COVID-19 STAT CESAREAN DELIVERY Guidelines
GW Health
April 27, 2020

For each shift, a designated care and delivery team will be assigned to the patient during sign-out. At the start of the shift it should be verified that the proper PPE is available for every member of the patient’s team (i.e. correctly fitted N95).

This protocol should be followed for cesarean deliveries of COVID 19 patients and other emergencies requiring the OR (i.e. hemorrhage).

Important points:
- Route of anesthesia may vary. Goal is to attempt spinal or use epidural to minimize airway instrumentation. If epidural is present, begin dosing in LDR prior to transport.
- OR 2 will remain minimally stocked to prevent contamination of supplies such as suture/gowns/gloves that cannot be cleaned.
- OR 2 is preferred OR, but all OB and Anesthesia physicians will have badge access to the trauma elevators in the event of transport to backup Main OR 11 (neg pressure OR).
- Certain decisions will be standardized to reduce stress and time:
  o FSE/IUPC/monitor to be removed in LDR, wipe down to be completed upon admission
  o N95s to remain on throughout
  o No monitoring of FHR in OR
  o Splash prep
  o All uterotonics will be pulled for cesarean to minimize OR traffic
  o Ancef 2g and Azithromycin 500 mg will always be given unless weight/allergies dictate
  o Immediate cord clamping
  o LDR bed will kept in the OR, stripped and used to transport back to negative pressure room

Roles:
RN1: Primary Bedside RN
CR- Chief Resident
OB-MD- Attending
RN2: Designated second for shift/delivery/OR
Anesthesia-1: OB Anesthesia Attending
Anesthesia-2: OR Anesthesia Attending, Senior Anesthesia Resident, Anesthesia Assistant (AA), or Junior Anesthesia Resident
NICU-RN: Charge RN
NICU-MD: NICU Fellow or Attending
Level I Cesarean Communicated

Step 1: When cesarean called, team members will simultaneously fill the following roles:

- RN1 and CR: Alert all team members of “Level 1 cesarean-19 out of LDR#).” In the LDR, preps patient for transport.
  o PPE to remain on during patient prep.
  o If epidural present, dosing of epidural to begin in LDR to determine adequacy by arrival to OR.
  o Bed unplugged, lines and epidural secured.
  o FSE, IUPC, and all fetal and TOCO monitors to be removed.
  o IV poles remain in the LDR- to be re-used post-op and to prevent any unnecessary contaminated equipment from leaving LDR.
  o Confirm mask, hat, SCDs and EKG leads placed on patient at time of admission.
  o CR to notify Anesthesia resident (6090)
  o RN1 and CR to push patient bed to the door and wait for OB-MD and RN2 to knock on LDR door for transfer, RN1 and CR to doff PPE appropriately inside of room except N95 remains on throughout.
  o RN1 and CR to don PAPRs if needed, CR to obtain PAPR for OB-MD.

- RN2: Calls charge RN (73700)/ OR tech (2533) – determines location of cesarean, then dons PPE and prepares to receive patient in LDR hallway.
  o Cesarean will preferentially take place in OR 2 with Main OR11 as the backup.
- OB-MD: Calls Anesthesia-1 (6091) and NICU (2538), dons PPE and prepares to receive patient in LDR hallway.
- Anesthesia-1:
  o If epidural present, Anesthesia-1 and Anesthesia-2 will divide roles of dosing epidural and preparing the OR based on immediate availability.
  o If epidural not present, calls Anesthesia-2 and the safety officer (2221) for guidance in donning of ENHANCED PPE (following “PPE Guideline for Airway Procedures”) in case GETA is required.
  o Anesthesia-2 role determined based on immediate availability. If OR Anesthesia Attending unavailable, role may be filled by Senior Anesthesia Resident, AA, or Junior Anesthesia Resident. During the case, specific member may change based on other emergencies/needs.
- NICU: prepares team to accept baby that may need transport to the NICU. Designated COVID bassinet and Giraffe isolate located in the OR Hallway.

Step 2: Transport to OR:

- OB-MD and RN2, donned in PPE, transport patient to OR.
- OB-MD and RN2 transfer the patient from LDR bed to OR table, with attention to lines/epidural.
  o Supine if epidural in place
  o Seated for spinal
- RN2 connects BP cuff, pulse oximeter, and EKG leads, and starts cycling of BP cuff.
- RN1 dons full PPE (and PAPR if no epidural) and enters OR to count.
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- LDR bed moved against OR wall.

