TITLE	Management of Infant Born to Mother with COVID-19
TODAY'S DATE	July 24, 2020
SECTION	☐Organization Wide ☐PPE ☒OB/GYN ☐Emergency Department ☐Surgery ☒Inpatient ☐Ambulatory ☐Nursing ☐Medical staff [physicians and advance care practitioners]

APPLICABLE LOCATIONS	☐All Bozeman Health locations ☒Bozeman Health Deaconess Hospital ☐Big Sky Medical Center		☐Belgrade Clinic + UrgentCare ☐Hillcrest Senior Living ☐b2 UrgentCare ☐b2 MicroCare

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APPROVAL DATE	July 24, 2020

PURPOSE:
The following outlines considerations for newborn care after birth to a person with confirmed COVID-19 or a Person Under Investigation (PUI) for having the disease.

POLICY/PROTOCOL:
Definitions
SARS-CoV-2: coronavirus that causes COVID-19

COVID-19: symptomatic respiratory illness caused by the SARS-CoV-2 coronavirus

Enhanced Droplet Precautions: patient care with use of the following:

- standard procedural face mask
- eye protection
    - eye protection may take the form of goggles in combination with standard procedural face mask or use of combined face mask/eye shield
    - personal eyeglasses or contact lenses are not adequate eye protection
- When performing aerosol generating procedures: N95 or PAPR for respiratory protection. Perform in Airborne Infection Isolation Room (AIIR) if available, otherwise in a room with the door closed.

Contact Precautions:

- Use of gown and gloves for patient care activities.

BOTH CONTACT AND ENHANCED DROPLET PRECAUTIONS SHOULD BE USED WITH A COVID + PATIENT OR PUI.

Airborne Transmission: defined as respiratory pathogens transmitted by aerosolized droplets that remain suspended in the air. This type of transmission means that the pathogen can be acquired from breathing the same air as the patient; this can be the case for periods of time after the patient has left a room/area. Measles, varicella and tuberculosis are examples of respiratory infections that require airborne precautions which include use of respiratory protection and isolation in a room with negative air pressure.

Current evidence supports transmission of SARS-CoV-2 by respiratory droplet and ***not*** by airborne transmission. Despite this, when available, isolation rooms with negative air pressure should optimally be used for the care of patients with confirmed COVID-19. As such, rooms may be limited or unavailable at many centers, they should be reserved for patients with COVID-19 who require aerosol generating procedures or supports (e.g., invasive suctioning, nebulizer treatments, CPAP, mechanical ventilation) that may result in mechanical aerosolization of respiratory secretions.

Newborn Risk

- It remains unclear if SARS-CoV-2 is vertically transmitted from mother to fetus antenatally via maternal viremia and transplacental transfer. Prior published experience with respiratory viruses would suggest this is unlikely.
- Perinatal exposure may be possible at the time of vaginal delivery.
- Current data suggest that approximately 2-5% of infants born to women with COVID19 near the time of delivery have tested positive in the first 24-96hrs after birth.
- Newborns are at risk of infection from a symptomatic mother's respiratory secretions after birth, regardless of delivery mode.
- There are published reports of infants requiring hospitalizations before 1 month of age due to severe COVID19 infection.

All infants

- A designated, limited set of caregivers will be assigned to the infant.
- The infant should be bathed as soon as is reasonably possible after birth.
- Newborns will be tested for perinatal viral acquisition as follows:
    - Obtain either a single swab of the nasopharynx; or a single swab of the throat followed by the nasopharynx; or two separate swabs from each of these sites, and submit for a single test.
    - Testing should be done first at 24hrs of age and again at 48hrs of age; clinicians may choose to order a single test at 24-48hrs of age.
    - For infants positive on initial testing, consider f/u testing at 48-72hr intervals until there are two consecutive negative tests. This is most important for infants cared for in the NICU, and less so for those discharged to home.

Delivery Room Management

- Initial stabilization/resuscitation of the newborn will take place in alternative labor room, labor room or OR (will use negative pressure isolation rooms preferentially).
- Because of the uncertain nature of newborn resuscitation (that is, suctioning and/or tracheal intubation may be required), **N95 mask with a face shield or PAPR should be used.**
- Limit personnel inside the delivery room: Delivery attendance by a single nurse if Level I delivery, with back-up nurses on standby outside of room; for Level II and III deliveries, two nursery nurses and MD should attend; have standby nurse or RT outside Delivery Room.
- Resuscitation team should have 2nd gown worn over 1st gown, and double gloves.
- If in regular labor room: Resuscitation warmer should be placed behind curtain (if in a labor room) and newborn personnel should remain behind curtain, with the exception of the person identified to receive the baby from OB.
- Delayed cord clamping practices should continue per usual practice. Mothers with COVID-19 should use a mask while holding baby during delayed cord clamping.
- After stabilization, transfer newborn to isolation room (preferably room next door): Resuscitation team members will doff 2nd gown and 2nd glove, prior to leaving room; and will escort infant on resuscitation warmer immediately to room where newborn will be isolated.

