OB Anesthesiology
Rotation Guidelines

These anesthetic guidelines are meant to provide a general overview for your information & preparation. Please discuss specific techniques & anesthetic plans with your attending.

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I. Academics
   A. Daily Lecture/Staff contact – in order to facilitate fruitful discussion of the various OB topics, residents should contact their OB staff on the day prior in order to agree on the academic topic to be covered the next day. A suggested syllabus is provided as a word document on the L drive in the RESIDENTS folder under Obstetric Anesthesiology.
   B. Patient-generated topics - Though academic topics are listed in the syllabus, the patients that present on L&D are a plentiful resource for additional learning areas. Residents are encouraged to pursue the interesting aspects of a patient’s past medical history and to engage the attending regarding the anesthetic impact on patient care.
   C. Level of Knowledge Assessment – for your use in assessing your reading and retention, an online quiz is provided that covers a wide range of OB anesthesia topics. It can be accessed at: http://www.quia.com/quiz/3433227.html You are encouraged to take the quiz prior to starting the rotation and then again at the end in order to assess your progress. Of course, it may be used to direct your readings and study time as appropriate.

II. Change of Shift

Hand-offs & change-of-shifts are necessary, but have the potential to jeopardize the quality of patient care (especially safety, effectiveness, and patient-centeredness).

   A. Punctuality: Arrive dressed in scrubs, ID, stethoscope, ready to go before designated duty start time.
   B. OR Check: Ensure the daily turnover log (located in the Anesthesia office) is signed, indicating LDR 01 & 02 (cesarean delivery ORs) preparedness (see section II).
   C. Early Morning Clinical Tasks:
      1. Epidural Carts: There are 2 carts on L&D. Inspect each, including emergency equipment at the beginning of each shift, and after use. Replace missing items yourself, or contact an Anesthesia Technician.
      2. Meet with OB staff for morning turnover conference:
         i. review with them any critical issues or potential problems, and
         ii. collaboratively prioritize scheduled competing tasks at hand.
      3. Ongoing Procedures: New team members will take over care for any ongoing procedures (Cesarean delivery; initiation of labor analgesia)
      4. L&D Rounds:
         i. All parturients with ongoing analgesic therapy should be seen by new team members as soon as possible. Purposes: assessment of analgesic adequacy, hemodynamic stability, and obstetric management status; introduce self as new provider responsible for her care
         ii. New admissions must be assessed and consented. Please note the witness for the consent must be an NMCP staff member
         iii. Scheduled Cesarean delivery patients must be prepared for surgery.
      5. Post-Partum Rounds: A designated member of the team sees parturients who have delivered before midnight the previous day, including
         i. Assessment of analgesic effectiveness, satisfaction, complications, and side effects
ii. Initiate or continue intervention to manage complications or side-effects, if needed

iii. Complete Essentris note

III. LRD 01 & 02 Preparedness

**Vitally important:** Unless occupied with a case, both LDR operating rooms must be fully prepared to receive an emergency case at all times! Their readiness must be confirmed:

- At the beginning of every new shift by the on-coming team
- Immediately after the conclusion of every OR case

Confirm the following:

- Monitor on, functional, working capnograph.
- Be sure all equipment is present & functioning properly.
- Notify the anesthesia technician immediately if there are any problems with anesthesia equipment or drug cart.
- Verify appropriate drugs for routine neuraxial & emergency general anesthetic cases (propofol, succinylcholine, phenylephrine, oxytocin, etc.) are available and unexpired

IV. Pre-Anesthetic Consultations

1. It is essential that each patient admitted to L&D undergoes a pre-anesthesia interview & assessment, and that an Essentris consultation note be completed in a timely fashion. Due to the nature of our service, EVERY CASE is a potential problem and therefore, a prospective emergency!

2. The nursing staff will usually contact our team upon admission of parturients. The nursing staff may have given the parturient a pre-anesthesia questionnaire, similar to the one used prior to same-day surgery. You may find that it is helpful in assessing the patient in an efficient manner. Our team should also be vigilant for the appearance of new patients on the OB census board who are designated as triage, especially if they are noted to have potentially unstable conditions (e.g. bleeding, placenta previa, trauma, etc.). If in doubt, call the L&D resident or charge nurse to get clarification.

