**DAILY OR SET UP - ALL 3 ORs**

To be done by resident coming on duty

1. Get sign-out on active & anticipated pts/cases from Res going off duty.
2. Perform usual room check as you would for any OR/GA, including:
   - Ck circuit, machine, ETT (6.0, 6.5, 7.0), laryngoscope, std monitors
   - Check suction
   - Epidural & spinal kits available
   - Jet ventilation apparatus & ambu bag on side of machine
   - Check drugs: All ready to go on anesthesia machine:
     - Propofol (10mg/ml) 20cc syringe & 1 unopened 20cc bottle
     - Succinylcholine (20mg/ml) 10cc syringe & unopened 10cc bottle
     - Ephedrine (5mg/ml) 5cc syringe
     - Phenylephrine (100mcg/ml) 10cc syringe attached to stopcock & 1cc syringe
     - Pitocin (10units/ml) 5cc syringe containing 4cc (40 units)
     - Phenylephrine Infusion (200mcg/ml). Add 2 ml of 10mg/ml phenylephrine to 100cc bag & put it on Alaris pump.
   - LMA's sizes 3 & 4 in bottom drawer of machine
   - Pressure bag hanging on side of anesthesia machine
   - IV set-up
3. Check location of Difficult Airway Cart & restock if used

**DAILY CART SET UP (in hallway between LDR's 3 & 4 & in epidural cart closet across from LDR 9)**

To be done by resident coming on duty

In drawer of cart - Ready to go:

- 20cc syringe 3% chloroprocaine (nesacaine)
- 20cc syringe 2% lidocaine w/ epi 1:400K
- Bicarbonate
- Bicitra

3rd DRAWER OF EPIDURAL CART

- Phenylephrine (0.1mg/cc) 10cc syringe, change daily
- Ephedrine (5mg/cc) 10cc syringe, change daily
- Check laryngoscope, ETT sizes 6.0, 6.5, 7.0

ON SIDE OF CART

- Ambu bag & $O_2$ cylinder

**CONTINUOUS EPIDURAL INFUSION BAGS in PYXIS**

Bupivacaine 0.0625% w/ fentanyl 1.6ug/cc. Usually start at 7cc/hr w/ 7cc bolus & 7 minute lockout

**TOP-UPS/TOP-OFFS (For a patient experiencing pain after the epidural placement & boluses are administered.)**

1. Ask pt where she has pain. If she has rectal pressure, OB may want to exam the pt first. If she only has supra pubic pain, she may have bladder distention & need a foley or straight cath (normally pt will already have a foley, though).
2. Check sensory level bilaterally. You may have a one-sided block. Pt can lie on the side that is still painful & then bolused. If this does not work, catheter may be pulled back 1-2cm depending on how deep it is.
3. If block is bilateral, give 5-10cc bupivacaine 0.125% or 0.25% after negative aspiration.
   Notify RN that you are giving top-off. RN must be at the pt's bedside when dosing epidural.
4. Possibly add fentanyl 50ug - 100ug to above
5. Chart top ups on anesthesia chart & record 3 sets of BP's a well as FHR after top -up is given
6. If no improvement, check sensory level again & epidural site. The catheter may have migrated out of the epidural space.
7. If a pt is for VBAC, notify OB if pt still c/o pain after reasonable top-up is given w/ evidence of motor block.

**AFTER DELIVERY**

1. All paperwork must be completed. This includes time, sex of birth & APGARS. BP should be recorded every hour.
2. Catheter should be removed & this should be documented (including "tip intact"). Pumps should be disconnected & remainder of bag documented & wasted (w/ witness). Return paperwork to PYXIS (white copy of anesthesia record & waste sheet). Rest of papers go into billing bin. If there were any complications w/ the pt make sure the proper paperwork is filled out so that they will be followed up appropriately.

