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
  - Collected in clear plastic box (A3740)
- 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
  - Delivery team (MDs & nurses) to wear NOVEL RESPIRATORY PPE (including N-95) during 2nd stage. 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 that will directly change patient management
  - 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
  - Collected in clear plastic box (Antepartum Med 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
- Medication considerations:
  - **Betamethasone** per protocol in pt <34 weeks if respiratory symptoms are mild/moderate. For pts with severe symptoms, pts who have already had a course and pts >34 weeks, discuss with MFM
  - **Magnesium sulfate** use should be discussed with MFM depending on the clinical situation and risk of further respiratory compromise

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