Obstetrical and Neonatal (OB/NBN) COVID-19 Operational Guidelines

August 18, 2020 v. 15

Upon review of national and regulatory recommending bodies, the following guidelines have been developed by Intermountain OB/NBN Operations for the purpose of guiding obstetric and neonatal cares that are consistent with ACOG, AAP and CDC guidelines and recommendations during the COVID pandemic

Patient classifications:

- ***COVID-19 Active:*** Symptomatic patient with positive SARS-CoV-2 testing in the last 20 days and is at high risk for viral shedding.
- ***Person Under Investigation (PUI)*:** At risk and/or symptomatic patients with pending SARS-CoV-19 testing or who refused universal screening.
    - *Person Under Investigation (PUI) Permanent*
        - Patient has strong clinical suspicion of COVID (O2 requirements, unresolved fever, CXR findings, etc.) **and/or** close contact
        - Patient refuses universal screening
        - Patient remains PUI regardless of SARS-CoV-2 result
    - *Person Under Investigation (PUI) Temporary*
        - Patient has mild symptoms **and** no close contact or unknown history
        - When history and testing results are available, the patient will become COVID negative, COVID active, or PUI Permanent based on results
- ***Unknown SARS-CoV-2 Status:*** Patient with no to little information regarding symptoms and exposure risks. Will treat as PUI until evaluated (e.g., precipitous deliveries).
- ***Asymptomatic, Screened:*** Asymptomatic patient with pending universal COVID screening and is at low risk for viral shedding.
- ***SARS-CoV-2 Negative:*** Asymptomatic patient with negative testing within the last 48h and has no to extremely low risks of viral shedding.
- ***COVID-19 Resolved:*** Patient with more than 10 days for mild to moderate illness or 20 days for severe to critical illness since symptom onset/diagnosis with improved symptoms and > 24h since last fever without the use of antipyretics.
    - *"For severally immunocompromised patients who are asymptomatic throughout their infection, transmission- based precautions may be discontinued when at least 20 days have passed since the date of their first positive viral diagnostic test."*

"These considerations are based upon the limited evidence available to date about transmission of the virus that causes COVID-19…and are intentionally cautious until additional data becomes available to refine recommendations for prevention of person-to-person transmission in inpatient obstetric care settings" (https://www.cdc.gov/coronavirus/2019-ncov/hcp/inpatient-obstetric-healthcare-guidance.html).

Application of these guidelines will require provider and care team judgement at the point of patient care with the ability to escalate via the chain of command for any questions or concerns (see Appendix A).

Scope:

- These patient guidelines apply to all caregivers and providers in Labor and Delivery (LD), postpartum Mother-Baby (MB) and neonatal nurseries to include: Well-Newborn (WNB), Special Care Nursery (SCN) and Neonatal Intensive Care Units (NICU).
- While advanced notification re: patient disposition is ideal, it is understood that laboring patients may arrive without notice, requiring prompt triage and care accordingly.
    - It is preferred that COVID-19 Active or PUI patients deliver in a LIII/IV delivering facility (IMED, UVH, MKD, DRMC) due to availability of staffing and resources.
        - For patients requiring transfer after triage, every effort should be made to make sure Life Flight has as much advanced notice as possible.
        - Patients unstable for transport will be managed accordingly and supported via telehealth resuscitation and/or consult. Patients may stay at LI or LII facilities assuming they meet leveling criteria and have the ability to separate and isolate mom and baby if needed.

- Based on needs to consolidate services in preservation of infrastructure, staffing and/or resource, cohorting will be done under the direction of OB/NBN Operations and local facility teams.

