please consult with your local health department for additional guidance.

Additionally, IG may extend the incubation period from 21 to 28 days, so if excluded, people who receive IG will need to remain home for 28 days.

Health care personnel

Exclude health care personnel without evidence of immunity from duty from day 5 after first exposure through day 21 after last exposure, regardless of post-exposure vaccine.

KNOWN IMMUNITY

General population & health care personnel

People who meet the criteria for proof of immunity as outlined on pages 1-2 may continue their normal activity. Exposed individuals should monitor themselves for any signs or symptoms of measles, and be excluded should any symptoms develop.

Exposure Settings

General population (schools and other non-health care settings)

For all measles exposures, consider the entire group that could have been exposed. That could be the whole school, whole work setting, etc. Students, teachers, all staff and visitors should have their immune status evaluated. Notification of exposure should be considered for people who are determined to be exposed and should include education on hygiene, prevention, signs and symptoms of disease, and what to do if they become symptomatic.

The decision to exclude students or employees should be made in consultation with public health authorities. However, in a school setting, parents should be informed that if their child is not vaccinated and a case of measles occurs in the school, their child may be excluded until 21 days after rash onset in the last case of measles. Excluded students may be readmitted immediately if they are vaccinated within 72 hours of first exposure, after consulting with the local health department. Please consult with your local health department for additional information regarding controlling measles exposures.

Health care

If a patient calls/arrives complaining of measles symptoms

If patient notifies you before arriving and if time permits, special arrangements should be made for symptomatic patients to be evaluated without putting other patients or medical office staff at risk. Staff with known immunity to measles should be identified to assist. Because measles can

hang in the air for up to two hours, it is advisable that the patient be seen as the last patient of the day, use a separate entrance, and be placed in isolation immediately upon arrival.

If a patient arrives unannounced to your office complaining of fever and rash, it is advisable that they be removed from waiting areas as soon as they are identified, placed in a private room with the door closed, and asked to wear a surgical mask, if tolerated. Staff with known immunity to measles should be identified to assist and should wear a particulate respirator if one is available and they have been appropriately fit-tested. Since measles is airborne, the virus can travel through the ventilation system and might infect others not in direct contact with the ill individual.

In hospital settings, patients with suspected measles should be placed immediately in an airborne infection (negative-pressure) isolation room if one is available and, if possible, should not be sent to other parts of the hospital for examination or testing purposes. Staff with known immunity to measles should be identified to assist and should wear a particulate respirator if one is available and they have been appropriately fit-tested.

Use of any room or area where a suspected measles case has been should be avoided for at least two hours after the patient has left. Use standard sterilization and disinfection procedures to clean and disinfect surfaces and equipment that are likely to be contaminated.

Take a detailed history to determine the individuals travel history, contact with travelers, vaccination status, and detailed history of present illness including symptoms, symptom onset dates and rash progression. Information on specimen collection for patients meeting the clinical case definition can be found here:

http://www.nj.gov/health/cd/measles/documents/measles_lab_testing_faq.pdf

Immediately notify the local health department where the patient resides of the suspect case:

<http://nj.gov/health/lh/what.shtml>

Actions to be taken after a measles case visits a health care facility

If measles exposures occur in a health care facility, all contacts (including staff, patients, and visitors) should be evaluated immediately for presumptive evidence of measles immunity. Due to the greater opportunity for exposure, health care personnel are at higher risk than the general population for becoming infected with measles. These individuals should be monitored for symptoms and excluded should illness develop. Please see the “Post Exposure Prophylaxis” and “Exclusions” sections on pages 2-4.

Make a list of all other individuals in the facility at the time the patient with suspected/confirmed measles was present in the office and for 2 hours after the patient leaves. This list should include patients, individuals accompanying patients, delivery persons, and vendors. Public health officials will work with you to ensure that everyone is notified, immune status evaluated and public health protective measures initiated.