

NAME OF ROTATION: Neurology

FOCUS OF THIS ROTATION

- The goal of this rotation is to provide the Internal Medicine trainee (PGY1s, PGY2s and PGY3s) with the opportunity to develop competencies in the assessment and management of patients with neurological disorders in the emergency department, on the ward, and in the ambulatory clinic setting.
- The goal listed will be completed, in part, during the subspecialty rotation. Completion of all goals is expected by the end of the PGY 3 year and will be accomplished through ongoing clinical exposure, participation in the formal academic curriculum and personal learning strategies. Residents are encouraged to prioritize goals during their initial focused clinical exposure to this discipline.

CBD stage(s) for this rotation:

- TTD
- FOD
- COD

Length of this rotation:

- 1 block

PGY Level(s) for this rotation:

- PGY1
- PGY2
- PGY3

Locations for rotation:

- SHSC
- SMH
- SHS (MSH)
- UHN-TGH and PM
- UHN-TWH

Required training experiences included in this rotation:

Required training experiences (TTD Stage):

Clinical training experiences: 1.

1.1. Inpatient Neurology service

1.2. After-hours coverage for neurology inpatients and consultations to the emergency department

Required training experiences (Foundations stage):

Clinical training experiences: 1.

1.1. Neurology inpatient service

1.3. Neurology ambulatory care clinic at TWH

1.4. Acute care experience with patients presenting to emergency department with neurological symptoms

1.5. After-hours coverage for a broad spectrum of neurology inpatients and consultation to the emergency department

Other training experiences: 2.

2.1. Directed and/or independent learning experience, in topics such as medical ethics, critical appraisal, and wellness (e.g. use of journal clubs, online modules, academic rounds)

Recommended training experiences (Foundations stage):

Clinical training experiences: 3.

3.2. Consultation service for neurological complaints and/or disorders

3.3. Care of the elderly (optional)

3.4. Palliative care (optional)

Other training experiences include: 4.

4.1. Instruction or experience in procedural skills (may use simulation)

Required training experiences (Core stage):

Clinical training experiences: 1.

1.2. Neurology Ambulatory care: clinic and/or day hospital. This must include experience with a broad spectrum of conditions as well as patients with complex disorders (TWH).

1.3. Service providing neurology consultation to other disciplines or to medical and/or surgical inpatient units

1.4. Service providing neurology perioperative care

1.5. After hours coverage for a broad spectrum of neurology inpatients and internal medicine consultation to the emergency department

1.6. Experience with critically ill patients with neurological disorders. This must include ICU, CCU, and neurology consultation to the emergency department.

Optional Clinical training experiences: 4.

4.2. Internal Medicine for specific populations

Care for vulnerable/marginalized populations 4.2.1.

4.3. Other disciplines, subspecialties as well as Areas of Focused Competence, with entry from Internal Medicine

4.4. Methods of delivery of internal medicine care

Blue = TTD PGY1, Blocks 1-4; Green = FOD PGY1, Blocks 5-13, Red = COD, PGY2 and 3

EPAs Mapped to this rotation:	Total # of EPAs
TTD1 Performing histories and physical exams, documenting and presenting findings, across clinical settings for initial and subsequent care	6
TTD2 Identifying and assessing unstable patients, providing initial management, and obtaining help	Do whenever possible
FOD 2B Managing patients admitted to acute care settings with common medical problems and advancing their care plans: Part B: Communication with Patient/Family	2
FOD 2C Managing patients admitted to acute care settings with common medical problems and advancing their care plan: Part C: Handover	0-1 (can do)
FOD 3 Consulting specialists and other health professionals, synthesizing recommendations, and integrating these into the care plan	0-1 (can do)
FOD 4A & B Formulating, communicating, and implementing discharge plans for patients with common medical conditions in acute care settings: Part A: Discharge plan documentation & Part B Discharge plan communication	0-1 (can do)
FOD 6 Discussing and establishing patients' goals of care	0-1 (can do)
FOD 7 Identifying personal learning needs while caring for patients, and addressing those needs	2 (1 if short rotation)
COD 5 Performing the procedures of Internal Medicine	Do whenever possible
FOD 1 Assessing, diagnosing, and providing initial management for patients with common acute medical presentations in acute care settings	1-2
FOD 2A Managing patients admitted to acute care settings with common medical problems and advancing their care plans: Part A: Patient Assessment and Management	1-2
FOD 2B Managing patients admitted to acute care settings with common medical problems and advancing their care plans: Part B: Communication with Patient/Family	2
FOD 2C Managing patients admitted to acute care settings with common medical problems and advancing their care plan: Part C: Handover	0-1 (can do)
FOD 3 Consulting specialists and other health professionals, synthesizing recommendations, and integrating these into the care plan	0-1 (can do)
FOD 4A & B Formulating, communicating, and implementing discharge plans for patients with common medical conditions in acute care settings: Part A: Discharge plan documentation & Part B Discharge plan communication	0-1 (can do)
FOD 5 Assessing unstable patients, providing targeted treatment and consulting as needed	Do whenever possible
FOD 6 Discussing and establishing patients' goals of care	0-1 (can do)
FOD 7 Identifying personal learning needs while caring for patients, and addressing those needs	2 (1 if short rotation)
COD 2A Assessing and managing patients with complex chronic conditions: Part A: Assessment, Diagnosis, and Management	1

