MedStar Health

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Prepared by: OB/GYN Clinical Advisory Group and Neonatology CPC
Owners: Tamika Auguste, MD
J Ramasethu, MD

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# Guidelines for the Perinatal Management of Mothers with Confirmed or Suspected COVID-19 and Their Babies

***Please refer to StarPort COVID Page (or https://medstarhealth.org/covid19resources off network) for the complete and most current guidance as this information is rapidly changing and updated.***
**The guidelines may be adapted where appropriate for each individual institution.**

## I. Introduction

*Definitions:*

- SARS-CoV-2 - Virus causing coronavirus disease 2019
- COVID 19 Positive – Patients with COVID-19 confirmed by PCR or point of care testing
- PUI – Person Under Investigation for COVID 19 – Patients who have a clinical history, symptoms, or signs concerning for COVID infections, but no PCR confirmation. This does not include mothers undergoing screening testing for COVID (without a clinical picture suggestive of COVID infection).
- AGP – Aerosol Generating Procedures – procedures that increase the risk of virus aerosolization (note: the 2nd stage of labor is an AGP)
- PPE – Personal Protective Equipment
- Eye Protection – goggles, full-face shield or, surgical mask with face shield
- Contact Precautions – require gloves and gown
- COVID-19 Precautions –*For Patients receiving AGPs:* Airborne, Contact, Eye Protection. *For Patients NOT receiving AGPs:* Contact, Eye Protection and N95 (recommended) or Surgical Mask.
    - *Note: Airborne includes N95 and negative pressure room.*
    - *Patients NOT receiving AGPs do NOT require negative pressure rooms.*

*According to CDC and recent AAP, the risk of transmission for COVID-19 during birth and the risk of complications post birth are low when precautions are taken to protect newborns from maternal infectious respiratory secretions. The following preventative measures are recommended:*

- Mothers and newborns may room-in according to usual center practice.
- During the birth hospitalization, the mother should maintain a reasonable distance from her infant when possible.
- When mother is within 6 feet or is providing hands-on care to her newborn, she should wear a mask and perform hand-hygiene.
- Use of an isolette may facilitate distancing and provide the infant an added measure of protection from respiratory droplets. If using an isolette, care should be taken to properly latch doors to prevent infant falls.
- A designated set of healthcare workers will be assigned to the infant and mother.
- Breastfeeding is not contraindicated at this time

*Recommended room designations at each entity:*

- If resources allow, each entity will have designated Labor/Delivery rooms
- If resources allow, each entity will have a designated OR for possible Cesarean Section

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- If resources allow, each entity will have a designated COVID-19/PUI Neonatal Nursery

*Overall Plan of Care for COVID19+ or PUI Mother/Baby couplets*

Please Implement the Following Steps and document in the EMR:

- For all COVID-19+/PUI mothers and/or babies "COVID-19 precautions" are required. Reminder that the 2nd stage of labor is considered an AGP.
- Negative Pressure Room (aka AIIR) should be used for AGPs when available.
- An order for these precautions should be placed in the electronic medical record.
- Place isolation signs on the patient's door and always keep the door closed.
- Utilize entity specific room(s) for COVID-19+/PUI transitional nursery and resuscitation room.
- Ensure that the PPE cart is placed outside of designated patient rooms. The cart should contain: gowns, gloves (all sizes), face shields/goggles and N95 respirators (all sizes).
- Visitors should be referred to the MSH visitor policy during the COVID-19 Pandemic period.
- A "warm zone" will serve as the area inside the doorway of the room where necessities are handed off from outside the room to the team inside the room.
- When a PUI/COVID-19 positive patient has been identified, a daily COVID-19 specific huddle will take place on the nursing unit as part of IMOC rounds with the interdisciplinary team to include the OB attending physician, the responding resident/physician, the primary RN, Neonatologist/Pediatrician, L&D and mother-baby Resource RN's.

