Care of Infants at Risk for COVID-19

Updated August 11, 2020

This interim guidance is based on CDC guidelines and is intended to help healthcare providers and colleagues reduce the risk of SARS-CoV-2 (the virus that causes COVID-19) transmission in neonates; in particular the infant born to a mother who is positive for COVID-19 or presumed positive (PUI).

Routes of Transmission:
Transmission of SARS-CoV-2, the virus that causes COVID-19, to neonates is thought to occur primarily through respiratory droplets during the postnatal period when neonates are exposed to mothers, other caregivers, visitors, or healthcare personnel with COVID-19. The potential for vertical transmission through intrapartum or peripartum means is unclear. Delayed cord clamping practices should continue per usual ministry practice. Mothers with COVID-19 should use a mask while holding their baby during delayed cord clamping for the purpose of preventing SARS-CoV-2 transmission to the neonate.

Clinical Presentation:
Current evidence suggests that SARS-CoV-2 infections in neonates are uncommon when precautions are taken to protect newborns from maternal infectious respiratory secretions. If neonates do become infected, the majority have either asymptomatic infections or mild disease (i.e., do not require respiratory support), and they recover. Make parents aware of the reported signs among neonates with SARS-CoV-2 infection which include fever, lethargy, rhinorrhea, cough, tachypnea, increased work of breathing, vomiting, diarrhea, and feeding intolerance or decreased intake; the extent to which SARS CoV-2 infection has contributed to these reported symptoms is unclear as these symptoms can be seen in infants for other reasons.

Testing Neonates:
Testing is recommended for all neonates born to women with confirmed COVID-19 or PUI regardless of whether the neonate is symptomatic. For neonates presenting with signs of infection that suggest COVID-19, providers should also consider alternate diagnoses to COVID-19 (e.g., neonatal respiratory distress syndrome).

Recommended Testing:
Diagnosis should be confirmed by testing for SARS-CoV-2 RNA by reverse transcription polymerase chain reaction (RT-PCR). Detection of SARS-CoV-2 viral RNA can be collected using nasopharynx, oropharynx or nasal swab samples.

Serologic testing is not recommended at this time to diagnose acute infection in neonates.

Timing of Testing:
Both symptomatic and asymptomatic neonates born to mothers with confirmed or suspected COVID-19, regardless of mother’s symptoms, should have testing performed at approximately 24 hours of age. If initial test results are negative, or not available, testing should be repeated at 48 hours of age. For asymptomatic neonates expected to be discharged <48 hours of age, a single test can be performed prior to discharge, between 24-48 hours of age.
**Prioritization of testing:**

In areas with limited testing capacity, testing should be prioritized for neonates with signs suggestive of COVID-19 as well infants with COVID-19 exposure requiring higher levels of care or who are expected to have prolonged hospitalizations (>48-72 hours depending on type of delivery).

For infants who are positive on their initial testing, consider follow-up testing at 48 – 72-hour intervals until two consecutive negative tests are obtained to establish that the infant has cleared the virus from mucosal sites. This is most important for infants cared for in the neonatal intensive care unit and much less so for those discharged to home.

**Limitations and interpretation of testing:**

The optimal timing of testing after birth is unknown. Early testing may lead to false positives (e.g., if the neonate’s nares, nasopharynx and/or oropharynx is contaminated by SARS-CoV-2 RNA in maternal fluids) or false negatives (e.g., RNA may not yet be detectable immediately after exposure following delivery). For this reason, infants born to mothers with confirmed or suspected COVID-19 should be bathed after birth to remove virus potentially present on skin surfaces.

**Infection Prevention Precautions:**

Transmission-based precautions (Standard/Contact/Droplet Precautions) apply, including gowns, gloves, standard procedural mask and eye protection (face shield or goggles) should be used with infants. If aerosol generating procedures are expected, N95 or equivalent is recommended.

If neonatal clinicians are needed to provide infant stabilization in the Delivery Room transmission-based precautions apply.

All neonates born to mothers with confirmed or suspected COVID-19 should be considered as having suspected SARS-CoV-2 infection when testing results are not available. Mothers with suspected or confirmed SARS-CoV-2 infection and their neonates should be isolated from other healthy mothers and neonates and cared for according to recommended infection prevention and control practices for routine health care delivery. If a neonate does not remain in the mother’s room, facilities should consider the institution’s capacity and resources as well as the potential risk of SARS-CoV-2 transmission to other high-risk neonates when determining where the neonate should be isolated.

