

Pediatric Pain Rotation

Boston Children's Hospital

ROTATION DIRECTOR:

Anjali Koka, MD

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I. Rotation Overview

Children's Hospital Boston is one of the largest and most prestigious pediatric medical centers in the US. The Division of Pediatric Pain Medicine offers excellent multidisciplinary training in pediatric pain medicine. The curriculum combines training in Anesthesiology, Physiatry, Neurology and Psychology. During their 2-week rotation, fellows will learn to take care of acute, chronic and cancer pain in infants and children. They will get well versed in managing acute peri-operative pain and work as an integral part of the Acute Pain Service Team.

While on the Acute Pain Service, Fellows will take call responsibility.

During their rotation the Pediatric Anesthesia Fellow will function under the direct supervision and guidance of the assigned Pediatric Pain Attending at Boston Children's Hospital

The fellowship director will receive a summative assessment at the end of the 2-week rotation.

II. Pediatric Pain Faculty

Charles B. Berde, MD PhD - Division Chief, Pediatric Pain Management

Anjali Koka, MD – Program Director

Aykut Bilge, MD

David Casavant, MD

Joseph Cravero, MD

Pradeep Dinakar, MD

Christine Greco, MD

Alyssa Lebel, MD

Yuan-Chi Lin, MD

Thomas Mancuso, MD

Bobbie Riley, MD

Susan Sager, MD

Neil Schechter, MD, FAAP

Navil Sethna, MB, ChB

Steven Zgleszewski, MD

FOR COMPLETE UPDATED FACULTY LISTING PLEASE REFER TO THE WEBSITE OF THE DEPARTMENT OF ANESTHESIOLOGY, CRITICAL CARE, AND PAIN MEDICINE AT THE BOSTON CHILDREN'S HOSPITAL.

III. Teaching Methodology

The ACGME has recognized six general competencies for resident and fellow education. These competencies are:

- Medical Knowledge (MK)
- Patient Care (PC)
- Interpersonal and Communication Skills (ICS)
- Professionalism (PROF)
- Practice Based Learning and Improvement (PBLI)
- Systems Based Practice (SBP)

Competency based education focuses on learner performance (learning outcomes) in reaching specific objectives (goals and objectives of the curriculum).

The Goals and Objectives of the rotation will be met utilizing the following methods:

- Didactic Activities: Pain Core Lecture Series, Case Conference, and Department Grand Rounds
- Morning report
- Guided personal study

Recommended Texts, Reading Material and Electronic Resources:

- “A Practical Approach to Pediatric Anesthesia” by Robert Holzman and Thomas Mancuso.
- “A Practice of Anesthesia for Infants and Children” by Charles J. Cote, David Todres.
- “Smith’s Anesthesia for Infants and Children” by Peter J. Davis and Etsuro K. Motoyama.
- Electronic Access via Tufts Health Sciences Library to multiple reference and research resources (OVID, Medline, MD Consult, Pediatric Anesthesia Journals etc.)
- Computer based learning through TUSK (Tufts University Knowledge Database)
- Pediatric Anesthesia Sections from Major Anesthesia Texts (Miller, Barash etc.)

IV. Evaluation and Assessment Methods

Your clinical performance during the rotation will be assessed using a collection of assessment and evaluation tools to assure that the competency – set goals and objectives have been met. Constructive assessment and feedback will help you focus on areas which and skill sets which need attention so that you can improve in them. Assessment data also will help us improve our

rotation and improve your educational experience. Competencies covered using each method are delineated in *italics* below

A. Focused Direct Observation and Feedback

During the rotation fellows will receive direct observation and feedback from the rotation's supervising faculty. This will include verbal feedback and written assessments at the end of the rotation.

All 6 competencies.

B. 360 ° Global Evaluations

These are evaluation by different members of the patient care team (Surgeons, Nurse Practitioners, Nursing Staff, and Ancillary Staff etc.). Helps provide multiple perspectives of fellow's performance.

Professionalism, Interpersonal and Communication Skills, SBP

C. Participation in Didactic and Educational Activities

Core Lectures, Participation in Case Conferences and M&Ms

PBL

Interpersonal and Communication Skills

Medical Knowledge

Patient Care

D. Rotation Evaluations by Fellows

Fellows do get an opportunity to evaluate the rotation at the completion of the rotation and more formally during the annual confidential program and faculty survey. The aim is for them to self-assess the successful achievement of rotation goals, and provide feedback to the program. This feedback is important for us to continue improving the rotation and address specific issues.

Practice Based Learning and improvement.

