



June 14, 2019

To: Health Care Providers, Hospitals, Emergency Departments, Local Health Departments, and Dental Providers

From: New York State Department of Health (NYSDOH), Bureau of Immunization

HEALTH ADVISORY: MEASLES VACCINATION RECOMMENDATIONS FOR ADULTS

Please distribute to the Chief Medical Officer, Infection Control Department, Infectious Disease Department, Pediatrics Department, Director of Nursing, Emergency Department, Primary Care Clinics, and all patient care areas.

UPDATE ON THE MEASLES OUBREAK AND VACCINATION RECOMMENDATIONS FOR ADULTS

SUMMARY

- There is continued ongoing transmission of measles in communities in NYS with the majority of cases in those who are unvaccinated or undervaccinated. Since October 1, 2018, there have been 932 cases reported in NYS: including 267 in Rockland County, 49 in Orange County, 18 in Westchester County, 8 in Sullivan County, and 588 in New York City (NYC).
- Providers should NOT rely upon self-report of vaccination as evidence of immunity. If there is no record of vaccination or evidence of immunity (and no contraindication), the patient should be vaccinated.
- For adults in **outbreak areas**, the NYSDOH recommends administration of a second dose of a measles-containing vaccine (MMR) for adults with one documented dose of a measles-containing vaccine.
- For adults in **non-outbreak areas**, recommendations have not changed. One dose of a measles-containing vaccine (or other presumptive evidence of immunity) is sufficient for most adults.
- Healthcare providers need to maintain vigilance for measles and immediately report any suspect cases by telephone to the local health department (LHD) where the patient resides.

UPDATE ON NYS MEASLES OUTBREAKS

- This health advisory provides the most recent information on the ongoing measles outbreaks in NYS. Since October 1, 2018, 932 cases of measles have been reported in NYS, the most in NYS since 1991 and since measles was declared eliminated in the US in 2000. The vast majority of cases have occurred in undervaccinated close-knit Orthodox Jewish communities.
- As of June 14, 2019, there are 344 confirmed cases of measles in NYS outside of NYC: 267 in Rockland County (concentrated in New Square, Spring Valley and Monsey), 49 in Orange County (concentrated in Kiryas Joel), 18 in Westchester County, 8 in Sullivan County, 1 in Greene County, and 1 in Suffolk County.

- As of June 10, 2019, NYC has identified 588 confirmed cases of measles primarily in the communities of Williamsburg and Borough Park in Brooklyn.
- Among 324 of the confirmed cases in NYS, outside of NYC, 62 (19%) were adults aged 19 years or older. Of these 62 individuals, 5 (8%) were born before 1957 (4 unvaccinated, 1 with unknown vaccine status) and 57 (92%) were born during or after 1957. Among those born during or after 1957, 48 (84%) were unvaccinated or had unknown vaccination status, while 3 (5%) had received one measles-containing vaccine dose, and 6 (11%) had documentation of two doses of measles-containing vaccine. Notably, five cases in adults were importations from international travel, all of whom were unvaccinated or unknown vaccine status.

BACKGROUND

Most adults in the U.S. are at low risk for measles.

- The majority of those born before 1957 were likely infected naturally and may be presumed to be immune.
- Measles vaccination effectiveness after one dose of MMR is approximately 93%, increasing to 97% after two doses.
- From 2001-2015, the reported measles incidence for adults ≥ 18 years of age was < 0.5 cases per million persons, whereas the risk for children aged 6 to 15 months was 5 per million (Clemmons, et al, JAMA 2017).
- Protective levels of antibodies in the U.S. for persons 20-49 years of age ranges from 88% to 93% (Lebo et al., OFID 2017).

NON-OUTBREAK AREA - MEASLES VACCINATION RECOMMENDATIONS FOR ADULTS

Average Risk Adults (≥ 18 years)

Presumptive evidence of measles immunity includes:

- At least one documented dose of MMR¹
 - Birth before 1957
 - Laboratory evidence of immunity (positive measles IgG)²
 - Laboratory confirmation of disease (positive measles PCR, culture, or IgM)
- Providers should NOT rely upon self-report of vaccination as evidence of immunity. If there is no record of vaccination, or other evidence of immunity, the patient should be vaccinated with MMR, unless there are contraindications³. MMR vaccine is safe, even if given to persons who were previously vaccinated or had prior disease.
 - Adults who are born during or after 1957 and do not have presumptive evidence of immunity should get at least one dose of MMR vaccine.
 - One documented dose of MMR vaccine, or other presumptive evidence of immunity, is sufficient for most U.S. adults born on or after 1957, in non-outbreak areas⁴. There is no recommendation for a second dose of MMR vaccine for average-risk persons with one documented dose in non-outbreak areas.

¹ The first dose of measles-containing vaccine should be administered on or after the first birthday; a second dose should be administered no earlier than 28 days after the first dose.

² Measles immunoglobulin (IgG) in the serum; equivocal results should be considered negative.

³ Contraindications to MMR vaccination include a history of severe allergic reaction to any component of the vaccine, pregnancy, and immunosuppression.

⁴ If exposed to measles, an adult with one documented dose of MMR vaccine, should receive a second dose of MMR, ideally within 72 hours of initial exposure, at least 28 days after the first MMR vaccine dose.