**EPIDURAL BASICS**

1. Consenting parturient - take history: ask week of gestation (i.e. 38 wks), gravida + para status (i.e. G2 P1), PMH, PSH, allergies, meds, probs w/ pregnancy, ht, wt. Cervical exam, early labor vs close to 2nd stage
   - Do directed physical exam: focus on airway but if asthma, check lungs, etc
   - Discuss epidural + risks: be thorough in discussing risks. e.g.:
     *"As part of my job, I need to tell you about possible risks of an epidural though they may be uncommon. The risks include bleeding, infection, back pain, failed block, nerve damage, bleeding in the back referred to as hematoma, & breathing & heart problems, but these are all very small risks. There is also a 2 in 100 chance of getting something called a postdural puncture headache. This kind of headache is not dangerous & it is treatable or it goes away on its own, but it is usually a very bad headache so I just want to let you know that there is a risk for this. If you do end up getting this headache, you would usually not get it until 1-2 days from now"*
2. Enter Pre-epidural PowerPlan in computer (consists of fluid bolus, bicitra, etc). Check pt's labs (particularly H/H & platelets) at this time & write them on the H&P. If it is a healthy pt w/ an uncomplicated pregnancy & no concern for pre-eclampsia/HELLP syndrome, or on Heparin, you do not always have to wait for the platelet count to come back (ck w/attending). It is helpful to write the H/H especially if pt has a C-section or hemorrhaging.
3. DOING THE EPIDURAL - Sitting technique
   - Bring in cart/supplies, ck IV is working, pre hydrate pt (LR or saline - no dextrose), place pulse ox, attach BP cuff, give 30cc bicitra po.
   - Open epidural kit & add betadine to prep dish
   - Prep back widely x 3 w/ betadine sponge. Attach drape.
   - Palpate space
   - Give lidocaine 1% skin wheal at L3-4, L4-5, or L2-3 w/ 25g needle attached to 3cc syringe
   - Advance Toughy needle through wheal approximately 3cm, remove stylet, attach LOR syringe & advance slowly
   - When you have loss of resistance, thread catheter 3-5cm
   - Give lido/epi test dose unless there is a reason not to (eg: pt already hypertensive & you don't want to give epi or you did a CSE for a C-section then give test dose prior to dosing epidural catheter): 3cc lidocaine 1.5% w/ epinephrine 1:200K after negative aspirate slowly over 30 seconds. If lido/epi contraindicated, do air test to rule out intravascular placement & plain lido 45mg test dose to rule out intrathecal placement.
   - Watch pt closely for 90 sec - 3 min for signs of intrathecal injection (sudden analgesia, sudden sensory or motor block) or intravascular injection (tinnitus, perioral numbness, metallic taste in mouth, dizziness, palpitations) also observe pulse-ox for increased HR.
   - If negative test dose, tape catheter, aspirate catheter & give 5cc bupivacaine .125% (or 5cc bupivacaine 0.25%) in sitting position
   - Repeat 5cc bupivacaine .125% (or bupivacaine .25%) in 3 min if parturient able to move bilat LE.
   - Check sensory level & start infusion
   - Complete charting, don't forget Fetal Heart Rate

**STAT C-SECTION with Epidural in Place**

1. Ask reason for Cesarean delivery (prolonged bradycardia, late decelerations, failure to progress, category 2 or 3 FHT) & call attending immediately
2. If truly "STAT" take 20cc syringe of 3% nesacaine on anesthesia cart & add 2cc bicarb. Start giving the nesacaine quickly in labor room - 5cc-10 increments - & watch pt closely while transporting to OR. Most pts need 20-30cc of the nesacaine. Check level. Be prepared for a STAT general anesthetic if level inadequate.
3. Left uterine displacement & 100% $O_2$ immediately in OR

**CHECK FETAL HEART RATE IN OR, IF >120 CONTINUE W/ EPIDURAL BOLUS FOR T4 LEVEL, IF <120 CONSIDER GETA**

4. Place monitors.
   - Pt can still get fentanyl & Duramorph in epidural- see below

**PCEA (Patient Controlled Epidural Analgesia )**

1. Infusion: Bupivacaine 0.0625% w/ 1.6 ug/cc fentanyl at 7-10 cc/hr w/ 7cc demand bolus q 10 min
2. Instructions to pt: Call anesthesia resident after pt has pressed button 3x w/ no or minimal relief, severe pain, hypotension or any concerns.

