

**UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL
ANESTHESIOLOGY RESIDENCY PROGRAM**

**GOALS AND OBJECTIVES
ACUTE PAIN ROTATION CA-1/REQUIRED**

INTRODUCTION:

The acute pain rotation will be through the Anesthesia Consult and Acute Pain Service at the University campus for duration of 1 month for the CA1. The primary goal of the rotation is to provide the resident an environment to acquire the knowledge, skills, experience, judgment and attitude for the care of acute pain patients. The acute pain will include the post-operative but will also include trauma related pain, acute on top of chronic pain, acute cancer pain and pain from latitude of medical conditions. Residents are expected to actively participate and get involved in the decision making and management of those patients. Included in the rotation will be performance of various regional analgesia techniques in anticipation of planned surgery.

Education will be acquired through the daily rounds with the acute pain attending and team. The resident will be responsible to choose one interesting case every week and present it to the team with a review of the literature or text. The Acute Pain attending is expected to spend a minimum of 1 hour daily in resident education about various pain conditions either during rounds or afterward discussions with focus on evidence based practice and literature review.

COMPETENCIES

I. PATIENT CARE

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

- Demonstrate knowledge about the anatomy and landmarks for most common regional acute pain blocks
- Insert a lumbar or thoracic epidural continuous catheter for management of acute post op pain or other acute pain conditions under the direct supervision of the acute pain attending
- Insert a continuous perineural catheter for management of acute post op pain or other acute pain conditions under the direct supervision of the acute pain attending
- Recognize and initiate management of major complications related to acute pain procedures
- Demonstrate the skill and knowledge re: daily management of epidural and perineural catheters including dosing of medications, evaluation of proper dose and rate of infusion of medications, and timing of catheter removal
- Demonstrate full knowledge of the indication and contraindications to regional catheter placement for acute pain including the ASRA anticoagulation guidelines for neuraxial analgesia

II. MEDICAL KNOWLEDGE

The resident will demonstrate mastery of the following by the end of the rotation of:

- Mechanisms and actions of acute pain
- List and describe tools for pain assessment
- Describe different routes for providing analgesia
- Anatomy:
 - Surface Landmarks of most common acute regional blocks

- Brachial, Lumbar and sacral plexuses: roots, division, cords and major branches
 - Neuroaxial regional block lumbar and thoracic anatomy
 - Sympathetic nervous system (thoracic and lumbar) including celiac plexus
- Pharmacology:
 - Opioid analgesics: mechanism of action, duration, potency adverse effects and equianalgesic conversion table.
 - Local Anesthetics: mechanism of action, duration, potency adverse effects.
 - Acetaminophen and NSAIDS IV and PO
 - Alfa adrenergic agonists, gabapentinoid drugs
 - Antidepressant and other less commonly used drugs
 - NMDA antagonists (ketamine and Methadone)
- Clinical conditions knowledge:
 - Use of PCA for acute pain, including patient evaluation, initiation, side effects.
 - Use of epidural and perineural analgesia catheter for acute pain
 - Acute cancer pain evaluation and management. including but not limited to pancreatic cancer, pelvic cancer pain, neuropathic pain.
 - Acute on top of chronic pain and pain in opioid tolerant patients.
 - Acute pain focused history, physical and plan formulation.

III. PRACTICE-BASED LEARNING

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

- Locate, appraise and assimilate evidence from scientific studies that are relevant to their patients' health problems
- Use information technology to manage information, access on-line medical information and support their own education.
- Formulate diagnostic and therapeutic plans for their patients based on history, physical examination and laboratory data tempered with evidence-based medicine, clinical judgment and patient preference
- Improve their skills to provide optimal methodology to work up and deliver care to acute pain patients
- Explain the value of the ASA Guidelines for Acute Pain Management

IV. COMMUNICATION AND INTERPERSONAL SKILLS

At the conclusion of the rotation, the resident is expected to:

- Use effective communication techniques to provide to and elicit information from patients
- Give efficient and effective presentations during daily rounds
- Effectively disseminate information to primary teams and allied health care providers
- Communicate effectively with and demonstrate empathy and respectful behavior when interacting with patients and their families
- Ensure relevant and accurate information about their patients
- Ensure management plans are communicated to the primary and implemented

- Counsel and educate patients and their families about acute pain.

V. PROFESSIONALISM

At the conclusion of the rotation, the resident is expected to demonstrate:

- Respect, compassion and integrity to patients and families
- Responsiveness to the needs of patients and society that supersedes self-interest i.e. completion of the task at hand without regard to time or effort involved
- Accountability to patients, society and the profession
- Commitment to excellence through on-going professional development i.e. reading
- Commitment of ethical principles:
 - Provision/withholding of care
 - Patient confidentiality
 - Informed consent
- Sensitivity and responsiveness to patients' age, culture, gender and disabilities
- Complete timely, complete and legible progress and procedure notes

VI. SYSTEMS-BASED PRACTICE

At the conclusion of the rotation, the resident is expected to:

- Understand how their patient care and other professional practices affect other health care, the health care organization and the larger society and how these elements of the system affect their own practice
- Practice cost-effective health care and resource allocation that does not compromise quality of care
- Advocate for quality patient care and safety
- Know how to partner with health care managers and providers to assess, co-ordinate and improve health care and know how these activities can affect system performance

VII. EDUCATIONAL GOALS

Directed Reading and References

- AMERICAN PAIN SOCIETY Principle of Analgesic Use in the Treatment of Acute Pain and Cancer Pain, 5th edition.
- Acute Pain Management : A Practical guide, third edition by Pamela E. Macintyre
- Acute pain rotation resident manual
- Web-based curriculum on UMMS Dept. of Anesthesia WebCT, as well as Dept. of Anesthesia Library guide <http://libraryguides.umassmed.edu/anesthesiology>