- From 1963 to 1967, less than 5% of adults received a killed or inactivated measles vaccine that was available at that time and was not effective.
 - Therefore, persons who received inactivated measles vaccine, or measles vaccine of unknown type, should be revaccinated with MMR vaccine.
- Serologic testing for immunity is not recommended for individuals with the recommended documented doses of MMR vaccine.
- Serology may be useful in assessing immune status if persons report they were vaccinated, do not have written documentation, and are unwilling to receive MMR vaccination. IgM should be used to test persons who are suspected to have measles now or in the recent past.

High Risk Adults:

- Certain adults are considered to be high risk and need documentation of two doses of MMR, each dose separated by at least 28 days, unless they have other presumptive evidence of measles immunity, as listed above. These adults include:
 - students at post-high school education institutions (such as college or vocational school)
 - healthcare personnel (persons who work in health care settings, inclusive of volunteers, trainees, nurses, physicians, technicians, receptionists, and other clerical and support staff)^{5 6}
 - international travelers⁷
 - adults who reside or spend time in outbreak areas

OUTBREAK AREA - MEASLES VACCINATION RECOMMENDATIONS FOR ADULTS

- Healthcare providers should review vaccination and immunity status for adults who reside in outbreak areas or who regularly spend time in areas with measles transmission. Additionally, adults who serve children or adults from outbreak areas, including camps, schools, and childcare settings which serve individuals from areas with measles transmission, should be included in these outbreak area recommendations.
- Providers should NOT rely upon self-report of vaccination as evidence of immunity. If there is no record of vaccination or other evidence of immunity, the patient should be vaccinated with two doses of MMR, unless there are contraindications³. MMR vaccine is safe, even if given to persons who were previously vaccinated or had prior disease.
 - Adults in the outbreak area with one documented dose of a measles-containing vaccine should be administered a second dose of MMR vaccine ≥ 28 days after their first dose.
 - Adults with two documented doses of MMR administered at age ≥ 12 months and ≥ 28 days apart are considered immune.
- For those born before 1957 consider vaccination or, alternatively, assess serologic testing for

⁵ In non-outbreak areas, for healthcare personnel (HCP) born before 1957 who lack other evidence of immunity, consider administering two doses of MMR vaccine. For healthcare personnel in outbreak areas born before 1957, recommend two documented doses of MMR (alternatively assess serologic testing for evidence of immunity).

⁶ Serologic testing for immunity is not recommended for persons who have had two appropriately timed, documented doses of MMR vaccine, including HCPs. In the event that a person, including an HCP, who has 2 appropriately timed, documented doses of MMR vaccine is tested serologically and determined to have negative or equivocal measles titer results, it is not recommended that the person receive an additional dose of MMR vaccine. Such persons should be considered to have presumptive evidence of measles immunity. Documented appropriate vaccination supersedes the results of subsequent serologic testing.

⁷ 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. If a patient is traveling internationally and measles immunity is unknown, providers should vaccinate with a series of 2 MMR ≥ 28 days apart, unless there are contraindications. Serologic testing for measles immunity is not recommended.

evidence of immunity.

- For healthcare personnel in outbreak areas born before 1957, recommend two documented doses of MMR. Alternatively, assess serologic testing for evidence of immunity.
- There are no recommendations for administration of a third dose of MMR vaccine during measles outbreaks after two appropriately timed, documented doses. Serologic testing for immunity is not recommended for those with the recommended documented doses of MMR vaccine.
- For more detailed information on vaccination requirements for individuals who reside or work in designated outbreak areas in NYC, please refer to the NYC Department of Health and Mental Hygiene (NYC DOHMH) webpage: www1.nyc.gov/site/doh/health/health-topics/measles.page

REPORTING AND LABORATORY TESTING FOR PATIENTS WITH SUSPECTED MEASLES

- **Suspect measles cases must be reported immediately by telephone to the LHD where the patient resides.** Contact information for LHDs is available at: www.nysacho.org/i4a/pages/index.cfm?pageid=3713.
- Reporting suspected cases of measles enables appropriate measles control measures to be taken to prevent transmission and access to rapid testing through the NYSDOH Wadsworth Center Laboratory. Use of commercial laboratories for measles testing may take up to a week to obtain results and a critical postexposure prophylaxis opportunity may be missed.
- Viral specimens (nasopharyngeal swab and urine) and serology (IgM and IgG) should be obtained for diagnostic testing and confirmation. The LHD can assist in arranging testing at the Wadsworth Center Laboratory.
- If you are unable to reach the LHD, please contact the NYSDOH Bureau of Immunizations at 518-473-4437.

RESOURCES

Contact Information:

- County Health Department contact information: www.nysacho.org/i4a/pages/index.cfm?pageid=3713.
- New York State Department of Health, Bureau of Immunization: 518-473-4437

Additional Information:

- Morbidity and Mortality Weekly Report (MMWR) on the Prevention of Measles, Rubella, Congenital Rubella Syndrome, and Mumps, 2013: Summary of Recommendations of the Advisory Committee on Immunization Practices (ACIP): www.cdc.gov/mmwr/preview/mmwrhtml/rr6204a1.htm
- NYSDOH webpage: www.health.ny.gov/measles
- CDC webpage: www.cdc.gov/measles
- NYC DOHMH webpage: www1.nyc.gov/site/doh/health/health-topics/measles.page