

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

**CA-3 ADVANCED CLINICAL TRACK
GOALS AND OBJECTIVES**

In addition to the many subspecialty rotations available in the CA-3 year, residents may choose to spend additional rotation time at the University campus for advanced clinical experience.

GOALS OF ROTATION

The goal of the Advanced Clinical Track rotation is to provide CA-3 residents with the opportunity to achieve additional experience and expertise in the perioperative management of patients with complex medical issues undergoing complex surgical procedures, all within a setting which allows autonomy as indicated by the skill of the resident. Particular emphasis is placed on the development of critical thinking skills. In addition, the opportunity also exists to supervise junior residents, allowing the resident to hone leadership and communication skills necessary to become a consultant in anesthesiology.

COMPETENCIES

I. MEDICAL KNOWLEDGE

Residents will be expected to gain more in-depth knowledge of the pathophysiology of disease processes that will be encountered during the Advanced Clinical Track, and with which residents will become familiar, include, but are not limited

- pheochromocytoma
- severe coronary artery disease and/or significant valvular disease in the setting of non-cardiac surgery
- connective tissue disease resulting in aneurysmal dilatation of major vessels
- complexity of issues in patients with multi-system organ failure and sepsis
- the pulmonary and anesthetic issues of the thoracic patient

Residents will demonstrate familiarity with specialized techniques, including:

- transcutaneous and esophageal pacemakers
- transesophageal echocardiography
- complex neurophysiologic monitoring
- jet ventilation, nitric oxide use

Residents will demonstrate an increase in anesthesia knowledge by improved performance on the biannual Mock Oral exams and the annual In-training exam.

II. PATIENT CARE

Residents will demonstrate skill in the management of complex surgical situations:

- transplantation of liver, kidney, pancreas
- critically ill patients with severe ischemic heart disease, IABP dependent

- repair of thoracic aneurysms, esp. with circulatory arrest
- patients with multi-system organ failure
- patients with severe pulmonary disease requiring complex ventilatory management
- patients requiring complex thoracic and neurosurgical interventions
- patients with significant comorbidities requiring anesthesia for 'off-site' procedures (MRI,CT,angio, interventional neuroradiology, radiation oncology)
- organ donor patients
- acute trauma patients

Residents will demonstrate advanced proficiency with minimal supervision in the following techniques:

- placement of intraarterial and central venous catheters
- anesthetic induction and emergence
- ability to mask ventilate
- management of the difficult airway, including awake fiberoptic intubation and use of Glidescope
- placement of central venous access Pulmonary Artery catheters
- placement and management of thoracic epidural catheters

Residents will be able to :

- Complete a thorough patient evaluation that focuses on relevant issues including history of the problem, current medications, relevant diagnostic tests, and physical examination
- Develop appropriate recommendations for diagnosis and therapy
- Communicate these findings and recommendations to the primary service who consulted the anesthesia team
- Follow up to assure that problem has been addressed appropriately

In participating in all of the above, the resident will gain confidence, independence and the critical thinking and problem solving skills necessary to manage unexpected and sometimes catastrophic events that may occur intraoperatively.

III. INTERPERSONAL SKILLS AND COMMUNICATION

Residents will gain a better understanding of the role effective communication plays in the care of the complex surgical patient, especially during critical periods of the patient's care.

- residents will develop their own effective methods of communication, whether with patients, colleagues or family members
- residents will exhibiting appropriate behaviors that contribute to effective communication
- residents will appreciate the role timely and legible written communication plays in proper patient care
- residents will demonstrate proper communication in their role as teacher and/or supervisor

- residents will be able to discuss the detrimental role poor communication plays in the proper care of the patient, as well as in treatment of the learner

IV. PROFESSIONALISM

- residents will become more familiar with the more complex ethical principles surrounding care of the critically ill patient
- residents will treat patients and colleagues with respect
- residents will be prepared, will dress appropriately, will attend departmental conferences and comply with all policies
- residents will come to appreciate the need for responsibility and accountability, excellence and scholarship as one prepares to leave training

V. PRACTICE-BASED LEARNING

- in their role as senior resident and teacher, residents in this rotation will contribute to educational conferences within the department
- residents will demonstrate a commitment to practice based learning, and will take an active role in quality improvement conferences
- residents will rely more fully on evidence based medicine in their developing role as consultant anesthesiologist
- residents will be able to effectively perform a root cause analysis of sentinel events that develop either intraoperatively or postoperatively for cases which they manage

VI. SYSTEM-BASED PRACTICE

As residents become more comfortable in their role as anesthesiologist, they will begin to be more aware of the systems-based issues surrounding them within the institution.

- Residents will become more involved in quality improvement programs
- They will take a more active role in containment of costs via the anesthetic management plans they undertake
- Their role in patient flow through the operating room and post-anesthesia care unit will take a more prominent role in their decision-making
- Residents will understand the importance of working as a team to facilitate case management and efficiency