Acute Pain Service Rotation
Goals and Objectives

Department of Anesthesiology and Perioperative Medicine
Medical College of Georgia
Augusta University

Introduction
Welcome to the Acute Pain Service (APS) rotation at Augusta University Medical Center Department of Anesthesiology and Perioperative Medicine! With the increasing emphasis on acute and postoperative pain management, opioid stewardship, and enhanced recovery programs, there is much interest in the field of acute and regional pain management. This subspecialty rotation is designed for CA2 and CA3 to satisfy your ACGME anesthesiology residency program requirements for clinical experiences in acute perioperative pain management and regional analgesia. ACGME core competencies that are expected to be met by the end of this rotation include patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, and professionalism.

During each of your one month rotations, you will primarily be located within the OR, preoperative holding “Block Area,” and PACU. You will spend some time on the OB-Gyn, medical and surgical patient floors, and intensive care units. This is a fast-paced rotation but with much opportunity for educational, hands-on experience and relevance to your future practice. Enjoy the rotation!

Objectives
The main goal by the end of this rotation is to provide the resident with familiarity and proficiency with fundamental knowledge in acute pain management and skills in basic regional blocks (see below “Goals”). The overall objectives are as follows:

1. Develop the resident physician knowledge of the various management strategies for acute or perioperative pain management.
2. Educate the resident physician in the risks, benefits, indications, and contraindications of different pain management modalities.
3. Help guide the resident physician towards an appropriate pain management plan based on surgical procedure and factors, patient factors, and postoperative course.
4. Gain appreciation for relevant anatomy and proficiency in basic regional techniques of the upper extremities, lower extremities, truncal, and neuraxial blockade.
5. Develop familiarity with daily management and troubleshooting of neuraxial and/or peripheral nerve catheters.
6. Be able to identify complications and initiate appropriate management in a timely manner.
7. Build communication skills needed for multidisciplinary care in acute pain management

Expectations
To ensure both quality patient care and the meeting of the above educational goals and objectives of this rotation, certain expectations will be made of both resident physician and attending faculty. It is expected that the resident be an active participant in all procedures, management, follow-up, and organizational tasks involved in the care of patient perioperative pain management. It is expected that the resident perform all duties outlined below in a timely manner as allowed by workflow. The resident physician is expected to be an active learner, ask questions especially if unfamiliar or uncertain about any procedure or issue, and solicit feedback. Any potential complications must be brought to the attention of the APS faculty attending.
It is expected that the attending faculty provide teaching in the form of daily rounds, discussion, workshop, or formal didactic. Topics may include, but are not limited to, the fundamentals of ultrasound and techniques, anatomy relevant to regional anesthesia, regional techniques, local anesthesia pharmacology and toxicity, analgesia and sedation. Attending faculty are expected to be accessible and available to the resident physician for any assistance, questions, feedback, and guidance. Attending faculty are expected to mediate issues or concerns above the level of resident physician.