**II. Triage with or without Obstetrical Care:**

*Refer to the "MSH Coronavirus (COVID-19) Screening Algorithm for OBGYN" flowchart*

**III. Admission/Labor:**

- "COVID-19 Precautions" recommended throughout the hospitalization for COVID-19+/PUI mothers and their babies. Remember the second stage of labor is an Aerosol Generating Procedure (AGP) and should be in a negative pressure room when available.
- *Universal Testing for COVID-19 of all mothers admitted to Labor and Delivery will be in accordance to the following:*
    - All mothers admitted to labor and delivery should be tested for COVID-19. If a patient had an initial positive test within the past 90 days, she does not need to be retested. If it has been over 90 days since her initial positive test, she should receive a new test upon admission.
        - If a patient had an initial positive test less than 10 days ago, she should be placed into COVID -19 precautions and treated as positive.
        - If a patient had an initial positive test more than 10 days ago and within the prior 90 days, and she is without symptoms, she should be cared for using routine precautions and not retested on L&D.
        - If a patient had a positive test more than 10 days ago and within 90 days and she presents with symptoms consistent with COVID-19, she should be treated as a PUI and retested.

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*NOTE: Asymptomatic women who are screened in this way, should NOT be considered PUIs or placed on COVID-19 precautions (unless test results are positive, or they develop other concerning clinical features for COVID-19)*

- Once a patient has been identified as a PUI, use 2 patient identifiers before placing the COVID/PUI specific wrist band on the patient's wrist
- Upon each entry and exit of the patient's room, hand hygiene and proper donning and doffing should occur for all associates caring for the patient. Associates caring for this patient should be limited to essential associates. *(See the MSH guide for proper donning and doffing of PPE)*
- The OB Attending will consent the patient for an OB admission, discussing the risks and benefits for management of care to include CDC recommendations for COVID positive and PUI patients. Consents will be signed by the provider, patient and witnessed by RN.
- The Obstetrical and Neonatal team will discuss the risks and benefits of rooming in of the newborn and COVID-19 positive mothers. Families will be informed that the evidence to date suggests the risk of the newborn acquiring infection during the birth hospitalization is low when precautions are taken to protect newborns from maternal infectious respiratory secretions. The risk appears to be no greater if mother and infant room in together using infection control measures compared to physical separation of the infant in a room separate from the mother.
- A mother who is acutely ill with COVID -19 may not be able to care for her infant in a safe way. In this situation, it may be appropriate to temporarily separate mother and newborns.

**IV. Delivery:**

- The L&D Resource/Charge RN will notify the physician team and the Neonatology team regarding COVID-19+/PUI patient's status and needs.
- If possible, there should be sufficient advanced notice of the delivery so appropriate OB delivery team members are present. Essential personnel only are allowed in the room.
    - OB Attending Physician
    - 1 Resident
    - Pediatric/Neonatology Team Member
    - Primary RN
    - Secondary RN

**Delivery in Designated L&D rooms or in OR:**

- If patient has signs/symptoms concerning for COVID-19, consider the patient a PUI and use COVID-19 precautions. For other mothers, do not assume PUI and don PPE as per standard delivery routine (utilize PPE located in respective unit "PPE grab bags").
- If patient has to undergo a C-Section, please ensure that the patient remains masked during transfer from the designated patient room to the OR. The patient should be transported per facility policy about PPE.
- Alert Neonatologist and NICU team that patient is delivering.
- For a vaginal delivery, the Neonatology team will enter the LDR in full PPE **or** remain outside in the hallway of the designated patient room until needed to minimize the number of people in the LDR (If resources allow).
- For a C-Section, the Neonatology team will enter the OR, **or** remain in OR hallway until needed to minimize the number of people in the OR (If resources allow).

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- At the time of pushing, the equipment technician (ET)/OB technician (OBT) can be available to act as a "runner" for the laboring team. The runner will:
  - Obtain and provide the laboring team with any items needed
  - Avoid entering the room of the COVID-19 positive patient
  - Set up a bedside table or stand at the entrance of the room, that can serve as the "Warm" handoff zone
  - Stand outside the room door of the COVID-19 patient's room, obtain needed supplies and place on "warm zone" tray. Runner needs to wear a surgical mask and gloves while handing off equipment/supplies. All PPE will be doffed, and hand hygiene performed prior to leaving the warm zone for supply/equipment retrieval.

