

Inpatient Antepartum, Labor and Delivery Guidelines COVID 19 (PUI or CONFIRMED) Management in Labor

- **Patient attire/location**
 - Patient to wear clean gown and surgical mask (during entire labor process)
 - Restricted to the room at all times
 - Can use telemonitors and tub PRN
 - Isolated room
- **Support/caregiver:**
 - Recommend protective gear (CONTACT & DROPLET) at all times
 - Restricted to patient's room, not to enter common spaces including cafeteria
 - Uses patient bathroom
 - Single person for entire stay
 - Handwashing often
 - If develops respiratory symptoms (cough, fevers, etc) must leave immediately
- **Anesthesia**
 - **Strongly** encourage epidural use to avoid intubation in case emergency CS required
 - No nitrous oxide or remifentanil PCA
 - Only nasal cannula use for maternal hypoxia (NOT used for intrauterine resuscitation)
- **Additional materials**
 - Have forceps and vacuums in the room to avoid in-and-outs (Mity vac & Kiwi)
 - If ultrasound used, needs to be sterilized per protocol
 - Use only disposable stethoscopes
 - Leave some gel packets, gloves, and 2 FSEs, amniohooks, IUPCs in the room
 - Ensure FSE and amnioinfusion cords in the room
- **Monitoring**
 - Continuous pulse oximetry
 - Strict I/O monitoring
- **Safety huddles with team**
 - Team check in q2hrs, continuous pulse ox, strict I/Os (may not require in-person physical exam each time)
 - Attention to Maternal Early Warning Criteria for sepsis
 - Includes bedside nurse, MFM attg, MD attg, Charge nurse, OB anesthesia, ICU PRN
 - Review patient's clinical status, early intervention, low threshold for cesarean
- **Delivery personnel**
 - Recommend MD attg only with Chief resident PRN
 - Bedside nurse
 - Resource nurse
 - Pediatrics team (essential members only)
- **Delivery team donning and doffing**
 - Need to wear PPE (CONTACT + DROPLET). Don sterile delivery gloves OVER non-sterile blue gloves
 - New gloves when doffing of masks and eyewear
- **Delivery positioning and specifics**
 - Recommend pt in stirrups to have control of delivery and avoid sitting on bed to avoid fluid exposure
 - Avoid delivering baby to maternal abdomen. Do not recommend skin-to-skin
- **Pediatrics team**
 - Limited personnel/essential members only
 - All must be in PPE including provider to receive baby (will wear N-95 due to potential need for intubation)
 - If resuscitation is required, stays in LDR, then transfers baby out
- **Post-delivery management**
 - Debrief to be completed by MD attg – dispo to stay in LDR vs ICU
 - LDR to be CLOSED until appropriate high cleaning completed (up to 2 hours)

Inpatient Antepartum, Labor and Delivery Guidelines
COVID 19 (PUI or CONFIRMED)
Antepartum

- Notify OB Anesthesia & ICN if patient develops respiratory symptoms or is admitted as PUI/COVID+
 - MFM attg and ICN attending to discuss where delivery to take place if needed (minimize contamination of multiple spaces and PPE used)
- Patient attire/location
 - Patient to wear clean gown and surgical mask
 - Restricted to room at all times (not to use shared spaces)
 - Isolated room
- Support/caregiver
 - Recommend protective gear (CONTACT & DROPLET) at all times
 - Restricted to patient's room, not to enter common spaces including cafeteria
 - Uses patient bathroom
 - Single person for entire stay
 - Handwashing often
 - If develops respiratory symptoms (cough, fevers, etc) must leave immediately
- Additional materials
 - If ultrasound used, needs to be sterilized, so limit to only necessary use
 - Use PDC (see algorithm) for US cleaning
 - Use only disposable stethoscopes
 - Discuss opening OR3 surgical set on case-by-case basis
- Rounding/Direct Patient Care
 - MFM Attending only. Other team members can use tele-health or phone
- Safety huddles with team
 - Team check in q2hrs, continuous pulse ox, strict I/Os (may not require in-person physical exam each time)
 - Attention to Maternal Early Warning Criteria for sepsis
 - Includes bedside nurse, MFM attg, MD attg, Charge nurse, OB anesthesia, ICU PRN
 - Review patient's clinical status, early intervention, low threshold for cesarean
- Equipment
 - Small amount of gloves, gel, FSE, amniohook in room
- Transport of patient
 - Complete imaging studies in pt room as much as possible to avoid transport
 - If pt needs to be transported, must wear surgical mask and new gown. Drape clean sheet over patient
 - Minimize transport team. Transporter must wear CONTACT & DROPLET PPE during transport.
 - Don and doff per transport protocols (whenever going into and out of rooms/clinical spaces)
- If antepartum patient goes into labor or is induced, will stay in room, will NOT move to labor room

Inpatient Antepartum, Labor and Delivery Guidelines
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PLANNED/URGENT/EMERGENCY Cesarean Section Overview Guidelines