V. Goals and Learning Objectives

The detailed Goals and Learning Objectives of the CHB Pediatric Pain Rotation for Pediatric Anesthesia Fellows are outlined below. The curriculum has been developed based on the new ACGME competency based education guidelines. The contents of the course curriculum have been compiled based on the Course Guidelines developed by the *ASA Committee on Pediatric Anesthesia* and the *ABA Pediatric Anesthesia Certification Exam Content Outline*.

A. Medical Knowledge

1. Goals and Learning Objectives:

The fellow will be able to:

1. Understand methods for recognition and assessment of pain in different pediatric age groups.
2. Know methods for treatment of acute postoperative pain in children.
3. Understand the age-related differences in use of opioid analgesics in children.
4. Gain understanding of the anatomy and physiology of acute, chronic pain
5. Gain understanding of gender-related differences in pain
6. Gain understanding of psychosocial aspects of pain
7. Know different regimens for postoperative epidural analgesia in children.
8. Understand the pathophysiology and treatment of common chronic painful conditions in children (e.g., sickle cell disease, oncologic disease, reflex sympathetic dystrophy, etc.
9. Gain knowledge of the neuroanatomy relevant to diagnosing and managing pain conditions and necessary in performing invasive pain procedures
10. Gain understanding of diagnostic studies and imaging studies such as EMG, nerve conduction studies, discography, MR and CT
11. Gain expertise in pharmacology of opioids, non-opioid analgesics, non-steroidal anti-inflammatory drugs, local anesthetics, anticonvulsants, antidepressants, and centrally acting drugs
12. Learn fluoroscopic imaging and radiation safety

B. Patient Care

1. Goals:

1. Fellows must be able to provide care that is compassionate, appropriate and effective.
2. They should be able to communicate effectively with the care team.
3. They should demonstrate caring and respectful behavior with the team members, patients and their families.

2. Learning Objectives:

1. Demonstrate the ability to develop and carry out a plan to manage and treat postoperative pain in children across all age groups.
2. Demonstrate the ability to treat refractory postoperative pain in children of all ages.
3. Be able to evaluate and treat common complications of analgesic therapy in children (e.g., nausea, vomiting, pruritus, and ventilatory depression).
4. Be able to evaluate and manage children with epidural analgesic therapy and break-through pain.
5. Be able to evaluate a child for the use of patient-controlled analgesia (PCA), and demonstrate appropriate ordering of PCA for all age groups.

C. Interpersonal and Communication Skills

1. Goals:

Fellows must be able to demonstrate interpersonal and communication skills that result in effective information exchange. They should be able to work effectively with others as a member or leader of a patient care team. They will learn how to effectively gather information using effective listening, explanatory, questioning and writing skills.

2. Learning Objectives:

1. Fellow will be able to establish a sustained and therapeutic and ethically sound relationship with the parents and/or health care proxy.
2. Will be able to effectively retrieve pertinent medical information from the parents and patient care team members.
3. Obtain informed consent and clearly communicate the options and risks to the parents and families.
4. Will coordinate care and work effectively with other patient care team members
- 5.

D. Professionalism

1. Goals:

Fellows must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

2. Learning Objectives:

1. Fellows will demonstrate respect, compassion and integrity.
2. Fellows will demonstrate a commitment to ethical principles
3. Fellows will demonstrate sensitivity and responsiveness to the needs of parents.
4. Will demonstrate sensitivity towards patient's culture, gender and disabilities.
5. Fellows will demonstrate ability to manage conflict

E. Practice Based Learning and Improvement

1. Goals:

Fellows must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.

2. Learning Objectives:

1. Learn about the AAP and ASA Standards and Guidelines as pertinent to Pain Management. They will learn to analyze and improve on their practices based on the guidelines and standards set forth by the ASA.
2. Will be able to locate, appraise and assimilate evidence from peer reviewed scientific articles related to our subspecialty.
3. They will explore various ways to find information using information technology (e.g. PubMed, Ovid, MD Consult etc.). They will learn to use our institutions Patient Information System to effectively gather information.
4. They will be able to apply knowledge based on the appraised literature and strive to practice evidence based medicine.
5. They will take active part in departmental and institutional Quality Improvement and Risk Reduction projects.

F. Systems Based Practice

1. Goals:

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide effective safe care

2. Learning Objectives:

1. Understand the complex emotional atmosphere surrounding patients with acute and chronic pain.
2. Provide appropriate education to ensure parents or caregivers are well informed regarding pain management plans
3. Be aware of ethical issues faced by pain specialists as they balance individual patient care requirements with limited global resources
4. Acknowledge the difficulties and decision-making involved in utilization and allocation of finite health care resources
5. Fellows will learn to promote patient safety and understand ways to reduce medical errors (e.g. ticket to safety initiative, drugs error prevention program etc.)
6. The Fellows will strive to use medical supplies and equipment in a cost effective manner. Will learn strategies to reduce wastage and minimize cost of care.

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