Key TOPIC	Practice
Visitor Policy and Restrictions	Intermountain Healthcare Visitation restrictions apply; see Intermountain COVID website.
	All infants born to COVID-19 Active or PUI mothers will be considered PUIs.
	Hospital Tours for prospective patients will be cancelled until further notice.
	Childbirth Education Classes • All in person education classes are cancelled until further notice. • WEBEX options for interactive required learning (aka: Simply Birth). • Parents will be encouraged to seek learning through our free, online YOMINGO prenatal education program.
Staffing	Every effort should be made to coordinate continuity of care thereby reducing caregiver numbers and exposures.
	Nursing assignment will be made based on staffing, acuity and patient cohorting status. Patient may be grouped by like cohorts (PUI vs. COVID-19 Active, droplet vs. airborne, etc.).
	Minimize number of clinical staff who enter patient room.
	Competency trained staff on the use of PPE and isolation precautions.
Isolation Precautions	Follow Standard or Airborne – Contact or Droplet – Contact Isolation Procedures. Patient isolation and clinical care will be categorized into one of the following precautions: **Standard:** • Staff wear – mask, eye protection, and gloves • Patient wears – mask, as able **Droplet-Contact:** • Staff wear – mask, eye protection, gloves and gown • Patient wears – mask, as able **Airborne-Contact:** for aerosolizing generating procedures (eg., NRP, HFV, Intubation, CPAP…) • Staff wear – PAPR or N95, eye protection, gloves and gown • Patient wears – mask, as able ***If N95 is used, a full-face shield must be added**.
	Wear gown outside PAPR. Ensure glove cuffs extend over gown cuffs.
	Ensure appropriate PPE and isolation signage is ready for use.
	Operative Anesthesia and NRP code teams should anticipate the need for intubation and/or respiratory support and don airborne – contact PPE
	PPE type may be increased at the discretion of the caregiver especially in cases of the asymptomatic, screened OB patient or in the presence of the asymptomatic, unscreened visitor of the COVID+/PUI mother.
Patient Arrival	All OB Patients will be instructed to notify the L&D unit PRIOR to arrival so the unit can make appropriate infection control preparations BEFORE the patient's arrival (e.g., coordinate right room, PPE and caregiver team readiness and Neonatology/Peds heads up, etc…) Upon arrival, all patients and their visitor (if applicable) will be screened at the door, escorted to a room and instructed re: • the need to wear a mask at all times while in the hospital • respiratory hygiene to include cough etiquette, hand hygiene, and PPE donning/doffing.
	If arriving by EMS, EMS to notify emergency department (ED) and follow previously agreed-upon local or regional transport protocols. • OB unit to notify local infection control personnel and newborn team of the anticipated arrival.
	Pregnant patients that present for NON-obstetric complaints will be managed in the ED. LD will call ahead to ED for notification and room placement and patient will be masked and escorted via wheelchair accordingly. Needs for electronic fetal monitoring will be managed by an L&D nurse and monitored remotely.

Key TOPIC	Practice
Universal SARS-CoV-2 Screening (See Appendix B & C)	Patients scheduled for induction of labor and cesarean section will be SARS-CoV-2 tested 24-48hrs. BEFORE the scheduled procedure (regardless of symptom or contact risk). • Testing results are preferred before the scheduled case. However, if unavailable at time of procedure and the patient remains asymptomatic, she will be admitted and cared for under the "asymptomatic, screened" category. • If symptomatic, the OB provider will consult with MFM about timing and plan for procedure and convert sample to rapid test if possible. • If patient refuses universal screening, their elective procedure will NOT be scheduled.
	For scheduled COVID-19 Active patients, OB provider to consult with MFM to consider delayed delivery with isolation at home until symptom resolution or admission based on severity of respiratory symptoms and/or obstetric clinical indications following appropriate care and isolation precautions.
	Unscheduled patients for admission of labor or antepartum care, will be screened as soon as possible: • For symptomatic patient and/or with exposure risks in last 14d, provider to order rapid test. • For < 37.0 weeks gestation, provider to order rapid test status post review with local Facility Lab Director. • For >37.0, asymptomatic patients, standard SARS-CoV-2 testing is appropriate. Nasopharyngeal (NP) swabs will be collected by competency trained staff using Airborne-Contact precautions.
Maternal Room Placement	L&D Negative pressure room (AIIR) is preferred. However, in circumstances of limited room availability, patient management in non-AIIR private room is acceptable with the appropriate precautions **(See Appendix B & C).**
	Isolation signage will be placed on the door for caregiver awareness.
	Should patient's respiratory condition demand ICU levels of care as coordinated by MFM-Intensivist consult, all necessary obstetrical and neonatal teams and supply will move to the patient for remote L&D management. (OB/NBN OPs to be notified)
Maternal transport outside room	Patient transport outside the room should be limited and must be confirmed by attending provider prior to patient transport. Reinforce and consider point-of-care or bedside testing in context of personnel exposure and potential for equipment contamination (e.g. provider ultrasound).
	Non-intubated patients should wear a face mask during transport. Intubated patients should be transported on the ventilator (no BMV) and team should don airborne precautions.
	Patients should wear a face mask during transport and transfer team is in Droplet – Contact precautions.
Delivery recommendations (See Appendix D)	For preterm delivery of the COVID-19 Active or PUI mother, consider vaginal delivery in the OR, based on the increased risks of AGP procedures during NRP code response and the availability of a separate resuscitation area. • NOTE: Room turnover may be delayed due to terminal cleaning guidelines. Link here for Intermountain Room Cleaning Guidelines.
	Because of the often unanticipated emergent/urgent need for C/S, L&D caregivers should wear their N95 masks under their procedural mask during active phases of labor for the just in case.
Maternal Postpartum Care	Patient will be transferred based on stability and room availability.

