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

Labor management

- **Patient attire/location**
  - Patient to be met by RNs in PPE in Adult Lobby and pt & support will be masked
  - Patient to wear clean patient gown and surgical mask (during entire labor)
  - Restricted to the room at all times
  - Can use telemonitors and tub PRN
  - Isolated room (not necessarily neg pressure room) with appropriate Respiratory Illness Precautions sign

- **Support/caregiver**
  - Encouraged to wear protective gear (CONTACT & DROPLET) at all times
  - Restricted to patient’s room, not to enter common spaces including cafeteria
  - Uses patient bathroom
  - Must be asymptomatic and a single person for entire stay
  - Handwashing often
  - If develops respiratory symptoms (cough, fevers, etc) must leave immediately
  - Can order a guest tray as a special diet request from Dietary

- **Anesthesia Considerations and Oxygen use**
  - 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 (Oxygen is NO LONGER used for intrauterine resuscitation)

- **Labor Room Materials**
  - Ensure labor management supply box is in the room with limited materials (Labeled Covid+/PUI Supply Box)
  - Box includes everything from usual supply cart in labor room including vacuums
  - Ensure FSE and IUPC cords are in the room
  - If ultrasound used, needs to be sterilized per protocol

- **Monitoring**
  - VS and continuous pulse oximetry, individualized per orders
  - Strict I/Os

- **Safety huddles with team**
  - Team check in q2hrs: (may not require in-person physical exam each time)
  - Team to include: Bedside nurse, MFM attg, MD attg, Charge nurse, OB anesthesia, ICU PRN
  - Attention to Maternal Early Warning Criteria for sepsis
  - Review patient’s clinical status, early intervention, low threshold for cesarean

- **Delivery Personnel**
  - Recommend MD attending only with Chief resident PRN
  - Bedside nurse & LDR Resource nurse
  - Pediatrics team (essential members only)

- **Delivery Team Donning and Doffing**
  - Delivery team (MDs & nurses) to wear NOVEL RESPIRATORY PPE (including N-95 & face shield) during 2nd stage. Don sterile delivery gloves OVER non-sterile blue gloves
  - Hand hygiene, doffing of gown/gloves in pt rm (below the neck) and the doffing of masks and eyewear (above the neck) outside pt room, hand hygiene again

- **Delivery Positioning and Specifics**
  - Recommend pt in stirrups to have control of delivery and avoid sitting on bed to avoid/reduce risk of fluid exposure.
  - Skin-to-skin and delayed cord clamping to be discussed on case-to-case basis with ICN depending on plans for co-localization vs 14-day separation

- **Pediatrics Team**
  - Limited personnel/essential members only
  - All must be in PPE including provider to receive baby (will wear N-95 and face shields due to potential need for neonatal intubation)
  - If resuscitation is required, stays in LDR, then transfers baby in isolette if ICN

- **Post-delivery Management**
  - Debrief to be completed by MD attg with bedside RN – dispo to stay in LDR vs ICU
  - LDR to be CLOSED until appropriate high cleaning completed (up to 2 hours)
  - Prior to transfer: aim to clear hallways, minimize contact between patient and other staff/ surfaces.
  - Pt to wear surgical mask and covered from neck down in clean sheet for transport to PP; return wheelchair/gurney to dirty LDR

Version 9_Updated 4/13/20
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
  - Limit additional physical exams to one provider if possible when indicated

- 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

Version 9 Updated 4/13/20
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)
  - HUSC will communicate with unit
  - 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)

- **Provider PPE use**
  - 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 personnel log 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)
Postpartum/Discharge

- Notify OB Anesthesia & ICN if patient develops respiratory symptoms or is admitted as PUI/COVID+
  - Add patient to the Complicated postpartum list

- Post-delivery Management
  - Debrief to be completed by MD attg with bedside RN – dispo to stay in LDR vs ICU
  - LDR to be CLOSED until appropriate high cleaning completed (up to 2 hours)
  - Prior to transfer: aim to clear hallways, minimize contact between patient and other staff/ sur
  - Pt to wear surgical mask and covered from neck down in clean sheet for transport to PP; return wheelchair/gurney to dirty LDR

