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TO: Healthcare Providers, Healthcare Facilities, and Local Health Departments (LHDs)

FROM: New York State Department of Health

Health Advisory:

Guidance for Measles during Pregnancy, for Congenital Measles, and for Prevention of Measles in Infants

Please distribute to: Hospitals, Local Health Departments, Laboratories, Emergency Departments, Family Medicine, Obstetrician-Gynecologists, Midwives, Pediatrics, Adolescent Medicine, Internal Medicine, Infectious Disease, Infection Control, and other Primary Care Providers.

Summary

- New York State is reporting its first measles related death in 30 years.
- The New York State Department of Health (NYSDOH) is reminding medical facilities and health care providers to be alert for measles in under-immunized communities and be prepared for a person with measles to enter their facilities.
- Measles virus poses particular risks to individuals who are pregnant and infants. This advisory highlights and reinforces currently available guidance from professional medical societies on preventing and managing measles during pregnancy and after delivery.
- Guidance in this area continues to develop, and current recommendations incorporate professional input to support timely and safe care for individuals who are pregnant and their newborns.
- An early dose of MMR vaccine for infants aged 6-11 months who live in or are traveling to an outbreak area minimizes the risk of disease and death that could occur in these infants during measles outbreaks.
- **Report patients with suspected measles immediately to the local health department of the patient's residence. Do not wait for laboratory confirmation to report.** If you have urgent questions regarding measles during evenings, weekends, or holidays, call 866-881-2809.
- This advisory supplements information contained in the Health Advisory: Confirmed Measles Cases in Multiple Under-Immunized Communities, dated 8/21/2026. Please refer to that previous advisory for general measles information.

Background

- Measles is a highly contagious, vaccine-preventable respiratory illness. The virus can remain airborne for up to two hours in an enclosed space and infects more than 90% of exposed non-immune individuals. It spreads mainly through the respiratory route; however, a fetus can be exposed to measles through intrauterine transmission during maternal measles infection. Approximately one-third of babies born to mothers with rash onset within 14 days of delivery will develop congenital measles.
- Measles infection during pregnancy has been associated with an increased maternal risk of hospitalization, pneumonia, need for oxygen support or mechanical ventilation, and death.
- Maternal infection during pregnancy is also associated with an increased risk of miscarriage, stillbirth, low birth weight, and preterm labor. Maternal infection, particularly in the 14 days prior to delivery, can lead to transmissible measles infection of the infant. Evidence does not support an association between measles and teratogenesis.

Guidance for Prevention of Measles in Infants

Measles Vaccination in Infants 6+ Months in Outbreak Areas

- While MMR vaccination is not routinely recommended for children before 12 months of age, it can be safely administered to children as young as 6 months if they are at increased risk of exposure to measles.
- **During the current measles outbreak, infants 6-11 months who live in an area experiencing a measles outbreak are recommended to be vaccinated with MMR.** Infants who receive an MMR vaccine dose before their first birthday (early dose) should still receive 2 additional MMR vaccine doses according to the routine recommendation (1st dose at 12–15 months and 2nd dose at 4–6 years of age) or, if the risk of exposure remains, according to the outbreak area pediatric MMR vaccination schedule below.
- Children aged 1 year and older should receive two MMR vaccine doses as early as possible and at least 28 days apart.
- Sample outbreak area pediatric MMR vaccination schedule:
    - Infants: Early dose at 6-11 months, dose 1 at 12 months (at least 28 days after the early dose), dose 2 at 13-15 months (at least 28 days after dose 1)
    - Children over 1 year of age: 2 doses of MMR vaccine administered at least 28 days apart
- An area experiencing a measles outbreak is defined as a community where at least one measles case has occurred within the past 42 days or where there are credible reports that measles is circulating. If a pediatric provider is uncertain if a patient resides in such a community, they should contact the local health department.

Prevention of Measles in Infants <6 Months

Non-immune household members who live with or may be involved in the care of infants not yet eligible for vaccination should receive MMR vaccine to reduce the risk of measles exposure for the unvaccinated infant.

Measles Education for Parents of Infants

Infants and young children are at higher risk for complications of measles. Parents should be counseled about concerns of particular importance related to measles in infants:

- the risks of bringing unvaccinated infants into public settings in outbreak areas,
- the importance of vaccination for infants 6 months or older who might be exposed (e.g., residence in an area with measles transmission, travel),

- the importance of vaccination of family members to prevent exposure of infants too young to be vaccinated,
- the importance of post-exposure prophylaxis for exposed infants,
- the increased risk of complications of measles in infants, including pneumonia and secondary bacterial infections, and
- symptoms of particular concern in infants who have or are suspected to have measles that should prompt immediate medical attention, including trouble breathing; poor color; retractions or appearance of pain with breathing or coughing; signs of dehydration; lethargy, unresponsiveness, or other neurologic signs; and poor feeding.