3. When contacted by the OB staff or resident regarding a new consult request:
   - Inquire about any urgent issues or complicating factors
   - Respond to the request in a timely manner. If you are unable to attend to the request, contact the Anesthesia Con (988-9200).
   - Review Essentris for pertinent data/info, including a previously completed obstetric anesthesia consultation note. In the latter case, you should still assess the patient in person, and revise the note with an addendum.
   - Use the Adult Anesthesia Questionnaire (see #2 above) given to patients during the admission process) and the Essentris template to document the OB Anesthesia pre-anesthetic consultation completely & accurately. Especially important are obstetric details; history of neurological problems, headaches, cardiopulmonary issues; and prior neuraxial or general anesthetics, including outcomes. Meticulous assessment & documentation of airway is vital. An incomplete or inaccurate pre-anesthetic evaluation is dangerous
   - Obtain each patient’s informed consent in writing (see OB Anesthesia consent form). This form is then to be placed in the patient’s paper chart.
V. Documenting Anesthetic Care

1. Labor Analgesia Charting:
   a. Complete an Essentris note documenting the details of the chosen neuraxial technique (CLE, CSE, DPE). Especially important is the documentation of the distance to loss of resistance in the epidural space as this will be helpful if a subsequent re-placement is required.

2. Cesarean Delivery
   a. If the patient does not have an in-situ epidural, an Innovian ICD-9 code of 01961 should be entered in the Admission section under the Case tab in the Procedure block.
   b. If patient has ongoing neuraxial analgesia, then the Cesarean delivery anesthetic will require an ICD-9 code of 01968, (C-sec after neuraxial labor analgesia) as well as 01960 in the Admission section of the Innovian chart.

3. Other procedures in OR
   a. Vaginal Delivery, Multiple Gestation: This is normally done in the OR (LDR02). Accompany parturient and prepare for emergent intervention. If she has ongoing labor analgesia, open Innovian as above using an ICD-9 code of 01960 and continue charting. If it becomes a cesarean delivery, then add the ICD-9 code to 01968 (as above).
   b. Repair of Laceration: add code 99140 for any emergency case (including stat c/s).
   c. Cesarean after failed external cephalic version (ECV): if neuraxial analgesia / anesthesia was administered for ECV, then proceed with the record for cesarean, as above.

VI. Neuraxial Labor Analgesic Procedures

   Note: Consults for labor analgesia should be received from an OB physician (staff or resident). This ensures that you are cognizant of the L&D priorities as viewed by the obstetricians.

   Note: Attending supervision is required for neuraxial procedures. Any exception to this requires attending approval on a case-by-case basis!

Preparation
1. Review all relevant information thoroughly (obstetric history, complications, relevant co-existing disease, special considerations, current status, etc.) Be sure to examine any lab data that is available or pending.
   There are no standard required labs, but some context-specific labs may be indicated (e.g. platelet, LFTs, coags, in pre-eclampsia; PCV +/- blood bank labs in bleeding, or elective cesarean section; etc.).
2. Formulate appropriate analgesic plan (technique, drug regimen, special modifications)
3. Check consent form (must include signature as well as date and time for all signatures).
4. Present patient & plan to attending, as appropriate.
5. Medications: From L&D pyxis, obtain 250mL infusion bag (0.125% bupiv (or ropiv) + 2 mcg/mL fentanyl)

   Enter Patient Room
1. Foam in first, always!
2. Knock first, always!
3. **Gear:** Bring epidural cart and medications into the labor room.
4. **Greet patient** and family, if you haven’t already done so. Verify plan, offer explanations, solicit questions.
5. **OB Nurse** must present for procedure. Summon nurse if not present.
6. **Crowd control** before getting started: one support person may stay in room, sitting, on fetal monitor/nurse’s side of bed, while your cart is on opposite side. Aseptic technique and safety are the issues. (Even strong, confident support people have unexpectedly & suddenly collapsed to the floor.)
7. **Labels:** Label all syringes in epidural kit with sterile labels in the kits
8. **Time-out:** Confirm patient identity & procedure, including patient’s participation.
9. **Monitors:** BP, pulse oximetry, fetal monitor.
10. **IV Access:** Confirm free flowing IV. No routine IV fluid “pre-loading”. Begin hydration co-load, and do not delay block placement.
11. **Aspiration prophylaxis** only if indicated (as per attending preference??)
12. **Infection Control:** Do surgical cap & mask, **WASH HANDS**, & adhere to strict aseptic technique.
13. **Compassion:** Attend to patient’s questions, spoken & unspoken cues, and explain as you proceed. Many laboring women experience anxiety & fear when a needle is being placed in the back. Be sensitive.
14. **Supervision:** Attending presence is required during neuraxial block.
15. **Perform procedure** & initiate analgesia according to plan.
16. **Position parturient** appropriately: Remember left uterine displacement (LUD), or full lateral position.
17. **Epidural loading dose:** when used should be titrated in 3cc-5cc increments, assessing for sensory changes (rule out intrathecal catheter) and checking BP & heart rate frequently