*(If the ET/OBT is unavailable for this role, it will be filled by the L&D Resource/Charge RN)*

- Delayed cord clamping
  - If stable, delayed cord clamping will continue as usual. The newborn can be placed skin to skin with mother, while wearing a mask, in order to minimize contamination with droplets.
- Primary RN: will remain with the patient at all times during the delivery.
  - The primary RN is assigned to the laboring patient only.
  - The RN will recover the delivered patient according to post-partum order set.
  - Once patient completes the recovery process, the L&D RN will give hand-off report to the designated PP RN at the bedside.
- Nurse designated for the baby: this may be the Secondary RN, Nursery nurse or a NICU Nurse depending upon the institution and the anticipated severity of illness in the baby. **See Care of Newborn, Section VIII.**

**V. Maternal Postpartum Management**

- *After completion of delivery and immediate routine recovery, COVID-19+/PUI mothers may be transferred out of negative pressure rooms (if in a negative pressure room) unless other AGPs are anticipated.*
- Medical management of the postpartum mother will be routine unless there are medical indications for Maternal Fetal Medicine (MFM), Infectious Disease, or an Intensivist consults.
- If mother remains stable, proceed with routine postpartum care as ordered.

**VI. De-escalation of Isolation and PPE requirements:**

**COVID19+/PUI mothers:**

--When delivery is complete, patient can typically be moved to a non-negative pressure room (unless further AGPs anticipated)

--If COVID-19 PCR testing is negative, contact entity-based infection prevention and/or infectious diseases to decide on formal discontinuation of "COVID-19 Precautions**".**

**VII. Maternal Discharge**

- Mother should be discharged with education on COVID-19, its implications and how to minimize the spread to others and signs and symptoms of worsening condition.

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Provide the mother with the "Discharge Instructions for Patients with POSITIVE COVID-19 Test" instructions found on StarPort and routine postpartum discharge instruction

**VIII. Care of Newborn**

1. The secondary RN or designee will hold a blanket to receive the newborn from the delivering provider; this may vary according to the institution.
2. Baby may be resuscitated in the LDR /Operating Room or in an adjoining COVID designated room.
3. Set up for resuscitation/team will be determined by the individual facilities.
4. If infant is stable after birth, the infant can be left in the room with the mother.
5. An unstable or critically ill newborn will be transported by the NICU team using an incubator or an in-house transporter or a crib to the NICU.

**6. Admission:**

A. Stable newborn babies born to COVID -19+/PUI mothers may room in with their mothers.
   a. The mother should maintain a reasonable distance from her infant when possible.
   b. When the mother is within 6 feet or providing hands-on care to her newborn, she should wear a mask and perform hand hygiene.
   c. Use of an isolette may facilitate distancing and provide the infant with an added measure of protection from respiratory droplets. If using an isolette, care should be taken to properly latch doors to prevent infant falls.
   d. Health care workers should use gowns, gloves, standard procedural masks and eye protection ( face – shield) or goggles when providing care for well infants. When this care is provided in the same room as a mother with COVID-19, health care workers may opt to use N95 masks in place of standard procedural masks, if available.
   e. Feeding: The AAP strongly supports breast feeding as the best choice for infant feeding. Breast feeding is not contra- indicated. Mothers should perform hand hygiene and wear a mask during breast feeding. If an infected mother chooses not to nurse her newborn, she may express breast milk while masked after appropriate hand hygiene, and this may be fed to the newborn by other uninfected caregivers.

**7. Care of Well newborn**

   a. Bathe the baby as soon as possible, if stable, and administer Vitamin K AFTER the BATH or cleaning the site with alcohol wipes; Erythromycin may be administered.
   b. Initiate newborn order set and complete perinatal history form with all required newborn documentation.
   c. Medical provider to add diagnosis in EMR: **Exposure to COVID**
   d. Medical provider to identify early onset sepsis patients and order enhanced vital signs and/or blood culture, if indicated
   e. Feeding: RN to verify feeding plan and potential need for supplementation with medical provider; medical provider will order the diet in EMR.
   f. Nursery RN will always maintain PPE and ensure the patient's room door remains closed
   g. COVID-19+/PUI Nursery Nurse will maintain a distance of at least 6 feet if not providing clinical care
   h. COVID-19+/ PUI Nursery Nurse will perform routine newborn care