Guidance for Measles During Pregnancy

Primary prevention through immunization

- Providers should ensure that non-pregnant patients previously vaccinated with one dose of MMR vaccine receive a second dose. Non-pregnant patients with no evidence of immunity should receive one dose of MMR vaccine immediately and a second dose at least 28 days later. Due to the theoretical risk to the fetus of the rubella component of the MMR vaccine, patients should be counseled to avoid becoming pregnant for 28 days after receipt of the MMR vaccine.
- **MMR vaccine is contraindicated during pregnancy and should not be administered to individuals known to be pregnant or attempting to become pregnant.**
- Postpartum mothers who have not had two doses of MMR vaccine should receive a dose of MMR vaccine prior to discharge home. This is true even if they have a history of measles because the vaccine will also protect them against mumps and rubella, provided they have clinically recovered from their measles illness.
- MMR vaccine is safe during breastfeeding and does not need to be delayed during lactation.

Postexposure considerations for pregnant and postpartum patients

Individuals who are exposed to measles and do not have evidence of immunity against measles should be offered post-exposure prophylaxis (PEP). Healthcare providers should consider the individual's risk of exposure, immune status, and potential for severe disease. It is imperative to act swiftly following exposure to minimize the risk of measles transmission and outbreak.

Pregnant patients

- Non-immune individuals who are pregnant and exposed to measles should be offered intravenous immunoglobulin (IVIG) as PEP within 6 days of the initial exposure. MMR vaccine should not be administered as PEP during pregnancy. Exposed pregnant individuals should monitor for symptoms and remain in quarantine for 21 days from the last exposure, or 28 days for those who receive IVIG. Obstetrical care and other necessary medical care should continue during quarantine, with appropriate precautions to avoid exposures should the individual be in the early stages of measles infection.
- Preterm labor should be considered a potential sign of measles infection in exposed non-immune individuals who are pregnant.

Postpartum patients

- If exposed, postpartum patients who lack evidence of measles immunity should receive MMR vaccine as PEP within 72 hours of the initial exposure. The neonate, if also exposed, should receive immunoglobulin (IG) as PEP within 6 days of exposure.

Measles education for pregnant and postpartum patients
Pregnant and postpartum patients in outbreak areas should be educated about the symptoms of measles, and they should be aware of the increased risk of measles for individuals who are pregnant and infants.

- Symptoms of measles include fever (>100.4º F), cough, runny nose, and conjunctivitis followed by a rash 3-5 days after symptoms start.
- Patients should be instructed to seek medical care immediately for any sign of severe illness, including trouble breathing, pain when breathing or coughing, confusion, severe weakness, cyanosis, and difficulty eating or drinking.

Guidance for Congenital and Neonatal Measles

Definitions, Presentation, and Incubation Periods

- Neonates with clinical and/or laboratory evidence of measles infection within the first 10 days of life resulting from intrauterine measles exposure are considered to have congenital measles infection.
- The presentation of congenital measles infection is highly variable, ranging from asymptomatic, to the classic measles rash, to fulminant, multisystem disease and death.
- Common presentations include fever, rash, and jaundice. The classic maculopapular eruption may be atypical, delayed, or absent because of the infant's underdeveloped adaptive immune response, attenuation by passively acquired measles antibodies, or other reasons. Additional manifestations may include thrombocytopenia, pneumonia, and neurologic complications.
- Congenital measles is distinct from neonatal measles. Neonatal measles occurs when the neonate is exposed through the respiratory route after birth.
- For congenital measles, the incubation period ranges from 2–10 days, based on the interval between maternal rash onset and the baby's rash onset. For neonatal measles, the time between respiratory exposure and measles rash onset ranges from 7–21 days.
- Neonates born at any gestational age should be considered at risk for transmissible congenital measles infection if birth occurs after maternal measles symptom onset through 14 days after maternal rash onset. This timeframe incorporates the reported maximum 10-day period between maternal and neonatal rash onset after in utero exposure plus an additional 4-day presumptive infectious period if congenital measles developed in utero and the neonate remained infectious at birth.

Clinical management of neonates born during or shortly after the acute maternal measles infection (after prodromal symptom onset through 14 days after maternal rash onset)

- **Infection Prevention**
    - Neonates born at any gestational age within 14 days of maternal rash onset should be delivered and managed in airborne isolation until infectiousness can be determined.
    - If a neonate is born asymptomatic during the maternal infectious period (from 4 days before through 4 days after rash onset), the neonate might be at risk for either manifesting congenitally acquired measles or being infected postnatally via respiratory droplets. There is limited data to inform separation of the mother and the neonate during the mother's infectious period after delivery. Determining whether to separate the mother and neonate requires a joint parent-provider decision that weighs the risk of respiratory exposure in addition to existing in utero exposure.
    - If the mother and neonate are not separated during the mother's infectious period,

