

# Dalhousie University Neurosurgery

## Resident Rotation Objectives: Pediatric Neurology

### Medical Expert

#### *KNOWLEDGE*

As a basis for clinical competence, the neurosurgeon must be familiar with, and able to describe and discuss:

1. The embryological development of the skull and spine, and how congenital anomalies arise from disorders of this process.
2. The embryological development of the nervous system, and how congenital anomalies arise from disorders of this process.
3. The physiology of normal cerebrospinal fluid (CSF) circulation, and the disorders of CSF physiology (i.e.: hydrocephalus, pseudotumour cerebri).
4. The anatomic and physiologic basis of the normal neurological examination in the neonate, infant, child, and adolescent.
5. The pathophysiology of neurologic symptoms and signs (e.g.: seizures, spasticity, Horner's syndrome, papilledema).

#### *CLINICAL SKILLS*

1. The practiced discipline of obtaining a detailed history from a pediatric patient and his/her family, and carrying out a detailed neurological examination in order to provide a comprehensive differential diagnosis and localization of diseases affecting the central nervous system.
2. The demonstration of skills in ordering and interpreting appropriate general diagnostic tests (hematology, diagnostic imaging, chemistry, etc) for the satisfactory management of the pediatric patient.
3. The ability to order and interpret specific diagnostic tests relating to the management of pediatric patients who have a neurological disorder.
4. Management of seizures and status epilepticus.

### Communicator

1. Establish therapeutic relationships with patients and their families.
2. Document appropriate histories, physical examinations, and progress notes.
3. Provide age-appropriate information to patients, and provide information to parents that will support their involvement in decision-making.
4. Prepare written documentation for referring physicians in a timely, concise, and collegial manner.

### **Collaborator**

1. Consult effectively with other physicians (referring physicians and other specialists) as well as other health care professionals (including nurses, social workers, physiotherapists, occupational therapists, speech language pathologists, audiologists, respiratory therapists, psychologists, orthotists, and child life specialists).
2. Contribute to interdisciplinary activities as needed.

### **Leader**

1. The neurosurgical resident must learn to manage their time effectively in order to prioritize clinical activities, learning needs, administrative responsibilities, and research endeavours.
2. The neurosurgical resident should be prepared to provide advice on the efficient use of resources (including diagnostic imaging, inter-hospital transfers, and hospital admission) for the management of patients with epilepsy.

### **Health Advocate**

1. Maintain an index of suspicion for non-accidental trauma when evaluating young trauma patients.
2. Use available resources to assist with patients' educational, socio-economic, and psychological challenges.

### **Scholar**

1. Participation in the Pediatric Neuroscience Rounds is expected.
2. Demonstrate self-directed learning with critical appraisal of relevant literature.
3. Facilitate the learning of patients and their families, colleagues, and other health care professionals.

### **Professional**

1. Demonstrate the characteristics of integrity, honesty, compassion, and ethical conduct.
2. Meets deadlines, is punctual, monitors patients according to the needs of their condition, and provides follow-up.
3. Understands any limitations of knowledge or skill, accepts constructive feedback, and corrects deficiencies appropriately.