**Step 3: Patient in OR: Set-up for Cesarean and Intubation/Induction of Anesthesia**

- OB-MD positions step stools doffs PPE except for N95 and exits OR to don PAPR, scrubs, dresses and gloves for cesarean with second scrub tech. Re-enters through antechamber.
- RN1: Counts with OR tech
  - X-ray for incorrect cannot be brought into the COVID room.
- RN 2: places foley catheter, bovie pad, connects SCDs, splash preps, doffs ppe except N95 and exits the OR.
- Brief Timeout Patient Name, Procedure, Allergies and Concerns.
- OB-MD and CR places drape.
- Anesthesia to administer antibiotics
- If epidural is not present, Anesthesia-1 will enact the predetermined support plan (see “Guidance for OB Anesthesia Attending: A Decision Tree for STAT Cesarean Delivery Anesthetic Planning”)
  - If Anesthesia-2 is able to handle an airway without supervision, then Anesthesia-1 dons PPE for spinal while Anesthesia-2 dons ENHANCED PPE for possible GETA.
  - If Anesthesia-2 is deemed likely to require support without direct supervision, then Anesthesia-2 will don PPE to assist with patient positioning and spinal prep while Anesthesia-1 dons ENHANCED PPE for neuraxial attempt followed by GETA, if necessary.
  - If patient is deemed a poor candidate for neuraxial anesthesia, both Anesthesia-1 and Anesthesia-2 will don ENHANCED PPE for attempt at GETA.
- If GETA required, predetermined Anesthesia attending (see above) performs induction/intubation following “Anesthesia Department COVID-19 Airway Intubation Guidelines.” Note:
  - Clear plastic is placed on over the patient’s head prior to induction to protect against aerosolization
  - OB-MD, CR, OR tech and RN 1 remain > 6 feet from intubation.
- Once the level is adequate or the airway is secure, the obstetricians and OR tech to perform cesarean.

**Step 4: Patient airway now secured, start of cesarean**

- OB team begins cesarean. Anesthesia and OR Tech fulfill normal roles.
- RN 1 strips and replaces linen on LDR bed.
  - Make sure NICU in place to receive infant in antechamber.
  - Make any additional calls as needed.
- RN 1 remains in OR in PPE to circulate.

**Step 5: Infant Delivery:**

- Immediate cord clamping.
- OB-MD or CR carry neonate to antechamber, and place in bassinet.
- NICU RN to hand neonate to NICU MD waiting in OR Hallway.
- NICU MD to determined disposition of neonate for evaluation (NICU isolation or negative pressure LDR).
- NICU RN to doff PPE in the antechamber except N95, exit antechamber and assist NICU MD.

**Step 6: Post-cesarean**

- OB-MD and CR to doff surgical gown, boots, outer gloves. Clean PAPR. Exit OR and doff PAPR.
- Anesthesia-1 will determine extubation team (Anesthesia-1 or Anesthesia-2) and who will receive patient in hallway after extubation.
  - The Anesthesia personnel performing extubation dons ENHANCED PPE (following “PPE Guideline for Airway Procedures”). A clear plastic drape needs to be placed on over the patient’s head prior to extubation to protect against aerosolization and all equipment should be immediately discarded in a biohazard waste bag.
- Once extubated, Anesthesia-1 or -2, the OR tech, and RN1 will remain in the OR for 30 minutes to monitor the patient.
- After 30 minutes, Anesthesia, OR tech, and RN1, and additional personnel (if needed) transfer patient to clean LDR bed.

**Step 7: Return for recovery**

- RN2 and Anesthesia-1 or -2, donned in PPE, will receive patient outside OR2 and transport to negative pressure room labor room.
- RN1 and Anesthesia to clean PAPR. Exit OR and doff PAPR.
- OR tech prepares OR for terminal clean.
**Guidance for OB Anesth Attending**

**A decision tree for Stat Cesarean Delivery Anesthetic Planning**

4.23.2020

Anesth A:
Backup (Anesth B): in order of preference

- OB Anesth Attending
- OR Anesth Attending
- Senior Anesth Resident
- Anesth Assistant
- Junior Anesth Resident

Decision is left to the discretion of Anesth Attending A

*ENHANCED PPE will include booties and PAPR hood.

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**COVID + or PUI Stat Cesarean Delivery Called**

Anesth Attending A enacts predetermined support plan

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**B**

Backup (Anesth B) is deemed able to handle an airway without direct supervision

Anesth Attending A dons PPE for spinal attempt while backup (Anesth B) dons ENHANCED* PPE for possible GETA

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**C**

Backup (Anesth B) is deemed likely to require support without direct supervision

Backup (Anesth B) dons PPE and assists with patient positioning and spinal prep while Anesth Attending A dons ENHANCED PPE for neuraxial attempt followed by GETA, if necessary

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Patient is deemed a poor candidate for neuraxial analgesia

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Both Anesth Attending A and Backup (Anesth B) don ENHANCED PPE for attempt at GETA

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