**Resident Responsibilities and Daily Workflow**
- Report to the Block Area (Preop Bays 24-26) in time to review block schedule and have sedation medications for all block patients locked in the APS Cart by **no later than 6:30AM**. If there are many first case blocks and preop consents, plan to come earlier (can discuss with attending the day before). If expected to be late, notify APS faculty and coordinator promptly.
- Daily block schedule will be available on the block cart. Check board for any changes.
- Obtain sedation medication (2mg midazolam, 1000mcg alfentanil) for all block patients and place in block cart
- Confirm that preoperative evaluation is completed and there are no issues that may cancel/delay case (i.e., NPO status, severe metabolic or electrolyte abnormalities, new fever or cardiac symptoms)
- Confirm surgical consent
- Obtain block consent: include operative side, general type of block (e.g., upper extremity block) rather than specific (e.g., interscalene block), single shot with or without catheter placement
  - Confirm anticoagulation status and last dose – check neuraxial guidelines, check or draw labs as appropriate (INR or PTT)
  - Document pre-existing nerve injury on block side (motor and sensory exam as appropriate)
  - If possibility of extensive surgery with inpatient stay, discuss nerve catheter option
  - Discuss risks and benefits of nerve block and sedation
    - Risks include: allergic reaction, intravascular injection, toxicity, bleeding, infection, nerve injury, Horner’s syndrome (interscalene)
  - Inquire about allergies
  - Check labwork: contraindicated with INR>1.5, platelet<70,000, anticoagulant/antiplatelets
- Obtain consents for postoperative blocks prior to going to OR
- Discuss patient status and block with the APS attending
- Confirm placement of standard ASA monitors and O₂
- Prepare appropriate block kit, medication, sterile equipment (gloves, drape for catheters), hat and masks for all procedures
  - Ropivacaine 0.5% 20mL for upper and lower extremities
  - Lidocaine 2% with 1:200,000 epinephrine 20mL for surgical block
  - Ropivacaine 0.25% 50mL + dexamethasone 8mg for all ERAS (TAP) blocks
- Document procedure note in EMR, find precompleted template “Regional Anesthesia Perineural Procedure Block” note and send to attending for co-signature
- Round will occur at least daily on all inpatients with neuraxial, PNB catheters, and single shot blocks and write notes (usually after first blocks done)
  - Catheters: “Pain Peripheral Nerve Catheter Management” or “Pain Epidural Catheter Management”
- **Single shot block follow up: “APS Follow Up” (pending approval)**
  - Order correct infusion for all catheters – ropivacaine 0.2% infusions
    - Epidural Adult order set (for epidurals; must have urinary catheter subphase and bedrest for lumbar epidurals only)
    - APS nerve block order set (for peripheral nerve catheters)
- **Answer all pages to the Pain Pager in a timely manner.** Any acute epidural issues (hypotension, new lower extremity motor or sensory changes) must be promptly assessed by bedside and discussed with attending!
- **Document all blocks and catheters daily in the APS Spreadsheet and update all columns.** Provide “next step” suggestions to assist with troubleshooting. This must be completed prior to sign-out. One copy is given to the in-house covering resident and one copy is to be visible on the white board in the main OR.
- **CALL (updated as of 9/15/2017, effective 10/1/17):** During weekdays, one APS resident carries the Pain pager.
  - **MONDAY-FRIDAY OVERNIGHT:** The OB anesthesia call resident holds the pain pager Monday through Friday overnight. Sign out must be given and the covering resident must be provided an updated and completed sign out sheet with all inpatient blocks and active catheters (from Excel spreadsheet on PACU resident computer). Sign out must be given to the APS resident in the morning at 6:30AM.
    - The covering OB resident will maintain a log of pain calls and interventions for internal review and analysis of new call schedule
  - **SATURDAY-SUNDAY:** One APS resident will be on call over the weekend (2-3 weekends per resident per rotation). All active catheters must be rounded on with daily progress note over weekends and holidays, and all inpatient single-shot blocks must be followed up for resolution of block by the on-call resident and on-call APS attending. After rounding, sign out and pain pager may be given to the OB resident on call (with updated patient list to OB resident and on white board in main OR).
    - If the OB resident on call is occupied with OB-related tasks and unable to attend to APS, s/he may call the APS resident back in-house to attend to APS. The APS resident is expected to remain on home pager call for the entire weekend.
    - *The APS resident may be required to return in-house for on-call nerve blocks*
    - Sign out must be given by the covering OB resident to the APS resident in the morning at 7:00AM each day.
  - The APS resident on call will not be part of the general OR call pool.

**Educational and Procedural Goals:**
- **Basic nerve blocks**
  - **Upper extremity**
    - Brachial plexus: interscalene, supraclavicular, infraclavicular, axillary approaches
    - Adjunct blocks: Musculocutaneous nerve, intercostobrachial nerve blocks
  - **Lower extremity**
    - Above knee: femoral
    - Below knee: popliteal (sciatic), adductor canal (saphenous), ankle block
  - **Neuraxial**
    - Epidural: lumbar, thoracic
  - **Truncal**
    - Transversus abdominis plane (TAP) blocks
- Rectus sheath blocks
  - Advanced nerve blocks – experience depending on availability and appropriateness
    - Upper body: cervical plexus, individual peripheral nerves, intercostal, PEC I and II, serratus anterior
    - Lower body: subgluteal sciatic, lateral femoral cutaneous nerve block
- Selection of common local anesthetic and dose
  - Long-acting: ropivacaine, bupivacaine
  - Short/intermediate-acting: lidocaine, mepivacaine
- ASRA anticoagulation guidelines for neuraxial technique
- Toxicity awareness and management
  - Maximum doses
  - Local anesthetic systemic toxicity (LAST) management
- Ultrasound use
  - Appropriate probe choice: linear vs curvilinear
  - Orientation: transverse vs sagittal
  - In-plane needle technique will be used
  - Basic US functions: depth, gain, color doppler

**Communication and Professionalism**
Communication and professionalism are key components with any multidisciplinary effort. You will be interacting with patients, families, other physicians, nursing staff, and students. Professional behavior and communication is expected at all times. If any issues or concerns arise, notify the APS faculty and/or Dr. Aimee Pak as appropriate.

**Evaluation**
Daily feedback is encouraged by all members of the APS team. At the end of the rotation, performance is based on 360 evaluation. Suggestions for APS rotation improvement are always welcome.

**Additional Resources**
- Anesthesia Toolbox
- USRA website: [http://www.usra.ca/](http://www.usra.ca/)
- YouTube videos

Author: A Pak