Neonates with suspected or confirmed SARS CoV-2 should be isolated from other healthy infants. Isolating infants with suspected or confirmed SARS-CoV-2 infection in a Neonatal Intensive Care Unit (NICU) should be avoided unless the neonate’s clinical condition warrants NICU admission (to avoid infecting other infants at risk).

Mothers and partners who are COVID-19 persons under investigation (PUIs) should not enter the NICU until their status is resolved.

Mothers (and partners) with confirmed COVID-19 should not visit NICU infants while able to transmit SARS-CoV-2. Defining when a person with COVID becomes non-infectious is not straightforward. The CDC currently recommends a symptom and time-based approach, reserving a test-based approach for rare circumstances. Immunocompetent persons may be considered non-infectious if (a) afebrile for 24 hours without use of antipyretics (b) at least 10 days have passed since symptoms first appeared (or, in the case of asymptomatic women identified only by obstetric screening tests, at least 10 days have passed since the positive test), and (c) symptoms have improved. For persons severely or critically ill with COVID-19, and for severely immunocompromised individuals, the length of time since symptoms first appeared can be extended to 20 days.
Contact between Mother (or Caregiver) and Infant:

During the birth hospitalization, the mother should maintain reasonable caution to prevent transmission to her infant. When the mother with COVID-19/PUI provides hands-on care to her newborn, she should wear a mask and perform hand-hygiene. There remains a potential risk of SARS-CoV-2 transmission to the neonate via contact with infectious respiratory secretions from the mother, caregiver, or other person with SARS-CoV-2 infection, including just before the individual develops symptoms when viral replication may be high. Non-infected partners and other caregivers should also practice infection prevention and control measures (mask, hand hygiene, before and during care of the infant).

Rooming In:

Current evidence suggests the risk of a neonate acquiring SARS-CoV-2 from its mother is low if care is taken to prevent transmission. Further, data suggests that there is no difference in risk of SARS-CoV-2 infection to the neonate whether a neonate is cared for in a separate room or remains in the mother’s room. Health care providers should respect maternal autonomy in the medical decision-making about rooming in of the infant and should assist the mother in weighing the risks and benefits of rooming in versus temporary separation if the mother has tested positive or is PUI.

Benefits of Rooming In:

- Mother-infant bonding
- Mothers can more easily learn and respond to infant feeding cues
- Breastfeeding is known to reduce infant morbidity and mortality
- Rooming in promotes family-centered care (education in newborn care and IP practices, such as hand hygiene)

Considerations for Separation from the infant may be necessary when:

- The mother is too ill to care for the infant or needs a higher level of care
- The neonate is at higher risk for severe illness (e.g., pre-term or underlying medical condition)

Separation in order to reduce the risk of transmission from a mother with suspected or confirmed SARS-CoV-2 to her neonate may not be necessary if the neonate tests positive for SARS-CoV-2.

NOTE: If after discharge the mother will not be able to maintain separation from their neonate until they meet the criteria, it is unclear whether temporary separation while in the hospital would ultimately prevent SARS-CoV-2 transmission to the neonate, given the potential for exposure from the mother after discharge.

Measures to minimize the risk of transmission from mother to infant include:

Mother uses a cloth face covering and practices good hand hygiene during all contact with the neonate. The facemask should remain in place during contact with the newborn. Cloth face coverings or face shields should never be placed on neonates or any children younger than 2 years of age.

Engineering controls such as physical barriers can be used (e.g., placing the neonate in a temperature-controlled isolette), and the neonate is kept ≥6 feet away from the mother as much as possible. Educate staff and patients to keep the doors of the Isolette latched to reduce infant fall risk.

Healthy caregivers should wear a mask and comply with strict meticulous hand hygiene. If possible, expressed breast milk should be fed to the infant by a healthy caregiver, who is not at high risk for severe
illness from COVID-19. Breast pumps should be cleaned after each use, cleaning all parts that come in contact with breast milk.

**Discharge of the Infant:**

Neonates who otherwise meet the clinical criteria for discharge do not require the results of SARS-CoV-2 testing for discharge. Asymptomatic infants may be discharged home with appropriate precautions and with frequent outpatient provider follow up contacts (phone, telehealth, or in-office) thru 14 days after birth.

Results of testing should be communicated to the family and outpatient healthcare provider.

Parents and other caregivers should follow the recommendations of their provider for neonates with suspected or confirmed COVID-19, to include following transmission-based precautions until no longer required.

**References:**