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i. Nurse will educate mother on the following:
- Reiterate hand hygiene education: wash hands using soap and water for at least 20 seconds. If soap and water are not available use alcohol-based hand sanitizer
- Ensure the phone and call light is working and within reach of the mother
- Review all newborn 24 hours care tasks and/or procedures
- Review birth certificate information and encourage early completion
- Encourage mother to choose a healthy caregiver to assist at home. If no support has been identified, notify Social Work and Neonatologist/Pediatrician.
- Reinforce current MSH Visitor Plan

**8. COVID-19+/ PUI Nursery Nurse/Mother Baby Nurse will monitor for signs and symptoms of infection including**:

**Persistent physiologic abnormality ≥ 4 hours**

- Tachycardia (HR ≥ 160bpm)
- Tachypnea (RR ≥ 60)
- Temperature instability (≥ 100.4° or < 97.5°)
- Respiratory distress (grunting, flaring or retracting) not requiring supplemental $O_2$

**Two or more physiologic abnormalities lasting for ≥ 2 hours**

- Tachycardia (HR ≥ 160bpm)
- Tachypnea (RR ≥ 60)
- Temperature instability (≥ 100.4° or < 97.5°)
- Respiratory distress (grunting, flaring or retracting) not requiring supplemental $O_2$
  - If baby becomes symptomatic, alert the on-call Neonatologist

- Coverage for all breaks will be assigned by the Resource RN

## 9. Infant Feedings:

- Breastfeeding or expressing breast milk should be initiated immediately after delivery and newborn assessment
- COVID-19+/ PUI patient and assigned RN will be supported, with feedings and breast milk storage, by the guidance of an Internationally Board-Certified Lactation Consultant (IBCLC)

**When expressing breast milk, the following precautions should be followed:**

- Wash hands with soap and water for 20 seconds or more before and after feeding
- Wear a mask while expressing breast milk
- Be sure collection spoon, syringe or container is clean
- Be sure the pump and all pump parts are cleaned appropriately
- Appropriately store the breast milk in a clean container according to breast milk storage guidelines
- Have a healthy caregiver feed baby the expressed breast milk via spoon, syringe, cup or bottle
- Clean pump and all parts that come into contact with breast milk after every use

- Every 24 hours, from the time of birth, new pump parts will be provided for the patient and the old pump parts will be discarded; alternatively, manufacturer recommended disinfection procedures may be used.

**When feeding baby at the breast the following precautions should be followed:**

- Receive education on the risks of virus transmission from the healthcare team
- Appropriately wash the areas of bare skin that will come in contact with the baby (ie. arms, breast, chest)
- Wash hands with soap and water for 20 seconds or more
- Change maternity gown or clothing
- Put on a mask and wear it while nursing/feeding

**If formula feeding, ensure paced feedings.**

**At 24 to 36 hours of age:**

- Complete CCHD Pulse Oximetry screen per physician order
- Complete Newborn Metabolic Screening per physician order
- Hearing screening may be performed as per protocol. If Hearing screening is deferred, MD/RN must document arrangement of out-patient audiology follow-up
- For male infants, circumcision may be performed if parents would like it done.
- Birth certificate form should be completed and promptly removed from patient's room
- **Infant requiring intensive care**
    - Infants requiring intensive care or respiratory support optimally should be admitted to a single patient room with potential for negative room pressure (or other air filtration system).
    - If this is not available, or multiple COVID – exposed infants must be cohorted, there should be at least 6 feet between infants and /or they should be placed in air temperature controlled isolettes.
    - Health care providers must don gown and gloves and use either an N95 respiratory mask and eye protection goggles or an air purifying respirator that provided eye protection, for care of infants requiring supplemental oxygen at a flow > 2l/min, CPAP or mechanical ventilation.
    - Vitamin K may be administered after using alcohol swabs to clean the site if the baby is too unstable for a bath.
    - Expressed maternal breast milk may be used to feed the baby in the NICU, with the mother taking appropriate precautions as detailed above.

