

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

**AMBULATORY SURGERY HAHNEMANN CA-1 REQUIRED**

**Anesthesia for Ambulatory Surgery**

This resident rotation takes place at the Hahnemann Campus of the UMass Memorial Medical Center in Worcester. It is comprised of a nine room operating suite on two floors. This campus is located approximately three miles from the inpatient facilities. Although designated as a hospital based ambulatory surgery facility, this center functions as a freestanding ambulatory surgery center. The patients are generally ASA I, ASA II, stable ASA III patients and rarely stable ASA IV patients. The surgical specialties represented are: orthopedics including sports medicine, plastic surgery including cosmetic surgery, ophthalmology, pediatric surgery, podiatry and dental surgery. The residents are assigned to this center in one month blocks during their CA-1 year, as well as intermittent day assignments throughout their training.

**GOAL**

To introduce the resident to ambulatory anesthesia, with its particular emphasis on safe and efficient administration of anesthesia in a high turnover and fast paced environment. The resident will develop an understanding of the major issues in ambulatory anesthesia and will develop clinical skills and experience to function as a consultant in ambulatory anesthesia.

**COMPETENCIES**

At the conclusion of the rotation the resident should be familiar with the following areas:

**I. MEDICAL KNOWLEDGE**

**Pre-operative**

- Concept of multimodal pain management, including pre-emptive analgesia
- Pathophysiology and multimodal treatment and prophylaxis of nausea and vomiting
- Evidence-based approach to appropriate pre-operative lab testing for outpatients
- The ability and knowledge necessary to allow a patient to make a well-informed decision re: anesthetic and post-op analgesia options

**Intraoperative**

- The approaches to regional anesthesia for ophthalmologic surgery
- Pharmacology of anesthetics used in the ambulatory setting for regional and general anesthesia
- Be able to list the advantages and disadvantages of mask, endotracheal, and laryngeal mask airways
- Become familiar with the pharmacodynamic properties of, and use, the short-acting anesthetic agents appropriate in ambulatory anesthesia
- Be able to describe the indication for use of neuromuscular blocking agents in ambulatory anesthesia
- Be able to explain the need for psychological preparation for monitored anesthesia care
- Explain the risks and benefits of “light” sedation vs. “deep” unconscious sedation

- Be able to discuss the use of the various drugs including propofol, fentanyl, remifentanyl and ketamine via both bolus and continuous IV technique

### **Postoperative**

- Describe common PACU concerns and postoperative complications
- Describe appropriate postoperative management of a patient during PACU (Phase I) recovery, including monitoring, management of pain and emesis
- Discuss pertinent issues during Phase II recovery, including discharge criteria and teaching instruction
- Know the follow-up procedure in the ambulatory setting

## **II. PATIENT CARE**

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

### **Preoperative:**

- Perform a thorough, yet quick preoperative assessment of the patient on the day of surgery including assessment of medical problems, anesthetic history, airway assessment, confirmation of NPO status and medications taken in AM
- Discuss patient selection criteria for ambulatory testing, including the need and ability to assess the severity of common diseases such as diabetes, bronchospastic disease, morbid obesity, sickle cell disease, and congenital disease, as well as ex-premature pediatric patients, geriatric patients, and patients with uncommon diseases.
- Discuss pre-operative preparation and make a decision re:
  - NPO status for both adult and pediatric population
  - Need for antacids and H2 receptor antagonists for aspiration prophylaxis
  - Need for antiemetics for nausea prophylaxis
  - Use of anxiolytics, sedatives and opioids
  - Possible use of COX 2 inhibitors for pain management
- Decide the choice of anesthetic technique and formulate a plan for postoperative pain management

### **Intraoperative:** The resident will:

- Regional anesthesia:
  - Learn how to safely and expeditiously perform regional blocks, often in the holding area when appropriate, to minimize delay between cases.
  - Learn the importance of recognizing and marking of anatomic landmarks, proper use of the nerve stimulators for the various nerve blocks and appropriate sedation and monitoring for the block.
  - Be able to manage a failed block quickly and efficiently
- General Anesthesia:
  - Become familiar with techniques for the safe induction of anesthesia with minimal delay of surgical start, as well as techniques for rapid emergence
  - Become comfortable with the use of LMAs for airway maintenance

- Understand the need for, and be able to achieve, the unique hemodynamic parameters often required in certain subspecialty cases
- Provide safe airway management with either mask ventilation, endotracheal intubation or laryngeal mask airway insertion
- Monitored Anesthesia Care:
  - Learn the art and science of monitored anesthesia care
  - Perform MAC with appropriate intravenous agents administered either via bolus or continuous infusion and be able to demonstrate same
  - Be able to demonstrate proper airway maintenance during a MAC anesthetic, whether with “light” or “deep” sedation

**Postoperative:**

- Learn the concept and criteria for fast tracking, and be able to implement them
- Manage post-operative issues in the PACU, especially the three sources of extended stay in PACU i.e. pain, nausea, vomiting. Emphasis is placed on early recognition and proactive treatment
- Recognize and manage other complications, such as hypotension, hypertension, cardiac arrhythmias, airway issues etc.
- Recognize issues that will require the patient to be observed overnight.

**III. SYSTEMS-BASED PRACTICE**

At the conclusion of the rotation, the resident should:

- Have a clear understanding of the importance of effective time management in the operating room. S/he should learn techniques necessary to safely minimize turnover between cases
- Have an understanding of cost-effective decision making in the care of the ambulatory patient
- Have an understanding of the complexity and importance of determining patient selection criteria for a freestanding ambulatory surgery facility
- Have an understanding of the necessity to meet the needs of patients and surgeons adequately, especially re: the atmosphere of competition in healthcare

**IV. PROFESSIONALISM**

During the rotation, it is expected that the resident:

- Will be punctual
- Will adapt to frequent reassignment of cases as necessary for the efficient completion of the day's case list
- Will demonstrate sensitivity to the needs of all patients, with particular attention paid to the intra-op and post-op, as well as post-discharge needs, of geriatric patients

- Will be mindful of the needs of other anesthesia providers in the unit, and assist at any available opportunity in order to get cases started, or offer breaks to those in need

## **V. COMMUNICATION AND INTERPERSONAL SKILLS**

At the conclusion of the rotation it is expected that the resident will

- Be able to discuss the importance of communication with the entire team in order to effect smooth, safe and rapid turnover of cases
- Demonstrate good communication skills with ambulatory patients, many of whom have needs and expectations different from those of patients entering a hospital-based system

## **VI. PRACTICE-BASED LEARNING**

At the conclusion of the rotation, it is expected that the resident will

- Understand the importance of adverse outcome reporting in improvement of patient care
- Will participate in adverse outcome reporting
- Will show an ability to improve his/her performance based upon previous case management

### **Evaluation:**

Residents are evaluated at the end of rotation in accordance with our departmental web-based evaluation form.

### **Site information:**

1. Parking is in the employee lot in the back of the hospital and requires a sticker (obtained from the parking office at Memorial Campus ) and a UMass picture ID
2. Anesthesia workroom is located on the first floor and all controlled substances are in the PYXIS.
3. Cafeteria is on the 1st level. Every effort is made to give the resident a mid morning coffee break and a lunch break.