- Decision making
 - Make early decisions in controlled environment as much as possible (ie. Early diagnosis of arrest of descent, fetal intolerance)
 - Minimize need for emergency delivery
 - Maximize time we have to use approved PRECAUTIONS to minimize exposure to personnel
- Pre-operative anesthesia
 - Patient should be encouraged to have an early epidural as to decrease risk of needing emergency intubation
 - Plan CSE for non-urgent cesarean
- Caregiver
 - Only present in OR if urgent c-section (NOT if emergency c-section)
 - Wears PPE the entire time (CONTACT & DROPLET)
- Communication with unit
 - HUSC will activate **COVID batch page "91119"**
 - Charge nurse will utilize HUSC to advise people to CLEAR THE HALLWAY
 - Only essential team member involvement
 - Observer/Recorder to monitor personnel (donning and doffing of PPE)
 - OR RN Resource communicates when additional personnel needed in OR via PHONE to designated OUT OF OR person (ie if blood is needed, additional supplies)
 - Clear communication with PCA and Anesthesia tech (outside of OR)
- PPE – IF in OR during surgery, needs to be Novel Respiratory (N-95)
 - Outside of patient room (droplet/contact)
 - Outside of ORs in sterile core (droplet/contact)
- Surgical personnel
 - See separate check list and document
- Newborn management
 - OB team to hand off baby to Peds receiving person with appropriate delayed cord clamping
 - Baby will be resuscitated in the room per usual workflow
 - No skin-to-skin
- Donning and Doffing of PPE by surgical personnel
 - Occurs OUTSIDE of OR with separate trash bin (sterile core)
 - Should don NEW PPE prior to transporting patient
- Surgical Timeouts
 - Should be performed by MD OB attg to determine urgency of case
 - Post-op Debrief should include ICU attending, MFM attending (phone)
- Patient recovery:
 - Recovery in her intrapartum LDR isolation room vs ICU per anesthesia and OB team determined after surgery
 - Portable monitor set up in isolation LDR.
- OR clean up
 - HUSC/Charge RN communicates with housekeeping staff of COVID positive OR status
 - High risk clean up (up to two hours)

Inpatient Antepartum, Labor and Delivery Guidelines
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Discharge Follow

- Notify OB Anesthesia & ICN if patient develops respiratory symptoms or is admitted as PUI/COVID+
 - Add patient to the Complicated postpartum list
- Try to discharge stable PUI patients home with neonate ASAP
 - Add pt's MRN to COVID follow up list
- Patient attire/location
 - Patient to wear clean gown and surgical mask
 - Restricted to patient room (not to enter shared common spaces)
 - Isolated room
- Support/caregiver
 - Recommend protective gear (CONTACT & DROPLET) at all times
 - Restricted to patient's room, not to enter common spaces including cafeteria
 - Uses patient bathroom
 - Single person for entire stay
 - Handwashing often
 - If develops respiratory symptoms (cough, fevers, etc) must leave immediately
- Additional materials
 - Use only disposable stethoscopes
- Safety huddles with team
 - Team check in q2hrs, continuous pulse ox, strict I/Os (may not require in-person physical exam each time)
 - Attention to Maternal Early Warning Criteria for sepsis
 - Includes bedside nurse, MFM attg, MD attg, Charge nurse, OB anesthesia, ICU PRN
- Rounding/Direct Patient Care
 - OB attending only
 - Other team members can use tele-health or phone
- Equipment
 - Small amount of materials in the room
- Transport of patient
 - Complete imaging studies in pt room as much as possible to avoid transport
 - If pt needs to be transported, must wear surgical mask and new gown. Drape new sheet over patient
 - Minimize transport team. Transporter must wear contact & droplet PPE during transport.
 - Don and doff per transport protocols (whenever going into and out of rooms/clinical spaces)
- Breastfeeding considerations
 - Good hand hygiene and wear mask while feeding baby
 - Recommend to express and pump breast milk for infant if separated
 - Follow CDC guidelines for proper breast pumping hygiene ([CDC link](#))
- If patient requires prolonged hospital stay, consider transfer to Parnassus to be managed by COVID medicine services

Inpatient Antepartum, Labor and Delivery Guidelines
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Safety huddle protocols and guidance

- Complete safety huddles every **2 hours** for ALL PUI/COVID + patients on the unit
 - Assess labor process, fetal status, maternal status
 - Triage, intrapartum, antepartum, postpartum
 - Direct physical exam MAY NOT be indicated each huddle
- Safety huddle personnel
 - Charge Nurse
 - Bedside nurse (1:1)
 - OB/MFM attending
 - OB anesthesia
 - Chief resident
 - ICU attending PRN
- Monitoring for patients
 - Continuous pulse oximetry
 - Strict I/O
 - Attention to respiratory rate
 - LIMIT Physical exams to ONLY if there are vital sign abnormalities or change in clinical status

Questions to consider for Huddle:

- Maternal hemodynamic status (see below from the National Partnership for Maternal Safety)
 - Is the patient on oxygen support/tachypnea/decreased urine output/hypotension? → if YES, prompt evaluation of maternal status and reconsider proceeding with labor if remote from delivery
 - Discussion about indications for further testing → repeat CXR, CT, Labs
- Fetal Monitoring Category I? → YES/NO → if NO, low threshold to assess status and consider a controlled Cesarean section
- Assessment of labor progress → if in the active phase (greater than 6 cm) with no cervical change over 2 hours → consider interventions versus Cesarean delivery

Maternal Early Warning Criteria From the National Partnership for Maternal Safety

Maternal Early Warning Criteria:

- Systolic BP (mm Hg) <90 or >160
- Diastolic BP (mm Hg) >100
- Heart rate (beats per min) <50 or >120
- Respiratory rate (breaths per min) <10 or >30
- Oxygen saturation on room air, at sea level, % <95
- Oliguria, mL/hr for ≥ 2 hrs <35
- Maternal agitation, confusion, or unresponsiveness; Patient with preeclampsia reporting a non-remitting headache or shortness of breath