Key TOPIC	Practice
Infant Admission	Every newborn delivered to a **PUI or COVID -19 positive mom** is considered a PUI. • Infants ≥ 37.0 weeks gestation who are well-appearing at birth will be admitted to the Mom Baby nursery and placed in a private room/cohorting nursery in isolation. • Infants 35-36 6/7 weeks gestation, transition (minimum of 5 hours) in NICU/SCN in isolation and admit to Mom Baby based on stability criteria; place in private room or cohort nursery in isolation. • Infants < 35.0 weeks gestation or otherwise requiring higher levels of care will be admitted to the Special Care Nursery (SCN) or Neonatal Intensive Care Unit (NICU). Per AAP guidelines, "infants requiring neonatal intensive care and respiratory support optimally should be admitted to a single patient room with the potential for negative room pressure (or other air filtration system). If this is not available, or if 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. Isolette care does not provide the same environmental protection as use of negative pressure or air filtration but can provide an additional barrier against droplet transmission. Don gown and gloves and use an N95 mask and eye protection goggles/face shield for care of infants requiring supplemental oxygen at a flow > 2 LPM, continuous positive airway pressure or mechanical ventilation." Cohorting will be done under the direction of OB/Neo Operations and facility administration.

Rooming-in	Per updated AAP guidelines, "families can now be informed that evidence to date suggests that 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. This 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 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 newborn or to have the newborn cared for by non-infected caregiver in mother's room."
	COVID-19 Active or PUI mothers will be instructed to:
	• wear PPE whenever holding or in contact with baby, to include gown, gloves, and a facemask
	• wear facemask at all times
	• perform hand hygiene before and after contact with the baby
	• perform breastmilk pumping for bottle feeding (see breastmilk pumping section)
	  ○ wash hands and breast with soap and water for those that chose to feed at breast
	• keep baby in the crib more than 6 feet away from the ill mother
	  ○ an infant isolette is preferred over the open crib, as available
	
	Unit to consider use of other engineering controls like physical barriers (e.g., a curtain between the mother and newborn)

Infant transport outside of room	Patient transport outside the room should be limited and must be confirmed by attending provider prior to patient transport. Every effort should be made to coordinate bedside testing. For extenuating circumstance where the infant needs to be transported to outside the room, the infant will be placed in an isolette. • For infants needing respiratory support, the infant will be transferred on a conventional ventilator and NOT on bag/valve mask ventilation
Infant Cares	**BATHING:** Infant should be bathed as soon as is reasonably possible after delivery • No skin-to-skin