**STAT C-SECTION without Epidural in Place**

1. Call attending immediately & ask obstetricians reason for C-section.
2. Ask quick history & do airway exam
3. Be prepared to do a quick spinal or GA induction. Place monitors.
   - If spinal: 1.6cc bupivacaine 0.75% w/ glucose. For taller pts may use 1.8cc or even 2 for very tall.
   - If fentanyl & duramorph immediately available - add 10ug & 0.2mg respectively
   - If GA: Pre oxygenate w/ good mask fit w/ pt in left uterine displacement. RSI w/ IV propofol, SUX, cricoid pressure. Have difficult airway box in room. See details under Urgent C-Section.

**URGENT C-SECTION with Epidural in Place**

1. Ask reason for C-section & call attending.
2. If not truly STAT, take 20cc syringe of 2% lidocaine w/ epi 1:400K on anesthesia cart & add 2cc bicarb. Give lidocaine in labor room w/ 5cc increments & check sensory-motor level. Follow & chart BP's. Give bicitra po.
3. Most pts will develop adequate level w/ 15-20 cc lido 2% w/ epi 1:400k & bicarb.
4. Get "regional" kit from drug machine. Give 100mcg fentanyl in epidural after adequate level achieved (depending on attending preference, before case or after baby out).
5. Be sure to give duramorph or dilaudid before removing epidural!! 2-3mg.
6. Put in powerplan for pts receiving neuraxial morphine.

**URGENT C-SECTION without Epidural in Place**

1. Ask reason for C-section & call attending.
2. Anesthesia options are spinal, epidural, general depending on situation. Be prepared for each option as attending decides.
3. Focused history (PMH, any problems w/ pregnancy [preeclampsia, PIH, etc], hx anesthesia problems, allergies, etc) & do airway exam.

**GENERAL ANESTHESIA FOR STAT C-SECTION**

1. Do quick airway exam & ask pt if any med problems, allergies. If good airway, proceed w/ rapid sequence induction. If bad airway, attending to decide plan- probable STAT spinal.

*** REMEMBER, SPINAL ANESTHESIA IS STANDARD OF CARE FOR STAT CESAREAN DELIVERY ***

2. Check if pt has working IV. Maybe this should be at the start of every encounter w/ our parturients.
3. Bicitra premed.

*** REMEMBER, OB DOCS ALL PREPPED & DRAPED, "KNIFE IN HAND" BEFORE INDUCING GA ***

4. Preoxygenate w/ good mask fit 4 vital capacity breaths, cricoid pressure
5. IV propofol and/or ketamine & sux & intubate.
6. 50% $O_2$ & 50% $N_2O$ w/ halogenated agent, preferably ½ MAC (uterine relaxant). Vecuronium or rocuronium for paralysis. Versed if needed.
7. After baby out, 30% $O_2$, 70% $N_2O$, halogenated agent as low as pt will tolerate (turn off if atony), fentanyl, versed, zofran.
8. Extubate awake.

**ELECTIVE C-SECTION**

1. Consent pt (Epidural Basics), fill out preop eval & get other paperwork.
2. Check NPO status. Consider Famotidine and/or Metoclopramide if recent po intake.
3. Have IV Fluid running wide open. Give bicitra 30cc po w/in 15 min. of going to OR.
   - If spinal: 1.6cc bupiv. 0.75% w/ fentanyl 10ug (.2cc) & duramorph 0.2mg (.2cc) typically w/ epinephrine to prolong the block (these are usually for repeats or for some other complication).
   - If epidural: lidocaine 2% w/ epi 1:400K or 1:200K w/ bicarb (1cc/10cc lidocaine).
4. Complete duramorph orders.
5. If pt is at risk for postpartum hemorrhage, make sure Type & Screen or Type & Crossmatch has been sent. Routine standing orders on L & D are for Type & Hold only.
6. All C-section pts must be signed out by a resident.

