

Dalhousie University Neurosurgery

Resident Rotation Objectives: Junior Residents (PGY 1- 3)

Specific Objectives:

At the completion of their rotations, neurosurgery residents at the junior levels will function effectively as a:

Medical Expert

General Requirements:

1. Admit patients, record their medical history and physical examination in clinic, ward, and emergency department environments.
2. Assist in the operating room or operate as the principal surgeon under supervision of the attending.
3. Consult on patients on medical wards, ICUs, outpatient clinics, and emergency department.
4. Make rounds in the various hospital units as assigned, order appropriate medications, tests and other forms of therapy required for continued care, plan discharge with nurse clinicians and charge nurse and write a daily progress note in the chart where appropriate.
5. Attend clinics with a faculty member.

Specific Requirements:

KNOWLEDGE

1. An understanding of the main disorders requiring neurosurgical attention including infectious diseases, head and spinal cord injury, brain tumours, stroke, vascular malformations, and degenerative diseases of the brain and spinal cord.
2. A basic knowledge of the anatomy of the central and peripheral nervous systems, including the spine and skull, and a working basic knowledge of the other disciplines including physiology, pathology, endocrinology, and neuropsychology.
3. Familiarity with and understanding of diagnostic studies used to investigate the patient with neurosurgical disorders including EEG, EMG, CT, MRI, and ultrasound.
4. An understanding of the spectrum of surgical interventions that are available for the treatment of the patient with neurosurgical disease.

CLINICAL SKILLS

1. The ability to obtain a detailed history and perform a neurological examination in the patient in order to provide a differential diagnosis and localization of diseases affecting the central nervous system.

2. The development of skills in interpreting appropriate general diagnostic tests (haematology, x-ray, chemistry, etc.) for the satisfactory management of patients.
3. The provision of ongoing post-operative neurological assessment and care, including neuro-intensive care, to the neurosurgical patient.
4. The ability to interpret diagnostic imaging studies of patients with routine neurosurgical disorders.

TECHNICAL SKILLS

At the completion of their neurosurgical rotation, junior residents will have demonstrated a basic understanding of neurosurgical anatomy, and the technical ability to satisfactorily and safely perform the following procedures:

1. Burr holes for drainage of subdural hematomas and empyemas
2. Ventriculostomy
3. Insertion of ICP monitor
4. Craniotomy for trauma, tumour, stroke, and infection
5. Application of Halo ring and the use of cervical spinal traction
6. Cervical dissection for carotid endarterectomy and anterior cervical fusion.
7. Posterior cervical, thoracic and lumbar spinal exposures for trauma and degenerative diseases.
8. Lumbar puncture
9. Exposure of median and ulnar nerves for neuropathy
10. Nerve and muscle biopsies

Under the supervision of the staff neurosurgeon, the senior resident or clinical fellow, the neurosurgical resident at the junior level will assist at various levels in the completion of the following procedures:

1. Supratentorial craniotomy for traumatic head injury and removal of extradural hematoma, subdural hematoma, and intracerebral hematoma
2. Supratentorial craniotomy for tumour removal, including some intradural surgery
3. Craniotomy for aneurysm repair or AVM excision
4. Exposure of cervical and lumbar discs
5. Placement of VP shunts

Communicator

General Requirements:

1. Establish therapeutic relationships with the patients and/or their family
2. Obtain and synthesize relevant history from patients/families/communities
3. Listen effectively to advice and suggestions from faculty and senior residents
4. Discuss appropriate information with patients/families and the health care team

Specific Requirements:

1. Document appropriate histories, physical examinations, and progress notes.
2. Establish communication with the patient and family that supports a trusting and open

relationship.