Key TOPIC	Practice

	LAB TESTING: for the infant of a COVID-19 Active or PUI Permanent (symptom-based)* mother or *symptomatic* infant:
	Infants will be tested for perinatal viral acquisition following CDC guidance:
	• Molecular assay testing will be done at 24-48 hours per CDC guidelines.
	  ○ Testing should not begin before 24h of age, to avoid detection of transient viral colonization and to facilitate detections of viral replication.
	• For infants requiring prolonged hospitalization (NICU/SCN):
	  ○ The infant will be isolated 14d post exposure AND
	  ○ Will require 2 consecutive negative NP swabs collected ≥ 24 hours apart to be designated as uninfected resulting in discontinued isolation precautions and the ability to integrate back into the SCN/NICU population.
	  ○ Neonatology/IP consult to determine course for repeat testing and potential suspension of COVID precautions.
	*Asymptomatic infant testing should be suspended until mother's testing is resulted and confirmed COVID-19 Active or mother is clinically diagnosed with COVID-19. Infant specimens will be considered priority #1 for testing. Validate in iCentra and/or provide narrative for escalation.

Breastmilk Pumping	Mothers who desire to breastfeed should be encouraged to express breast milk to establish and maintain supply. • Hand hygiene will be performed prior to pumping or hand expression. • A dedicated breast pump should be provided if possible • After pumping, all parts that come into contact with breast milk should be thoroughly washed and the entire pump should be appropriately disinfected per the manufacturer's instructions.
	Caregivers will wear gloves to receive mothers' milk containers AND: • Wipe each milk storage container with approved disinfecting wipe • Receive into bridge and label • Place in a Ziploc bag to store in patient food refrigerator or freezer appropriately.
	Infants temporarily separated from their mother will be bottle fed mother's expressed milk via a caregiver.
	Provide Pasteurized Human Milk (PHM)/Medolac will be fed to infants for those moms with inadequate supply.
	For the breastfeeding PUI or COVID-19 Active mother who is rooming in with her baby, the mother will be instructed to wear appropriate PPE (gloves and mask) and practice hand hygiene before and after each feeding at the breast.

Key TOPIC	Practice

Infant Discharge	The PUI infant is eligible for discharge once hospital stability criteria have been met. SARS-CoV-2 infection status may or may not be established before discharge with the following special considerations:
	
	• Asymptomatic infants, COVID-19 positive OR testing pending may go home with a healthy caregiver under appropriate precautions and planned outpatient follow up.
	  ○ Family education re: disease course, infant precautions and isolation precautions for the immediate postpartum period will be reviewed (e.g., strict hand hygiene, home visitors, PPE, 6 feet separation, etc.)
	  ○ Precautions noted above should be continued at home until EITHER:
	  ▪ Mom is 10 days after mild-moderate infection (20 days for severe to critical illness) and afebrile (without meds) X 24 hours with symptom improvement **OR**
	  ▪ Mom has had two negative SARS-CoV02 testing collected > 24h apart
	  ○ Other caregivers in the home who are PUIs can care for baby using standard precautions noted above.
	• COVID-19 negative infants should be discharged home to a designated healthy adult caregiver
	• If both parents are COVID-19 Active and healthy adult caregiver is unavailable, then the infant will be kept in newborn nursery until designated caregiver/parent is 10 days after mild – moderate infection (20 days for severe to critical illness) and afebrile (without meds) X 24 hours with symptom improvement.
	
	At time of Discharge:
	• Must have provider to provider hand off.
	• Educate family how to take steps to reduce the risk of transmission to the infant.
	• Family will be instructed to call PCP prior to going to clinic.
	• Family will be instructed to not have COVID-19 positive parent* bring infant to clinic.
	  ○ *An asymptomatic parent may take infant to clinic 10 days after symptom onset AND at least 24 hrs. afebrile (without meds).