EPAs Mapped to this rotation:	Total # of EPAs
COD 5 Performing the procedures of Internal Medicine	Do whenever possible
COD 8 Caring for patients who have experienced a patient safety incident (adverse event)	Do whenever possible
COD 1 Assessing, diagnosing, and managing patients with complex or atypical acute medical presentations	2
COD 2A Assessing and managing patients with complex chronic conditions: Part A: Assessment, Diagnosis, and Management	1
COD 2B Assessing and managing patients with complex chronic conditions: Part B: Patient Education/Communication	0-1
COD 3A Providing internal medicine consultation to other clinical services: Part A: Patient Assessment and Decision-Making	2
COD 3B Providing internal medicine consultation to other clinical services: Part B: Written Communication:	2
COD 3C Providing internal medicine consultation to other clinical services: Part C: Oral Communication	1
COD 4A Assessing, resuscitating, and managing unstable and critically ill patients: Part A: Patient Care	Do whenever possible
COD 5 Performing the procedures of Internal Medicine	Do whenever possible
COD 6 Assessing capacity for medical decision-making	0-1 (can do)
COD 7 Discussing serious and/or complex aspects of care with patients, families, and caregivers	0-1 (can do)
COD 8 Caring for patients who have experienced a patient safety incident (adverse event)	Do whenever possible
COD 10 Implementing health promotion strategies in patients with or at risk for disease	0-1 (can do)

	Other assessments during this rotation:	Tool Location / Platform (e.g. POWER, Entrada):
1.	ITAR	POWER

	Key Objectives for this Rotation:	CanMEDS Role(s):
1.	Perform an accurate and detailed neurologic history and physical examination tailored to the patient's presenting complaints, including the use of physical examination maneuvers specific to a clinical presentation (e.g., Dix-Hallpike and HINTS maneuvers in a patient with acute vertigo).	Medical Expert
2.	Formulate a provisional and a differential diagnosis based on correct lesion localization of the patient's presenting symptoms and signs.	Medical Expert
3.	Demonstrate a rational and judicious approach to the investigation of patients with a variety of acute and chronic neurologic presentations.	Medical Expert
4.	Apply knowledge of medications commonly used in the management of neurologic disorders, including their indications, potential side effects, potential interactions with other medications or interactions with primary neurological disorders, and contraindications.	Medical Expert
5.	Independently complete lumbar punctures.	Medical Expert
6.	Recognize the role for, and demonstrates basic interpretation of, common neurophysiologic tests (e.g., CSF analysis, EEG, EMG/NCS, evoked potentials, CT, MRI).	Medical Expert
7.	Demonstrate the ability to perform and document accurate, patient-focused assessments reflecting the time constraints of the clinical environment.	Leader Communicator
8.	Recognize the important determinants of health in patients with common neurological disorders (e.g., stroke, headache, seizures, neuropathy), and advises appropriate lifestyle or other preventative measures.	Health Advocate

Royal College Internal Medicine Competencies emphasized on Neurology rotation.

Numbers refer to items identified in the Royal College Competencies document

Symptoms

Identify the causes and be able to use history, physical exam and investigations to arrive at a differential and provisional diagnosis for each of the following:

- Acute and chronic headache 1.4.7.1.1
- Altered mental status and disorders of consciousness 1.4.7.1.2
- Coordination and gait impairment
- Diplopia and vision impairment
- Dizziness and vertigo 1.4.7.1.3
- Dysarthria and dysphagia
- Sensory impairment
- Syncope 1.4.7.1.4
- Tremor 1.4.7.1.5
- Weakness: focal and generalized 1.4.7.1.6

Findings

Identify the causes and be able to use history, physical exam and investigations to arrive at a differential and provisional diagnosis for each of the following:

- Abnormal cranial nerve function 1.4.7.2.1
- Dix-Hallpike and HINTS maneuvers for positional vertigo
- Increased intracranial pressure 1.4.7.2.3
- Patterns of sensory impairment
- Patterns of motor weakness
- Radiculopathies (cervical and lumbar)

Investigations

Be able to perform and interpret the results of: Lumbar puncture 3.4.2.8.

Disorders

Using results of history, physical examination and investigations, be able to confirm the diagnosis of each of the following, and propose a management plan. The plan may include further investigations and treatment, taking into account the underlying cause and any complications. Must be able to manage neurological emergencies.*

- Acute spinal cord compression* 1.4.7.3.1.
- Amyotrophic lateral sclerosis 1.4.7.3.2.
- Cerebrovascular disease*: stroke and transient ischemic attack (TIA) 1.4.7.3.3.
- Coma* 1.4.7.1.2
- Dementia and delirium 1.4.7.3.4.
- Guillain-Barré syndrome* 1.4.7.3.5.
- Meningitis and encephalitis* 1.4.7.3.6.
- Motor neuron diseases (amyotrophic lateral sclerosis)
- Movement disorders including Parkinson's disease 1.4.7.3.7.
- Multiple sclerosis 1.4.7.3.8.
- Myasthenia gravis* 1.4.7.3.9.
- Myelopathy (acute, subacute and chronic)
- Neurogenic bladder and bowel dysfunction
- Neurological complications of alcohol and nutritional deficiency states
- Peripheral neuropathy 1.4.7.3.10.
- Seizure disorders and status epilepticus* 1.4.7.3.11.
- Brain neoplasms 1.4.7.3.12
- Paraneoplastic neurological disorders
- Migraine, chronic daily headache, chronic analgesia use, status migrainosus, autonomic cephalgias, hypertensive crisis/PRES, Pituitary apoplexy*

Therapies

Integrate knowledge of the indications/contraindications, side-effects and pharmacokinetics of the following therapies in the care of patients with neurological disorders:

- Behavioural therapies for dementia and functional neurological disorders
- Antiepileptic drugs
- Thrombotic agents
- Antiplatelet drugs
- Anticoagulants
- Endovascular therapy
- Levodopa/Carbidopa
- Corticosteroids (oral and intravenous)
- Immunosuppressive/immunomodulatory agents including biological agents
- Migraine medications