

## **Rotation Goals & Objectives**

**Neuroanesthesia Coordinator**

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**Last Revised**

November 2025

### **OVERALL GOALS**

1. Rotations in neuroanesthesia will provide the resident with a theoretical basis and clinical experience in the anesthetic management of adults undergoing surgical treatment of diseases of the CNS and spine.
2. Clinical experience is supplemented by a formal series of seminars in neuroanesthesia in the core curriculum and informal lectures within the OR setting. Guided independent study is also encouraged with the provision of a Manual of Neuroanesthesia and compilation of SNACC recommended peer-reviewed articles.
3. Residents are expected to have demonstrated proficiency in caring for patients with neurologic disease in a compassionate manner. This includes the preoperative evaluation, intraoperative management, and postoperative care utilizing the most current medical/anesthetic knowledge pertinent to each case. Residents are expected to become proficient at using online medical information, communicating with patients and working effectively with patient care team, demonstrating ethical practices, and practicing cost-effective yet quality health care. The clinical experience will provide exposure to a variety of basic and complex procedures in patients with neurologic disease with graded independence and responsibility.
4. Completion and discussion of resident learning cases with Neuroanesthesia Faculty by the end of the rotation (junior or senior) to help take trainee learning along a goal-directed path to establish clear applied knowledge on the rotation.

### **ROTATION OBJECTIVES**

At the completion of training, the resident will have acquired the following competencies and will function effectively as:

#### **Medical Expert**

The residents will be able to:

- Demonstrate knowledge of basic sciences as applicable to neuroanesthesia, including: neuroanatomy, neurophysiology, and neuropharmacology.
- Demonstrate basic understanding of the impact of commonly performed neurosurgical procedures on anesthetic management.
- Demonstrate clinical knowledge and skills necessary for the practice of neuroanesthesia, including:
  - i. Preoperative assessment to generate the anesthetic considerations and management plan, including prioritization and optimization, for complex neurological- or neurosurgical patients or surgeries (Core EPA 1).
  - ii. Managing and coordinating patient positioning during neuroanesthesia care and preventing and recognizing related complications. Positioning of patient include sitting, prone, supine, lateral decubitus and prone (Foundations EPA 5)

- iii. Anticipating, preventing, and managing common or expected intraoperative events and physiologic changes during neurosurgical surgery (Foundations EPA 6)
- iv. Diagnosing and managing common issues of neurological / neurosurgical patients in the post-anesthesia care unit, including slow awakening, delirium, pain, nausea and/or vomiting, arrhythmias, hypoxemia, respiratory depression (Foundations EPA 8)
- v. Initiating resuscitation and diagnosis of life-threatening neurologic conditions in a time-appropriate manner in the operating room or PACU (Foundations EPA 9)
- vi. Managing patients presenting with difficult airway, including appropriate extubation plans (Core EPA 4)
- vii. Providing anesthetic management for patients undergoing procedures in Interventional Neuroradiology (Core EPA 13)
- viii. Providing perioperative anesthetic management for patients undergoing spinal procedures. (Core EPA 16)
- ix. Providing perioperative anesthetic management for patients undergoing intracranial procedures including tumour, pituitary surgery, vascular intracranial surgery, neuroradiologic procedures. This includes patients with increased intracranial pressure (Core EPA 17).
- x. Basic understanding of basic principles of neurophysiologic monitoring (EEG, evoked potentials), cerebral oximetry, and intracranial pressure monitoring methods.

### **Communicator**

The resident will be able to:

- Establish a therapeutic relationship with patients and their families in the limited time available.
- Obtain and collate relevant history from patients and families.
- Listen effectively.
- Demonstrate empathy, consideration, and compassion in communicating with patients and families.
- Communicate effectively with medical/surgical colleagues, nurses, and paramedical personnel regarding the anesthetic management of the patient.
- Demonstrate appropriate written communication skills through accurate, legible, and complete documentation of the anesthetic record, patient chart, and in consultation.

### **Collaborator**

The resident will be able to:

- Demonstrate the ability to function in the clinical environment using the full abilities of all team members (surgical, nursing, ICU, etc.).
- Develop their anesthetic plan for their patients in consultation and in concert with surgery, nursing and ICU (if necessary) for more complicated neurosurgical patients.
- Function in the OR as a member of the neuro team and work in a positive, constructive manner, respecting the importance of the roles of all team members.

### **Leader**

The resident will:

- Demonstrate the ability to lead their operating room:

- i. Ensuring necessary equipment, monitoring, and medications are available for each case.
- ii. Making preparations to deal with anticipated complications.
- iii. All these activities should be conducted in an effective, efficient, and timely manner in order to avoid OR delays.
- Utilize personal resources effectively in order to balance patient care, continuing education and personal activities.
- Utilize information technology to optimize patient care and lifelong learning

### **Health Advocate**

The resident will:

- Begin to recognize the opportunities for the anesthesiologist to advocate for neurosurgical patients, particularly with regards to patient safety.
- Begin to adopt a leadership role in the postoperative care of their patients by anticipating and arranging for either PACU, ICU, or Neuro-Observation Unit care.

### **Scholar**

The resident will:

- Be responsible for developing, implementing, and regularly re-evaluating a personal continuing education strategy.
- Contribute to the development of new knowledge through facilitation/participation in ongoing departmental research activities.
- Be required to prepare in advance for the O.R. cases scheduled through additional reading, patient chart review/assessment.

### **Professional**

The resident will:

- Demonstrate a commitment to executing, professional responsibilities with integrity, honesty, and compassion.
- Demonstrate appropriate personal and interpersonal professional behaviors and boundaries.
- Recognize limits of personal skill and knowledge by appropriately consulting other physicians when caring for the patient.