Admission

- Current data suggest the likelihood that an infant has a positive PCR test for SARS-CoV-2 is similar for infants who are separated from their mothers and for infants who room-in with mothers using infection prevention measures.
- Mothers and well newborns may room-in according to usual center practice:
    - Mother should maintain a reasonable distance from her infant when possible.
    - When mother provides hands-on care to her newborn, she should wear a mask and perform hand-hygiene.
    - An isolette will provide infant added protection and will be used when available.
    - Healthcare workers should use appropriate PPE (contact and enhanced droplet precautions).
    - Non-infected partner or support person should use mask and hand hygiene when providing care to the newborn.
- Sick newborns needing SCN/NICU will be cared for in a designated isolation room, or cared for in isolette at least 6 feet from other patients if single patient room unavailable.
    - If the infant requires CPAP, HFNC >2L/m, or mechanical ventilation, N95 Mask w Face Shield or PAPR must be used, until infection status is determined.
    - N95 mask with eyeshield or PAPR for the operator or those with extended exposure should be used for aerosol generating procedures such as: intubation, open suctioning, extubation, bag-mask ventilation, chest compressions, or respiratory specimen collection.

Performing Sterile Procedures on Neonate with COVID-19 positive or r/o status

- Don PPE outside patient room. Don sterile garb inside room.
- Wipe down metal procedure tray outside patient room with germicidal wipe.
- Set metal tray up with procedural supplies including sterile gown/gloves/bonnets, etc. Do Not bring procedure cart into patient room.
- Inside room: don bonnet, open sterile items; don sterile gown/gloves on top of PPE; perform procedure; doff sterile gown/gloves and underlying PPE; continue with remainder of doffing procedure per hospital guidelines
- Have staff outside room if needed to run for supplies.

Breastfeeding

- AAP strongly supports breastfeeding. Several published studies have detected SARS-CoV-2 nucleic acid in breast milk. It is not yet known if infectious virus is secreted in breast milk, nor if protective antibody is secreted.
- Breastfeeding is not contraindicated.
- Infected mothers should breastfeed with mask and hand hygiene.
- If an infected mother chooses not to nurse her newborn, she may express milk after appropriate hand hygiene and this milk may be fed to the infant by designated caregivers.
- Mothers of SCN/NICU infants may express breast milk for their infants during time that their infection status prohibits their presence in the SCN/NICU.
- Mother should have a dedicated breast pump.
- Wipe the surface where syringes/bottles will be placed after collection with a germicidal wipe and cover surface with clean paper towel or cloth.
- After collection, ensure syringe/bottle cap is secured and wipe down syringe/bottle with germicidal wipe; with clean gloves label and place in biohazard bag until transfer outside room.
- HCW (Healthcare worker) outside room has clean biohazard bag to receive milk. Bagged milk is placed in new clean bag for transport to storage.
- 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).

- Milk from home should be collected in similar fashion and received bottles similarly cleaned before use or storage. Cleaned bottles should be placed in biohazard bag prior to storage in the fridge/freezer.

SCN/NICU Visitation

- Mothers (and partners) who are COVID-19 PUIs should not enter the SCN/NICU until their status is resolved.
- Mothers (and partners) with confirmed COVID-19 should not enter the SCN/NICU while able to transmit SARS-CoV-2.
- CDC recommendations for suspending precautions:
    - Afebrile for 24 hrs without use of antipyretics and,
    - At least 10 days have passed since first symptoms, or 10 days from positive test if asymptomatic and,
    - Symptoms have improved.
    - For critically ill persons or those with severe symptoms, consider extending length of time since symptoms first appeared to 20 days.

- These could change and it is recommended that you review CDC recommendations and consult with Infection Control before removing precautions.
- The non-maternal parent (or designated equivalent) may visit the infant who is cared for in a single room outside of the SCN/NICU, if they are asymptomatic, even if they are being monitored for infection due to exposure to the mother. This person will use the level of PPE that is appropriate for the infant's status.

Discharge

- There is no specific benefit for infants born to mothers with COVID-19 that results from discharge earlier than usual practice.
- Infants determined to be infected, but with no symptoms of COVID-19, may be discharged home with appropriate precautions and plans for frequent outpatient follow-up through 14 days after birth. Use precautions to prevent household spread per CDC guidelines.
- Infants whose infection status has determined to be negative or cannot be tested will be discharged home when otherwise medically appropriate. Follow CDC guidelines for prevention of household spread. If infant cannot be tested, presume virus-positive for the 14-day period of observation. Mother or other positive caregivers should maintain precautions until meeting criteria for non-infectivity per CDC guidelines.

Considerations for infants or mothers who become PUIs during their stay:
Situations where a mother becomes a PUI while post-partum and baby has been in couplet care, will be addressed on a case-by-case basis. Location of babies who become ill while in couplet care will be addressed on a case-by-case basis, with efforts to avoid exposure to babies in nursery.

NOTES:

OTHER POLICIES/PROTOCOLS TO REFERENCE:

SCOPE:
We anticipate these adjustment to be temporary and reserve the right to revise or discontinue these adjustments with or without notice depending on the current understanding and/or business needs of Bozeman Health relating to COVID-19.