

## Undergraduate Neurosurgery Rotation Specific Objectives: CanMEDS

### 1. Medical Expert/Clinical Decision-Maker

#### Knowledge: Basic Science & Anatomy

- A) Discuss basic neuroanatomy, neurophysiology and neuropathology sufficient to understand the clinical presentation and management of common neurosurgical conditions, such as traumatic brain injury (subdural hematoma, epidural hematoma, subarachnoid hemorrhage, diffuse axonal injury), low back pain, cauda- equine syndrome, cerebral aneurysm, astrocytoma, brain metastasis, meningioma, hydrocephalus
- B) Describe pharmacology of drugs commonly used in neurosurgery, such as Mannitol, Dilantin, Decadron

#### Knowledge: Clinical

- A) Medical history: concise, accurate and appropriate, specifically in back pain and altered level of consciousness
- B) Physical examination: relevant, sufficiently elaborate, specifically in back pain and altered level of consciousness
- C) Medical imaging tests: interpretation of basic x-ray, CT, and MRI
- D) Clinical diagnosis and decision-making: formulate diagnosis and therapeutic strategy for common neurosurgical problems
- E) Documentation / presentation: well-documented and organized assessments and recommendations
- F) Preoperative planning: understand the concept; order appropriate preoperative investigations to assist in planning and execution of preoperative plan
- G) Postoperative care: provide appropriate care to include effective pain management (with multidisciplinary assistance, if necessary), both in the hospital and office environments; recognize promptly and manage postoperative complications in an effective manner
- H) Emergency management — recognition: able to identify and respond appropriately to urgent medical and surgical problems

#### Knowledge: Skills

- A) Demonstrate examination of a patient with altered level of consciousness
- B) Demonstrate examination of a patient with low back pain

### 2. Communicator

#### Requirements:

- A) Recognize that being a good communicator is an essential function of a physician, and understand that effective patient-physician communication can foster patient satisfaction and compliance as well as influence the manifestations and outcome of a patient's illness and surgical intervention



- B) Establish relationships with the patient that are characterized by understanding, trust, respect, empathy and confidentiality
- C) Recognize the emotional stress for patients and families faced with neurosurgical conditions, a stress accentuated in the treatment of children
- D) Gather information not only about the disease but also about the patient's beliefs, concerns and expectations while considering the influence of factors such as the age, gender, ethnic, cultural, spiritual and socio- economic background
- E) Understand and demonstrate the importance of cooperation and communication among health professionals involved in the care of individual
- F) Appreciate alternative means of achieving consent if the patient is incompetent to provide consent
- G) Maintain clear, accurate and appropriate written records
- H) Complete concise hospital discharge summaries promptly
- I) Write well-organized letters, providing clear direction to the referring physician and other physician and allied personnel

### **3. Collaborator**

#### Requirements:

- A) Describe the role, expertise and limitations of all members of an interdisciplinary team required to optimally achieve a goal related to patient care, a research problem, an educational task, or an administrative ability
- B) Develop a care plan for a mutual-interest patient, that includes investigation, treatment and continuing care in both hospital and community settings

### **4. Manager**

#### Requirements:

- A) Utilize resources effectively to balance patient care, learning needs, and outside activities
- B) Allocate finite health care resources wisely
- C) Work effectively and efficiently in a health care organization
- D) Utilize information technology to optimize patient care, life-long learning and other activities

### **5. Health Advocate**

#### Requirements:

- A) Demonstrate knowledge of determinants of health by identifying the important determinants of health (i.e., poverty, unemployment, early childhood education, social support systems).
- B) Demonstrate knowledge of these concepts as applied:
  - I) In the management of individual patients, by identifying the patient's status with respect to one or more of the determinants of health; adapting the assessment and management accordingly; and assessing the patient's ability to access various services in the health and social system.



- II) In relation to the general population by describing the key issues currently under debate regarding changes in the Canadian health care system indicating how these changes might affect societal health outcomes particularly when relevant to neurosurgery

## 6. Scholar

### Requirements:

- A) Develop, implement and monitor a personal continuing education strategy
- B) Critically appraise sources of medical information
- C) Facilitate learning of patients, house staff/other students and other health professionals
- D) Contribute to development of new knowledge

## 7. Professional

### Requirements:

- A) Deliver highest quality care with integrity, honesty and compassion
- B) Exhibit appropriate personal and interpersonal professional behaviors
- C) Practice medicine ethically consistent with obligations of a physician
- D) Use appropriate strategies to maintain and advance professional competence
- E) Continually evaluate his/her abilities, knowledge and skills and know his/her limitations of professional competence