

## Guidelines of Management of Infant Born to Mother with Proven or Suspected COVID-19

The following are guidelines for the care of an infant born at University Hospital to a mother with confirmed COVID-19 disease or who has been tested (person under investigation [PUI]) for the presence of the SARS-CoV2 virus.

- It remains unclear if the SARS-CoV2 virus is vertically transmitted from mother to fetus antenatally via transplacental infection. Prior published experience with coronaviruses would suggest this is unlikely.
- Perinatal exposure **may be possible** at the time of vaginal delivery based on the detection of virus in stool and urine.
- Newborns are at risk of infection from a symptomatic mother's respiratory secretions after birth, regardless of delivery mode.

The following outlines the approach to be taken for the care of an infant born to a woman with confirmed/suspected COVID-19.

### Delivery

- Personnel attending the delivery of a COVID-19 positive or PUI mother should be limited if possible – one nurse, one respiratory therapist, and one advanced practice provider (Attending/NP/PA/Fellow)
- No residents, medical or nursing students, or other learners should attend the delivery
- Providers attending delivery should use enhanced droplet precautions (gown, gloves, **surgical mask** with eye protection)
- If aerosolized procedures (i.e. PPV, CPAP, intubation) are anticipated, such as with a preterm delivery or fetal distress, enhanced aerosol precautions should be used **for all 3 providers** (gown, gloves, **N95 mask, face shield**). These 3 providers will continue to take care of patients and do procedures in designated hospital bed/area until the end of the shift (see below).
- All Sky Tower deliveries will be using enhanced aerosol precautions as above, including **N95 masks and face shields**
- Use a face shield should also be used if delivery is anticipated to have an excessively bloody field (i.e. abruptions, percretas, etc...)
- Minimize time in the delivery room if possible; consider performing elective intubations in the NICU
- Transport infant to NICU in closed isolette using shortest possible route (following in-house neonatal transport guidelines for COVID-19)
- Isolette should then be cleaned using alcohol-containing wipes or another product effective against SARS-CoV2 (<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>)
- Chlorhexidine is **not effective** against SARS-CoV2

### Admission

- Mother and infant will be separated immediately at birth
- A designated, limited set of caregivers will be assigned to the infant
- Infant should be bathed as soon as is reasonably possible after birth

- Newborns of COVID-19 positive mothers, or those whose mothers' testing is still pending **at age 48 hours**, will be tested for perinatal viral acquisition:
  - Infant testing: molecular assay testing on nasopharyngeal swab at 48 hours
- If mother is a PUI and testing returns negative before 48 hours, infant will be considered uninfected and **does not** require testing
- Newborns who do not require testing or have a negative screen at 48 hours and are asymptomatic can be discharged or moved into the general population if needed.

### **Hospitalization**

- Infants will be admitted to the NICU Annex isolation room, which will be a triage space using portable HEPA filters
- Dedicated staff (physicians, PA/NPs, and RTs to visit those infants last if possible)
- Infant will be cared for with enhanced **droplet** precautions (gown, gloves, **surgical mask** with eye protection, and shoe covers)
- If infant is on room air or HFNC, droplet precaution is sufficient.
- If the infant requires CPAP, NIPPV, intubation, or mechanical ventilation: **N95 masks** or PAPR devices and **face shields** must be used, until infection status is determined as outlined above.
- Infants who test positive for COVID19 can be transferred to a single-patient, negative-pressure room (within PCCU or PICU COVID19 area with NICU personnel)
- No infant will be moved from the annex without approval from the NICU medical and nursing directors

### **Breastfeeding**

- Mother may express breast milk (after appropriate hand hygiene) and this milk may be fed to the infant by designated caregivers
- Milk should be pumped and then the outside of the bottle(s) should be cleaned off with alcohol-containing wipes or another product effective against SARS-CoV2 (<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>)
- Chlorhexidine is **not effective** against SARS-CoV2
- Breast pumps and components should be thoroughly cleaned in between pumping sessions using standard policies (clean pump with antiseptic wipes; clean pump attachments with hot soapy water)

### **Visitation**

- Parents will be the only allowed visitors
- No visitation will be allowed while the newborn's infection status is determined
  - *Exception:* the father may visit the infant and participate in care if they are asymptomatic, even if they are being monitored for infection due to exposure to the mother. Father will use enhanced droplet precautions, with standard medical procedure masks during the visit.
- No visitation will be allowed if infant is on CPAP, NIPPV, or intubated, as parents have not been N95 mask fit tested
- If the newborn is infected, they will remain in droplet precautions and can be visited by the father and the mother (once the mother [and father, if infected or PUI]) meet the following criteria:

- Resolution of fever (>24 hours), without use of antipyretic medication
- Improvement in illness signs and symptoms  
*and (if possible)*
- Negative results of molecular assay for COVID-19 (nasopharyngeal or throat)

### **Discharge**

- Infant will be eligible for discharge when the infant is otherwise medically-appropriate for newborn hospital discharge.
- Infants determined to be infected, but with no symptoms of COVID-19, may be discharged home with appropriate precautions with instructions to self-quarantine with family for a minimum of 2 weeks; MetroHealth will help coordinate follow-up of positive mothers and infants.
- Infants whose testing is still pending may be discharged home with instructions to self-quarantine with family until testing has resulted.
- Infants whose infection status has been determined to be negative will be optimally discharged home when otherwise medically appropriate, to a designated healthy caregiver who is not under observation for COVID-19 risk. If such a caregiver is not available, we will manage on a case-by-case basis.

### **Transport Requests**

- Transport calls from outlying facilities will follow the usual procedures
- Transport of infants should be for elevation of care for the usual reasons
- Infants exposed to COVID-19 positive or PUI mothers should be transported only if they meet the usual symptomatic criteria
- Asymptomatic infants exposed to COVID-19 positive or PUI mothers should not be transported for separation or testing but instead follow local hospital guidelines consistent with CDC recommendations of separation of newborn from mother until cleared.
- Due to size and space restrictions at most referral hospitals, separation may not be possible. We should provide reassurance and guidance consistent with the CDC recommendations:
  - If colocation (sometimes referred to as “rooming in”) of the newborn with his/her ill mother in the same hospital room occurs in accordance with the mother’s wishes or is unavoidable due to facility limitations, facilities should consider implementing measures to reduce exposure of the newborn to the virus that causes COVID-19.
  - Consider using engineering controls like physical barriers (e.g., a curtain between the mother and newborn) and keeping the newborn  $\geq 6$  feet away from the ill mother.
  - If no other healthy adult is present in the room to care for the newborn, a mother who has confirmed COVID-19 or is a PUI should put on a facemask and practice hand hygiene before each feeding or other close contact with her newborn. The facemask should remain in place during contact with the newborn. These practices should continue while the mother is on transmission-based precautions in a healthcare facility.

### **Neonatal Transport Team**

- Personnel should take droplet precaution PPE with them (gown, gloves, surgical mask, eye protection, and shoe covers)
- N95 mask and face shields should be worn to delivery if PPV/intubation is anticipated.
- N95 mask and face shields should be worn if infant to be placed on CPAP, NIPPV, or mechanical ventilation.
- Family of COVID19+ or PUI mother will not travel with transport team
- Follow in-house neonatal transport guidelines for COVID-19
- Further instruction delineated in the Neonatal Transport Guideline for COVID-19 at risk infants.