Anesthesia at Queen's Medical Center, PGY-1

Description of Rotation
The Anesthesiology elective provides background theory (in both the basic and clinical sciences) and clinical procedural exposure to the breadth of the specialty. The rotation also provides certification in the skill of tracheal intubation. A 4-week Anesthesia rotation is required for Categorical Orthopaedic residents during the first year of training.

| Length:       | 1 Block of PGY-I year |
| Location:     | The Queen’s Medical Center |
| Primary Supervisors: | Maimona Ghows, M.D. (Program Office: 586-2920) |
|               | Dr Ghows contact information will be provided prior to the rotation start date |

Goals of the Rotation
Upon completion of the Anesthesiology elective, a Resident will understand the principal concepts of regional and general anesthesia, and pain management, in the context of applicable anatomy and physiology. The Resident will be able to integrate pertinent principles into the management of surgical patients.

Patient Care
Competency
Residents must be able to provide patient care that is compassionate, appropriate, patient-centered and effective for the diagnosis treatment of orthopaedic problems and the promotion of health. Significant leadership in running a patient centered service is expected. Residents are expected to:

Objectives
1. Acquire skills in management of the airway, becoming technically facile in the performance of orotracheal intubation, laryngeal mask airway, and mask ventilation.
2. Demonstrate the ability to manage fluid requirements during anesthesia.
3. Demonstrate understanding of intraoperative physiologic monitoring and management of intraoperative complications (including acid-base abnormalities, malignant hyperthermia, hemorrhagic conditions, hemodynamic or pulmonary instability)
4. Appropriately recognize limitations imposed by the operative procedure on the conduct of anesthesia management.
5. Recognize the limitations imposed by the anesthetic on the conduct of the operation.
6. Understand the potential benefits, risks, and limitations of regional anesthesia (including spinal, epidural, and limb blocks).
7. Must be able to perform a focused pre-anesthesia history and physical examination, and demonstrate skill in preoperative assessment, implications of concurrent diseases, and anesthesia risk determination.
8. Demonstrate skill in use of Anesthetic Systems and the pre-anesthetic checklist.

Medical Knowledge
Competency
Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Residents are expected to be able to:

Objectives

1. Demonstrate understanding of the physiology and pharmacology of drugs commonly used in anesthesia. This comprises inhalational anesthetic agents, local anesthetics, narcotics, nonsteroidal anti-inflammatory agents, sedatives, neuromuscular blocking agents, vasoactive agents, sympathomimetics, and neuroleptics.
2. Acquire knowledge of metabolism, potential drug interactions, toxicities, and adverse reactions.
3. Demonstrate understanding of the various stages of anesthesia, including associated risks.
4. Demonstrate knowledge of blood product and volume expander usage, including rationale, indications, contraindications, and potential adverse side effects.
5. Understand special considerations, including risks, in pregnant and pediatric patients.
6. Develop a firm understanding of anatomic and physiologic conditions that affect the delivery of safe anesthesia, such as coronary artery disease, neuromuscular disorders, traumatic injuries and emergent situations.

Practice-Based Learning and Improvement Competency

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Residents are expected to develop skills and habits to be able to:

Objectives:

1. Evaluate one’s own knowledge, incorporating feedback from others.
2. Appraise and assimilate evidence from scientific studies to provide high quality anesthetic care.
3. Appropriately use hospital information technology systems to manage patient care and to access online medical information to effect high quality care.
4. Effectively use information technology and other resources to support one’s own ongoing self-education (DVDs, CDs, Vumedi etc).
5. Facilitate the learning of medical and nursing students, and surgical technician students rotating in the Operating Rooms.
6. Attend and participate and take a leadership role in teaching conferences and rounds.

Systems Based Practice Competency

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as be able to effectively call on other resources in the system to provide optimal health care. Residents are expected to:

Objectives
1. Become aware of efficient use of the operating room through appropriate scheduling.
2. Understand the multidisciplinary role of the Anesthesiologist, Surgeon, and the Operating Room Team in the provision of safe and high quality patient care.
4. Work effectively with other services, health care agencies, and case managers.
5. Work to improve the system of medical care at Queens Medical Center.

**Professionalism**

**Competency**

Residents must demonstrate commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to:

**Objectives**

1. Interact with Anesthesiologists, Nurse Anesthetists, Surgeons, Nurses, and Operating Room personnel in a respectful and professional manner.
2. Interact with other surgical services as an Anesthesia provider in a respectful and professional manner.
3. Demonstrate sensitivity, respect, and adherence to ethical principles when interacting with patients and their families.
4. Demonstrate non-judgmental sensitivity and responsiveness to the age, culture, disability status, and gender of patients and colleagues.
5. Show ethical/professional leadership by example.

**Interpersonal and Communication Skills**

**Competency**

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Residents are expected to:

**Objectives**

1. Demonstrate effective and sensitive information exchange with patients, their families, and Operating Room personnel.
2. Demonstrate ability for accurate and timely information exchange between other members of the healthcare team, both verbally and in writing, with appropriate use of the medical record.

**Clinical Content**

The clinical activities will include:

1. Managing the airway in adults and children, including masking and endotracheal intubation.
2. Establishing vascular access.
3. Applying appropriate monitoring devices, including arterial lines and pulmonary artery catheters.
4. Inducing, maintaining, and emerging from general anesthesia: (gas analysis, exhalation gas analysis, hemodynamic analysis)
5. Performing regional anesthesia: epidural, plexus, and local.
6. Managing patients pre- and post-anesthesia.
Implementation

Clinical Exposure: Residents will be assigned to an Anesthesia Faculty Attending on a daily basis, and will be given a list of that tutor’s cases the day prior. Residents will report between 6:30 a.m. and 7:00 a.m. to the preoperative holding area of the Hospital to interview the patient, do a physical examination, and chart review. After the exam and chart review, Residents will discuss the implication of their findings with the Attending. Together, they will formulate a plan and discuss it with the patient. The Resident will then write a preoperative assessment in the patient medical record.

Residents will also be required to set up the Anesthesia machine and check it, draw up the relevant drugs, and set up the monitoring equipment.

The Resident/Attending Team will induce anesthesia and monitor the patient intraoperatively. At the end of surgery, the Resident and the Attending will escort the patient to the PACU or to the ICU, write postoperative orders, and ensure that the patient is stable and comfortable.

Residents will maintain a copy of the preoperative evaluation, anesthetic record, and postoperative notes for the end-of-rotation evaluation by the Faculty. Residents will also formulate learning issues relevant to the case. These will be discussed with the Attending at the next meeting.

There is no call requirement for this elective

Required Reading:
Handbook of Clinical Anesthesia 5th Edition by Barash, Cullen and Stoelting
Reading materials and other rotation information will be provided by the surgery administrative staff prior to the rotation.

Assessment Method (Residents)
Resident performance will be subject to daily formative evaluation in the operating room, and the clinic; the 360 degree evaluation process (using faculty and nurse managers) will take place at the end of each rotation. Semiannual Program Director/Faculty/Resident evaluation meetings will provide summative evaluation.

Assessment Method (Program Evaluation)
Annual evaluations and assessment by the Program Director and faculty. Annual resident confidential evaluation of program, and its rotations.