**After Block Initiation**
1. **Start infusion** per plan, with modification based on loading dose if indicated.
2. **Monitor carefully** until stable – remain present in room after initiation of loading dose, including frequent BP, vigilance for complications, and attention to analgesic effectiveness.
3. **Charting:** This is also a time when you can complete charting (use OB Anesthesia templates), clean up & dispose of used gear, program the pump, and educate the patient.
4. **Infusion pump:** Set PCEA baseline rate, bolus dose volume, and lockout period. Individual patient response may vary so track the dermatome level of spread of analgesia. Check to see that the patient’s comfort level is actually improving.
5. **Effectiveness:** Assess & document sensory levels, upper & lower extents (e.g., T10–S2) on each side. Ensure that the block is adequate and bilateral, **and** that the patient has satisfactory analgesia; if not, with the advice of your attending, work to correct the situation.
6. **Rounding:** Return to check on her approx. every 2-3 hours and document patient’s BP & comfort.

**VII. Cesarean Delivery Procedures**

**A. Non-emergent Cesarean Delivery**

1. Maintain communication with the OB Service. Parturient’s status & the indication(s) for Cesarean birth influence timeframe & anesthetic plan. When OB service notifies a team member of decision to proceed to Cesarean, the attending must be informed. **We strive to be timely always.**
2. Formulate anesthetic plan (spinal, CSE, volume loading, post-op analgesia) with your staff.
3. Conduct anesthesia per plan.

B. Emergency / STAT Cesarean Delivery

1. Summon attending & other members of your team immediately.
2. Decide on SAB vs GETA (or epidural top-up if patient already has a dense sensory block)
3. Brief, targeted assessment, airway exam, explanation, reassurance.
4. 30 mL Bicitra PO
5. Assess FHR in the OR prior to any technique! A “normal” FHR may allow you to proceed non-emergently and/or may change your anesthesia technique.
6. SAB → perform SAB within 1-2 minutes, then mask O2 & LUD.
7. General Anesthesia →
   a. PreO2 and LUD.
   b. Reassess airway & position head / shoulders properly. Do awake laryngoscopy if in doubt.
   c. Wait until abdomen has been prepped & draped before inducing general anesthesia.
   d. Rapid sequence induction, with or without cricoid pressure (per attending).
   e. Maintain as instructed by attending/senior resident. (F,O₂ > 0.5 before delivery)
   f. Antibiotic per OB preference.
   g. Pass oro-gastric tube & empty the stomach as soon as possible.
   h. Extubate patient when fully emerged.
   i. Transport to recovery.
   j. Generous analgesic orders for short-term. Post-cesarean pain is significant without neuraxial morphine! Include NSAID unless contraindicated!

C. All Cesarean Deliveries

1. Remember:
   a. Hand Hygiene!
   b. Aspiration prophylaxis [Bicitra, famotidine, metoclopramide] as indicated.
   c. Antibiotics before incision!
   e. Warming devices (IVF, Bair Hugger).

2. Upon conclusion of Cesarean
   a. Hand-off care to L&D recovery nurse per routine. Transport patient to PACU, provide detailed hand-off report, and ensure patient stability & safety before leaving room.
   c. Complete Innovian record completely, ensuring staff review.
   d. Return to OR, restore room readiness (as above)
   e. Important: Return to assess patient within an hour of transfer to recovery, sooner and more often if indicated. Be especially vigilant for post-partum hemorrhage & post-cesarean analgesic effectiveness.

VIII. Complications
Essential: Inform your attending of all complications or potential complications as soon as possible! He or she will guide you in managing complications, notifications, disclosures, documentation, follow up, QI, etc.

IX. Controlled Substances Policy

- Keep all controlled substances in your possession at all times, account for all administration & waste, and return drugs & pharmacy drug forms at the end of your shift.

  **Recommended for C/S:** Fentanyl, Duramorph, Ketamine, Versed

  **Remifentanil:** Pharmacy has begun stocking 1mg vials in the L&D pyxis. If needed for sedation or analgesia, a syringe should be prepared at a concentration of 10 mcg/mL.

- Following delivery, most nurses are credentialed to remove epidural catheters.

X. Emergency Carts / Gear

1. **“Crash Carts”** – emergency airway equipment is located in various drawers of each of the epidural carts
2. **L&D Hemorrhage Kits** – in pyxis refrigerator
3. **Emergency Airway Cart** – located in the substerile space between LDR1 & 2
4. **Level One Infusion Device/Belmont** – located in the Anesthesia workroom across from the call room