they should be in an airborne infection isolation room (AIIR). The mother may consider using source control (e.g., NIOSH-approved disposable N95 respirator without an exhaust valve) to decrease the risk of transmission to the neonate; however, data are not available to inform this practice.
    - Expressed breast milk can be given to the neonate regardless of separation.
    - The neonate should be evaluated for signs and symptoms of congenital measles, and samples should be collected for measles testing, which include nasopharyngeal (NP) or oropharyngeal (OP) swabs, urine for real time reverse transcriptase polymerase chain reaction (RT-PCR), and serum for measles IgM. Please see testing guidelines here.
- **Interpretation of testing at birth:**
    - Negative IgM or RT-PCR in an asymptomatic neonate does not fully rule out congenital measles. Monitor these neonates for symptoms for 14 days after maternal rash onset and consider retesting.
        - If symptoms develop during the monitoring period, testing should be repeated.
        - If the neonates who tested negative at birth remain asymptomatic, consider repeat testing on day 10 of life to evaluate for evidence of in utero transmission. However, a negative repeat test might not exclude in utero transmission entirely. If admitted to a high-risk setting, additional caution may be warranted.
    - Negative IgM or PCR in a symptomatic neonate may also require repeat testing on at least day 10 of life, or as per the clinical judgment of the providers.
        - For neonates with a positive IgM or PCR test, consider the following:
            - Full term and symptomatic with rash: isolation discontinuation may follow the conventional guidance, which is 4 days after rash onset.
            - However, if the infant is in a high-risk setting such as the neonatal intensive care unit (NICU), it may warrant a test-based approach, including two consecutive PCR tests, to determine when to discontinue isolation.
        - Full term and asymptomatic: continue isolation and monitor for symptoms during the 14 days after maternal rash onset.
        - Premature, symptomatic or asymptomatic: due to the possibility of prolonged infectiousness in premature neonates, a test-based approach including two consecutive PCR tests may be needed to determine discontinuation of isolation.
- **Considerations for IG and vitamin A for neonates born to women with suspected or confirmed measles**
    - For neonates who are **asymptomatic** at birth,
        - IG PEP is indicated to prevent and attenuate congenital measles and provide protection against postnatal transmission, if the mother is infectious at birth.
        - The effect of IG on the incubation period of measles infection may differ based on exposure route.
            - For postnatal respiratory-acquired measles, IG extends the incubation period from 21 to 28 days.
            - For in utero transmission, while data are limited, available literature suggests that rash onset occurs within a similar timeframe, regardless of the receipt of IG. Thus, symptom monitoring and empiric isolation for neonates who are only exposed in utero and receive IG as PEP should be considered on a case-by-case basis and should last at least up to 14 days after maternal rash onset. The role of vitamin A for asymptomatic

neonates who are at risk for congenital measles is unclear.

- For neonates who are **symptomatic** at birth,
  - Vitamin A should be given as part of supportive care for neonates with congenital measles with overt symptoms, unless there are contraindications to vitamin A. While vitamin A deficiency is rare in the United States, it has been associated with increased measles severity, mortality, and delayed recovery.
  - While IG is generally recommended as PEP during the incubation period, its role during acute infection is unclear. However, given the immaturity of the neonatal immune system, IG administration may help reduce measles morbidity.

Clinical management of neonates born <u>more than 14 days</u> after maternal rash onset

- Maternal measles can result in fetal exposure and pregnancy complications including miscarriage, stillbirth, and preterm delivery. The clinical impact to the neonate if the pregnancy continues is uncertain. It is likely that active measles infection of the fetus had occurred and concluded by the time of the delivery.
- If delivery occurs at or near term >14 days after maternal rash, maternal measles IgG developed in response to maternal measles should have been transferred to the neonate in utero, conferring immunologic control of measles replication.
- Neonates born at 34+ weeks gestation and more than 14 days after maternal rash onset would be generally expected to not have risk for an acute symptomatic and transmissible measles infection after birth. Congenital measles infection may have occurred in utero, but the neonate would generally not be anticipated to be infectious at birth.
- There is limited data to inform the management of neonates born more than 14 days after maternal rash onset. Measles testing, isolation, and IG administration should be considered on a case-by-case basis, based on maternal gestational age and immune status, neonatal factors including clinical status and any identified congenital syndrome that may affect immunocompetence, and the circumstances of care including admission to a NICU or any high-risk setting.

Post-acute and long-term sequelae in neonates exposed to measles during gestation

- Most people with measles recover uneventfully, but measles can cause serious immunological and neurological sequelae. All neonates exposed to measles during gestation, regardless of gestational age at the time of exposure, should be considered exposed to measles and may be at risk for congenital measles and its delayed complications.
- An important immunological sequela is immune amnesia, a form of immunosuppression of both cellular and humoral immunity that can persist for months to years after acute measles infection and can increase susceptibility to severe secondary infections.
- Measles-associated encephalitis is a rare but serious and potentially fatal complication. Primary measles encephalitis (PME) and acute postinfectious measles encephalomyelitis (APME) are two distinct conditions that typically develop days to weeks after the rash. Measles inclusion body encephalitis (MIBE) affects immunocompromised patients and occurs weeks to months after infection. Subacute sclerosing panencephalitis (SSPE) can occur months to years after apparent full recovery.
- For infants and children with known history of congenital measles infection or known in utero exposure to measles, long-term clinical follow-up and vigilance for neurologic and immunologic complications are warranted. Parents should be carefully counseled, and providers should monitor for neurologic signs or symptoms later in life including seizures, regression in milestones, and academic difficulties in older children, which might indicate early signs of SSPE.

For additional information about Congenital Measles, see: AAP – Congenital Measles: Frequently Asked Questions