UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL
ANESTHESIOLOGY RESIDENCY PROGRAM

GOALS AND OBJECTIVES

ROTATION IN PERI-OPERATIVE ANALGESIA (REGIONAL ANESTHESIA)

CA-1/2 REQUIRED

The regional anesthesia rotation is designed with the goal of providing the resident with sufficient cognitive and clinical experience such that he/she will be able to proficiently perform the basic peripheral nerve blocks for both operative and post-operative pain relief. It will build upon the knowledge and skills gained during the CA-1 Acute Pain/Anesthesia Consult Service rotation. The rotation occurs at the Ambulatory Surgery Center of the UMMS/UMass Memorial Health Care Hahnemann Campus. By the end of the experience at the CA-2 level he/she should have a solid working knowledge of all the blocks commonly used in practice as well as some of the more advanced, less frequently used procedures. The resident will become familiar with the use of peripheral nerve blocks and continuous peripheral nerve catheters for post-operative and acute pain management.

GOAL

The goal of this rotation is to provide the resident with the knowledge and tools necessary to safely utilize regional techniques as one component of a planned anesthetic.

COMPETENCIES

I. MEDICAL KNOWLEDGE

At the conclusion of this rotation, the resident will be able to discuss:

- The relative and absolute indications and contraindications to regional anesthesia
- The relevant anatomy for regional techniques, including spinal canal and contents, neural plexuses, and major autonomic ganglia
- The principles of ultrasound and the applicability of ultrasound imaging to regional anesthesia
- Discuss the use of stimulating vs non stimulating peripheral nerve catheters in regional anesthesia
- The pharmacokinetics and pharmacodynamics of commonly used local anesthetics, including toxicity
- The principles and indications for various local anesthetic adjuvants, such as epinephrine and opioids
- The principles and options for sedation for regional anesthetic procedures
- The physiologic changes associated with various regional blocks
- The potential complications associated with regional anesthesia and their treatment

- o seizures from local anesthetics
- o cardiac arrest from local anesthetics
- o total spinal
- o cauda equine syndrome
- o peripheral nerve and nerve root injury
- o transient radicular irritation
- o recurrent laryngeal nerve and phrenic nerve paralysis
- o Horner's syndrome
- o Pneumothorax

- Proper equipment set-up prior to starting a regional anesthetic
  - o supplemental oxygen
  - o hemodynamic monitoring
  - o availability of emergency airway equipment

II. PATIENT CARE

At the conclusion of this rotation, the resident should be able to:

- Correctly select patients appropriate for regional anesthesia and provide proper informed consent

- Perform an appropriate preoperative evaluation of the patient for the applicable peripheral nerve

- Perform the proper preparation for administration of a regional anesthetic

- Demonstrate the appropriate sterile technique for performance of a regional block

- Appropriately monitor the patient during and after the placement of the applicable peripheral nerve block

- Demonstrate the technical skills needed to perform the following:
  - thoracic and lumbar epidurals
  - interscalene, axillary and Bier blocks
  - femoral (3 in 1) block
  - popliteal and ankle blocks
  - infra and supraclavicular blocks
  - lateral femoral cutaneous and obturator nerve blocks
  - saphenous nerve blocks

- If the block is performed as the anesthetic for an operative procedure appropriately sedate and monitor the patient

- Confidently diagnose, manage and document any complications of regional anesthetics

- Learn to problem solve for events such as
  - inadequate block
  - failed block
  - intravenous placement or subdural placement of epidural catheter
  -

III. PROFESSIONALISM

During the rotation the resident will be expected to:

- Conduct post-op rounds efficiently
- Assist in the efficient running of the service
- Keep logs of all blocks performed or assisted
- Respect patient privacy

IV. COMMUNICATION AND INTERPERSONAL SKILLS

At the conclusion of the rotation the resident will:

- Be able to inform patients of the risks, benefits, and alternatives to regional anesthesia
- Be able to explain to the patient in easily understandable language the events of the procedure
- Demonstrate ability to act as a consultant in developing patient management strategy in conjunction with surgeon

V. SYSTEM-BASED PRACTICE

During the rotation, the resident will:

- Have the opportunity to experience, and learn from, a different type of surgical and anesthesia environment
- Understand how to appropriately document and code for regional anesthesia procedures

VI. PRACTICE-BASED LEARNING

During the rotation the resident will:

- Understand the need to communicate any adverse outcomes incurred during the conduction of a regional anesthetic, and discuss with both patient and attending staff
- Be able to evaluate and critique procedural skills via feedback from patients, fellow physicians and other health care providers

PROCESS TO ACHIEVE GOALS AND OBJECTIVES:

- Knowledge base will be obtained through didactic lectures and textbook reading, as well as less formal discussions in the operating room.

- Other skills will be developed through case experiences during the specific regional anesthesia rotation, as well as other rotations during which regional techniques are frequently employed

- (General OR at all CA levels, OB Anesthesia, Anesthesia Consult/Acute Pain Service)

EVALUATION AND FEEDBACK:

- The goals and objectives will be reviewed with each resident at the start of their regional anesthesia rotation.
- At the end of the rotation, each resident wil be asked to evaluate the experience through the E*Value evaluation system
- Faculty at the site will be asked to evaluate the resident through the standard E*value system