**D & C'S & D & E'S**

1. Consent pt: (see "Epidural Basics"). Be sure to ask weeks of gestation, NPO status.
2. Spinal vs. MAC.
   - If spinal: 1.4 ml 0.75% bupivacaine.
3. If MAC: (only an option if pt is less than 12 weeks) midazolam, fentanyl +/-propofol.

**FORCEPS DELIVERY with Epidural in Place**

1. Take 20cc of 3% nesacaine or 2% lidocaine w/ epi in anesthesia cart & add 2cc bicarb.
2. Raise head of bed so that the pt is in sitting position
3. Inject 5-15cc of nesacaine in 5cc increments over 10 minutes until sacral anesthesia is achieved
4. Stay w/ pt until delivery & record BP's for at least 15 mins. Remember a failed forceps delivery will likely become a STAT C-section
5. Replace nesacaine or lidocaine syringe.

**BTL (Bilateral Tubal Ligation)**

1. If epidural in place for delivery, working well, & the patient is stable & NPO during labor, then a BTL can be performed immediately after delivery. Give bicitra 30cc po. Inject epidural w/ 15- 20cc 3% nesacaine or 2% lidocaine w/ epi 1:400k to obtain T6- T4 block. Obtain regional kit. Can add fentanyl 50-100ug . No duramorph!
2. If patient is NPO & scheduled for BTL post-delivery day 1, then we administer a spinal anesthetic. Can add fentanyl 10ug. Bicitra premed. Have regional kit w/ versed available.
3. General anesthesia is not offered for BTLs since it is an elective case. Please consult w/ your attending if a patient is refusing a spinal.

**CHARTING - VERY IMPORTANT**

1. Write preop (see "Epidural Basics")
2. Legible Chart
   - Be sure to document bicitra 30cc po & "LUD" (left uterine displacement), time of delivery, APGAR scores on all charts.
   - Be sure to chart a set of vitals (BP, HR, FHR) at least once per hour for patients w/ a labor epidural.
   - Be sure to document top-off meds given & 3 BPs (over 15 min) after the top-off.
   - Document fentanyl given & infusion concentration & rate.
3. Postops. See & write a brief postop note for all of your patients. Place a check next to the patient's name in the black marble book in the call room after the postop is done. Call pts that are already at home.
4. All patients (C-section, labor epidurals, D & C's) should be recorded in the black marble book in call room.
5. See "Sample Epidural Record" & "Sample C-Section Record".
6. Completed anesthesia records:
   - Pink copy to chart
   - Yellow copy w/ billing sheet to marble book in call room
   - White copy w/ yellow drug form to drug machine

**DAILY DUTIES**

1. 7AM start time - report to resident call room (Resident One). The 7AM resident is responsible for checking all anesthesia rooms, replacing drug trays, and making sure the epidural carts are stocked including syringes for c-sections. The other resident (Resident Two) comes at 8AM and stays until 6 PM when the nightfloat resident comes.
2. Receive night report, give sign out.
3. Check board for elective cases.
4. Ask OB residents about high risk pts & check OB board. Consent all high risk pts thoroughly.
5. Preop elective cases.
6. Postops.
7. Daily readings/discussions.

**DAILY READINGS AND EXAM**

Get your OB Anesthesia book from Joan prior to rotation. Every day a 20 min chapter is assigned. Chapter will be discussed the following day as clinical duties allow. The reading schedule is posted in the call room. Please do these readings. There is an exam at the end of the month.

**OB COMPLICATION BOOK (Green binder in call room)**

Any pts who have a wet tap or who contact us postop with headache, nerve problems or any new problem, need to have an OB complication form completed (see book). These pts will need daily follow-up in person or via phone. Notify your attending of these pts. Preferable for day-time attending do the follow-ups. Any pt that has a problem or complication should be given the phone # for L & D (444-2050) & advised to call the anesthesiologist if the problem persists or worsens after discharge.

**OB CONSULTS**

Often obstetricians notify us about a high-risk pt who needs anesthesia consult prior to term. If RN asks you to see a consult pt, please notify your attending. A formal consult needs to be done. Completed consults will be found in the consult book (Black binder in call room).