- 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 infectious 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 personnel in 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

- 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 (outside patient room)
  • Charge Nurse
  • Bedside nurse (1:1)
  • OB/MFM attending
  • OB anesthesia
  • Chief resident
  • ICU attending PRN

• Monitoring for patients
  • Continuous pulse oximetry
  • Strict I/Os
  • 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
• 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

Version 9_Updated 4/13/20
Inpatient Antepartum, Labor and Delivery Guidelines
Changes in L&D management of the Asymptomatic patient

- **Induction considerations**
  - Strongly recommend outpatient ripening for medical inductions
  - Outpatient cervical ripening mandatory for elective inductions

- **Patient attire/location**
  - Recommend for patient to wear clean gown and surgical mask during entire hospital stay.
  - Recommend surgical mask particularly during the 2nd stage
  - Limiting time outside of labor/antepartum rooms

- **Support/caregiver:**
  - Single person for entire stay
  - Encouraged to wear facemask
  - Limit time in common areas including hallways
  - Handwashing often
  - If develops infectious symptoms (cough, fevers, etc) MUST leave immediately

- **Labor management considerations**
  - NO nitrous oxide
  - Only nasal cannula use for maternal hypoxia (NOT used for intrauterine resuscitation)

- **Strong recommendation for early PP discharge if mom and baby are stable (see list for contraindications).**
  - Remember that if mom is readmitted, baby will NOT be able to visit

- **Provider PPE considerations**
  - Providers to wear surgical masks at all times with appropriate reuse criteria (see guidelines)
  - Wear eye shield or goggles along with normal delivery attire
  - Limit number of providers in the room for deliveries to conserve PPE

- **Considerations if asymptomatic patient undergoing a C-section**
  - If the patient has higher than average risk of requiring intubation, ALL surgical team members need to wear NOVEL RESPIRATORY PPE in the OR
    - N-95 or PAPR
    - Gown
    - Gloves
    - Eye protection

- **Cases at High Risk for requiring general anesthesia:**
  - Epidural in situ > 12 hours
  - pain during labor requiring > or equal to 2 additional anesthesia administered boluses
  - non-CSE/DPE epidural catheters
  - concerns for morbidly adherent placenta
  - BMI > 40
  - emergent surgery
Inpatient Antepartum, Labor and Delivery, Postpartum Guidelines
COVID 19 (PUI or CONFIRMED)
HANDLING OF SPECIMENS FOR LAB AND PATHOLOGY

CONTACTING PATHOLOGY

• Normal Business hours M-F 7am-6pm
  • Contact the Mission Bay Gross Room: 514-3711
  • Provide patient’s name and Medical Record Number (MRN)
  • Notify verbally of COVID status when to expect specimen to be brought to Gross Room (M2379)

• After-Hours (Weekends)
  • Please contact on-call resident pager: 443-1166
  • Provide the patient’s name and MRN
  • Notify verbally of suspected or confirmed COVID status and that specimen will be placed in Pathology pass-through refrigerator.

Labs (including cord gases)

• Ensure proper labeling of specimen (specimen label matches lab requisition, double RN check)
• Place contaminated lab biohazard bag with specimen in a new clean lab biohazard bag (double bag)
• Lab requisition to be placed in the outside pocket of lab bag
• These CAN be sent via pneumonic tube (ensure specimens are tightly sealed)
• Labeling of PUI or COVID + on specimen or requisition is not necessary

LABELING OF REQUISITION AND SPECIMEN CONTAINER

• Both Requisition and Specimen container should be labeled with a SHARPIE with big letters:
  • Suspected COVID-19 or
  • Confirmed COVID-19

TRANSPORTING OF SPECIMEN

• DO NOT PLACE IN TUG
• Specimens must be walked down to pathology gross room
• During Normal Business hours – hand deliver to pathology gross room (M2379 – 2nd floor of Gateway Medical Building, next to lab/bloodbank)
• After-hours – hand deliver to pathology gross room pass-through refrigerator (M2379, badge access to the door that leads to refrigerator)