10. **COVID-19 PCR Testing -- Steps for the Newborn**:

- Testing should be performed on the newborn at approximately 24 hours of age and repeated about 24 hours after the first test.
- If it is planned for a healthy newborn to be discharged prior to 48 hours of age, clinicians may choose to order a single test at 24 to 48 hrs of age.
- The doctor/respiratory therapist/RN or Nurse practitioner will collect nasopharyngeal and oropharyngeal specimens using eye protection, gown, gloves, and N95 respirator.
- The swab should be first inserted into the oropharynx and the *same* swab used for the nasopharynx. [Please ensure the correct swab and viral transport medium is obtained from the lab]
- The specimen will be placed in a viral transport medium (see pic below)

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- The nurse will label the specimen tube with appropriate patient information, scan, place in biohazard bag, and walk it to lab immediately. and surgical mask should be worn during specimen transport to the lab.
- Refer to unit job aids located in the COVID-19 binder

Depicted is an example of the supplies used to collect an oropharyngeal specimen.*

**11. De-escalation of Isolation and PPE requirements in newborns**

a. If COVID-19 PCR testing at approximately 24 and 48 hours is negative, and baby remains well, isolation precautions may be discontinued if the baby is in the NICU. If the baby is with the mother, isolation precautions used for the mother will continue. . See discharge instructions below.

b. If COVID -10 PCR testing is negative and baby is on respiratory support (invasive or non-invasive), consultation with infection prevention and/or infectious diseases to decide on formal discontinuation of "COVID-19 Precautions" is recommended.

c. If COVID -19 PCR testing on baby is positive, 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 NICU and less so for those discharged home. ID consultation may be helpful.

d. If the COVID- 19 PCR test is positive in infants with ongoing hospital care, caregivers should use appropriate PPE until discharge, or until the infant has had two consecutive negative tests collected ≥24 hrs apart.

**12 When can the mother and her partner visit their newborn if the infant is in the NICU.**

a. Mothers and partners who are COVID -19 Persons under investigation should not enter the NICU until their status is resolved.
b. Mothers and partners with confirmed COVID-19 should not enter the NICU until they are considered to be non- infectious.
c. The CDC currently recommends a symptom and time-based approach, reserving a test-based approach for rare circumstances. Immunocompetent people may be considered non-infectious if:
    i. Afebrile for 24 hours without use of antipyretics and
    ii. **AND** At least 10 days have passed since symptoms first appeared (or in the case of asymptomatic women defined only by screening tests, at least 10 days have passed since the positive test)
    iii. **AND** Symptoms have improved.

**d.** Centers may choose to extend the period of time before parents with prior COVID 19 infection may safely enter the NICU to 14 to 20 days. 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.

**13. Infant Discharge:**

- Newborn infants born to COVID positive mothers should be discharged based on the center's usual criteria. Discharge prior to usual practice provides no advantage to the newborn or family and may place additional burdens on families to access and on outpatient pediatric offices to provide recommended newborn care, screenings and outpatient follow up.
- Infants with COVID+ results, but without symptoms of COVID-19, may be discharged home with appropriate precautions; the healthcare team will review on case-by-case basis.
- Infants with negative status may be discharged home with the mother, with education on the precautions to be followed at home ( similar to the ones used in the hospital when rooming in- physical distance, mask use, hand hygiene) The mother should take extra precautions with her baby for 10 to 14 days, based on the advice given by the facility. This includes wearing a face mask whenever she is in the same room as the baby and washing her hands before picking up the baby. Five surgical face masks or 2 washable/reusable cloth masks will be provided to her upon discharge home.
- Please review and provide the patient with COVID-19 + Home Precautions Educational Sheet as part of discharge education
- If the mother is unwell and remains hospitalized, the infant may ideally be discharged to a healthy caregiver who is not under observation for COVID-19 risk. If a healthy caregiver has not been identified, notify Social Worker, Neonatologist or Pediatrician. The discharge procedure can be followed below or with coordinated care with entity specific Pediatric Department.

    - Coordinate a well-baby visit with a pediatrician of the parent's choice. In person post discharge visits are the preferred means to provide timely newborn screening, bilirubin testing, feeding and weight assessments.
    - Routine discharge follow-up phone call will occur by designated person-nurse or doctor at least once a week until baby is 2 weeks old.
    - Social Worker will coordinate patient's transportation home and any other available community resources need and will discuss the plan with the RN
    - .

- , Please see instructions for COVID-19 Discharge Room Cleaning on StarPort

**Reference**

1. https://www.cdc.gov/coronavirus/2019-ncov/hcp/caring-for-newborns.html
2. American Academy of Pediatrics. Critical Updates on Covid 19/ Clinical Guidance/ FAQs: Management of infnats born to COVID 19 mothers 7/22/2020