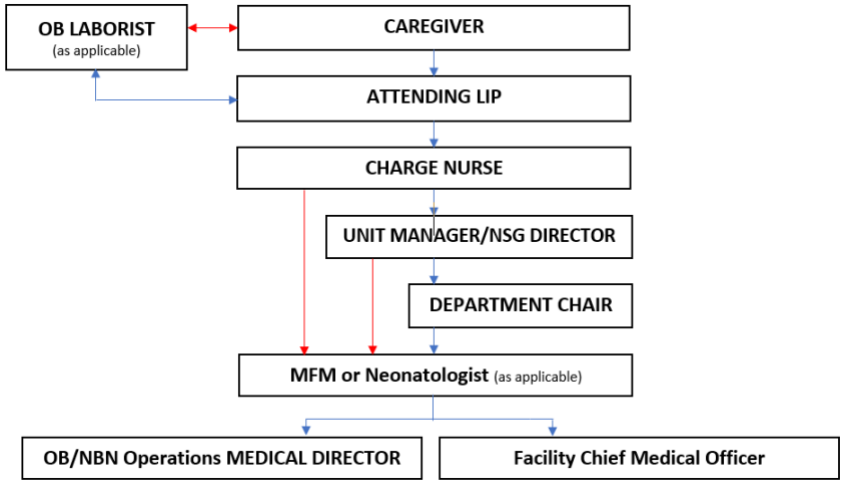
Out of hospital births (OOH)	Maternal patients will be screened in ED and transfer to Med Surg or ICU units for inpatient treatment.
	• If obstetric concerns persist after ED arrival (e.g, placenta undelivered, HTN, PPH) patient will be transferred to LD for continued obstetric recovery and transferred to MB for postpartum care.
	  ○ Universal screening will be performed accordingly.
	
	Neonatology will be consulted for all newborn inpatient needs status post OOH birth. Unit placement will be determined by gestational age and disposition:
	• ≥ 35.0wks gestational age placement will be decided on a case-by-case review.
	  ○ For asymptomatic mother, care for couplet using “asymptomatic, screened” guidelines, pending maternal SARS-CoV-2 testing
	  ○ For symptomatic mother, care for the couplet using “PUI” guidelines, pending maternal SARS-CoV-2 testing
	Unstable newborn should be managed in a negative pressure room in the SCN or NICU. Unstable newborns and/or < 35.0 weeks will be managed in a negative pressure room in the NICU.

Key TOPIC	Practice
Surrogacy Policy	Intended parents of surrogacy situation will be permitted per the following: • Per CDC guidelines, intended parents will: ○ Monitor symptoms for 7 days prior to the delivery and remain symptom free. ○ Monitor temperature twice daily for 3 days prior to the delivery and report to Nursing Director; must remain afebrile for 3 days prior to the delivery. • When surrogate mother is in labor and delivery is imminent, intended parents may come to hospital and must pass hospital entrance screening. • Once the infant is delivered, the asymptomatic parents will be allowed to remain with the infant per Intermountain visitation policy and care for the infant during well newborn stay. ○ Intended parents need to continue to monitor their symptoms while with the newborn. • Infant will be discharged to the intended parents when stability discharge criteria has been met. *For international intended parents needs to be coordinated through OB Neonatal Operations.

Resources:

Obstetrical management:	https://www.acog.org/Clinical-Guidance-and-Publications/Practice-Advisories/Practice-Advisory-Novel-Coronavirus2019
Breastfeeding:	https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/pregnancy-guidance-breastfeeding.html
	https://www.cdc.gov/coronavirus/2019-ncov/hcp/inpatient-obstetric-healthcare-guidance.html
	https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-criteria.html

Appendix A: Chain of Command and System Stakeholders



System Administrative Stakeholders

Name	Role	Cell phone
Mike Woodruff MD	Senior Medical Director - OPE	801-927-0291
Kristen Dascomb MD	Infectious Disease	801-633-2935
Cherie Frame		801-497-6965
Elizabeth O'Brien MD	Senior Medical Director – Neonatology, OB/NBN Operations	801-718-8744
Sean Esplin MD	Medical Director – Obstetrics, OB/NBN Operations	801-520-8493
Anne-Marie Savage	Executive Director – Nursing, OB/NBN Operations	801-608-8200
Kim Child	Legal	801-718-8143
Anne Armstrong		801-608-5931
After Hours Legal Line		801-442-3065

Appendix B: COVID Visitation per Risk Designation

Pending approval