3. Provide information to the patient and family that support the patient's participation in decision- making.
4. Respond appropriately to patients, families, and colleagues, who express anger, hostility, or a complaint.
5. Share information with the senior resident and faculty that supports teamwork and effective care planning and provision in an expeditious manner.
6. Be sensitive to the needs of patients and their families as they are affected by age, gender, cultural and ethnic perspectives.
7. Be able to communicate in a clear, concise and collegial manner with referring physicians.
8. Be able to present data to a group of peers or allied health personnel in a clear and understandable way at weekly neurosurgery and neuroscience conferences.
9. Learn the avenues of communication with institutional managers and administrators to be able to clearly express the needs of his/her service.
10. Prepare written documentation regarding patient consultations in a timely and accurate fashion.

Collaborator

General Requirements:

1. Consult effectively with other physicians and health care professionals.
2. Contribute effectively to other interdisciplinary team activities.

Specific Requirements:

1. Learn to communicate with other physicians and health care professionals to contribute effectively to interdisciplinary team activities to improve patient care in the management of surgical disorders that benefit from such approaches.
2. Be able to collaborate with allied health care personnel in developing public education tools.
3. Be able to work with healthcare governance at all levels.
4. Contribute administrative skills to the physician team, including direction.
5. Be able to delegate responsibilities where and when appropriate.
6. Listen to concerns expressed by others providing care and assist in resolving these concerns if appropriate.

Leader

General Requirements:

1. Utilize resources effectively to balance patient care, learning needs, and outside activities.
2. Allocate finite health care resources wisely.
3. Work effectively and efficiently.

Specific Requirements:

1. Set priorities and manage time for clinical activity, learning needs and family and recreational activities.

2. Optimize the application of existing resources.
3. Interact with the community to preserve and secure adequate resources for the provision of excellent care.
4. Triage patients that require prompt and immediate management including evaluating appropriate diagnostic and imaging modalities and plan for operative treatment.

Health Advocate

General Requirements:

1. Identify the important determinants of health affecting patients.
2. Contribute effectively to improved health of patients and communities.
3. Recognize and respond to those issues where advocacy is appropriate.

Specific Requirements:

1. Identify the important determinants of health that affect their patients.
2. Contribute effectively to injury prevention, health maintenance and health enhancement programs in the community.
3. Be effective advocates of practices that enhance health and well-being.

Scholar

General Requirements:

1. Develop, implement and monitor a personal continuing education strategy.
2. Critically appraise sources of medical information.
3. Facilitate learning of patients, house staff/students and other health professionals.
4. Present at Clinical Neuroscience Grand Rounds.
5. Submit an abstract for local presentation (division and department).

Specific Requirements:

1. Acquire current techniques to appraise sources of medical information and develop, implement and monitor a personal education strategy so as to become life-long learners.
2. Acquire a sufficient awareness of the scientific method, including the principles of epidemiology, in order to critically analyze the literature for continuing medical education and investigation.
3. Learn to facilitate the learning of patients, medical colleagues, both junior and senior, and other health care professionals.
4. Make presentations at various times at weekly Neurosurgery and Neuroscience rounds
5. Prepare cases for discussion at monthly morbidity and mortality rounds
6. Review topics for discussion at didactic teaching rounds.
7. Undertake one or more clinical research projects leading to a presentation and/or publication as supervised by the faculty.

Professional

General Requirements:

1. Deliver the highest quality care with integrity, honesty and compassion.
2. Exhibit appropriate personal and interpersonal professional behaviours.
3. Practice medicine ethically consistent with obligations of a physician.

Specific Requirements:

1. Have a thorough appreciation of the necessity for methods of quality assurance in the delivery of health care.
2. Learn to deliver the highest quality care with integrity, honesty and compassion, and understand the importance of bio-ethical issues in the delivery of health care.
3. Have the department of a professional including the demonstration of a sincere, caring attitude in dealing with patients.
4. Fulfill medical, legal, and professional obligations of the specialist.
5. Meet deadlines, be punctual, monitor patients, and provide follow-up.
6. Understand the principles of ethics and apply these in clinical situations.
7. Demonstrate self-assessment, seek and accept advice when necessary