



Neurology Curriculum

NGMC- Family Medicine Residency Program
Gainesville, Ga

PGY: 2

Description of Rotation:

This is a four-week block Neurology experience with direct supervision by neurologist. The goal of this rotation is to introduce family medicine residents to the role of neurological disease in patients and familiarize residents with its place in the overall practice of family medicine. Supplemental longitudinal learning in the FMP supervised by Family Physician Faculty is also expected.

Overall Goals of Neurology Rotation:

A solid understanding of normal neurological development, anatomy, and neurophysiology is imperative to the treatment of neurological pathology. Neurological problems are estimated to comprise 10 percent to 15 percent of a family physician's workload. Taking a history in neurology and performing a comprehensive neurological examination are essential skills for all family physicians. Emphasis is on good diagnostic and therapeutic skills and appropriate consideration of biopsychosocial and cultural factors. Both the variability of presentation and degree of pathophysiology can make diagnosis very difficult. Neurological diseases can carry significant social stigma, and family physicians must address both the medical and psychosocial stress that each disorder can cause in the patient and his or her family. Family medicine residents should be aware of social-cultural variations and take time to be sensitive to the differences in cultural perceptions of disease.

Patient Care Objectives and Competencies

- PC-1: Cares for Acutely ill or injured patients in urgent and emergent situations in all settings.
- PC-2: Cares for patients with chronic conditions.
- PC-3: Partners with the patient, family, and community to improve health through disease prevention and health promotion.
- PC-4: Partners with the patient to address issues of ongoing signs, symptoms, or health concerns that remain over time without clear diagnosis despite evaluation and treatment, in a patient-centered, cost-effective manner.

Objectives:

- Demonstrate ability to apply clinical skills and use the physical examination to localize neurological lesions. The resident must be able to complete a comprehensive history and must develop the ability to perform a competent neurological examination, including: (PC1/level 3)
 - Mental status: language, memory, attention/concentration, affect, intellect
 - Cranial nerves
 - Motor exam including details on bulk, strength and tone
 - Reflex exam including stretch and pathological reflexes
 - Detailed sensory examination
 - Coordination and gait and balance
- Demonstrate ability to develop a rational clinical approach to solving basic clinical neurological problems including (PC4/level 3):
 - Stupor and Coma
 - Seizures
 - Tremors
 - Weakness
 - Dizziness, Syncope and vertigo



- sensation changes
- dementia and delirium
- Paralysis
- Headaches
- Change of Vision or other sensory organs
- Demonstrate ability to perform lumbar puncture including appropriate pre- and post-procedure counseling and care (PC1, PC5)/level 3)

Medical Knowledge Objectives and Competencies

- MK-1: Demonstrate medical knowledge of sufficient breadth and depth to practice family medicine.
- MK-2: Applies critical thinking skills in patient care.

Objectives:

- Demonstrate understanding of neuroanatomy sufficient to localize neurologic lesions. (MK2/level 2)
- Reflect an understanding of the differential diagnosis and natural history of common neurological issues (see above list).
- Demonstrate understanding of the indications, basic techniques, and basic interpretation of the following tests (MK2/level 2)
 - Lumbar puncture and CSF Analysis
 - carotid Dopplers
 - Neuro-imaging (CT, MRI, PET scans)
 - EMG and Nerve conduction studies
 - EEG and evoked potential studies
- Understand the pathophysiology, clinical presentations, and achieve competence in the diagnosis and treatment of the following diseases (MK2/level 2)
 - Stroke
 - TIA
 - Meningitis
 - Alzheimer's disease and other causes of dementia
 - Alcohol and drug related neurological disorders
 - Seizure Disorders
 - Parkinsonism and other movement disorders
 - MS and other demyelinating disease
 - Carpel tunnel and other entrapment Syndromes
 - CNS tumors and malignancy
 - Peripheral neuropathy and radiculopathies
 - Guillain-Barre Syndrome
 - Migraines and other causes of headaches
 - ALS and other motor neuron diseases
 - Peripheral neuropathy
 - Myopathy
 - Muscular dystrophy
 - Myasthenia gravis and other dystonia's s
 - Neuro AIDS.
- Reflect satisfactory knowledge of the use of specific neurological drugs. Know potential drug interactions and adverse drug effects, especially in elderly patients (MK2/level 3)
- Demonstrate knowledge in genetic basis of certain neurological disorders as they affect the patient and his or her



family, and education of the family regarding the benefits of genetic counseling (MK2/level 3)

Topics to cover in rotation:

MK Topic	On-Line Resource
Parkinson's Disease	https://www.aafp.org/afp/2013/0215/p267.html
Dementia	https://www.aafp.org/afp/2018/0315/p398.html
Alzheimer's disease	https://www.aafp.org/afp/2011/0615/p1415.html
Stroke & TIA	https://www.aafp.org/afp/topicModules/viewTopicModule.htm?topicModuleId=24
Meningitis	https://www.aafp.org/afp/2017/0901/p314.html
Multiple sclerosis	https://www.aafp.org/afp/2014/1101/p644.html
Headache	https://www.aafp.org/afp/topicModules/viewTopicModule.htm?topicModuleId=10
Seizure Disorders	https://www.aafp.org/afp/topicModules/viewTopicModule.htm?topicModuleId=80
Peripheral Neuropathy	https://www.aafp.org/afp/2010/0401/p887.html
Delirium	https://www.aafp.org/afp/2014/0801/p150.html

Interpersonal and Communication Skills Objectives and Competencies

- C-1: Develop meaningful, therapeutic relationships with patients and families.
- C-2: Communicates effectively with patients, families, and the public.
- C-3: Develops relationships and effectively communicates with physicians, other health professionals, and health care teams.
- C-4: Utilizes technology to optimize communication

Objectives:

- 1. Demonstrate ability to communicate effectively and demonstrate caring, compassionate, and respectful behavior (C2/level 3)
- 2. Create and sustain a therapeutic and ethically sound relationship with patients and their families (C1/level 3)
- 3. Address End-of-life issues in neurological disorders, the role of palliative care services, and ethical and legal aspects of terminal care (C2/level 2)
- 4. Communicate collaboratively with other residents and show respect and ability to work well in a team setting (C3/level)
- 5. Recognition of times when limiting further investigation and treatment is in the best interest of the patient (C1/level 3)
- 6. Demonstrate satisfactory skills in clinical documentation of neurologic complaints and general evaluations in the medical record (C4/level 3)

Practice Based Learning and Improvement Objectives and Competencies:

- PBLI-1: Locates, appraises, and simulates evidence from scientific studies related to the patients' health problems
- PBLI-2: Demonstrates self-directed learning
- PBLI-3: Improves systems in which the physician provides care

Objectives:

- Able to locate, critically appraise, and assimilate evidence from scientific studies and apply this knowledge to patients seen on the neurology consultation service (PBLI-1/level 2)
- Demonstrate ability to use information technology to manage information, access on-line medical resources, and support self-education, patient care decisions and patient education. (PBLI-2/level 3)



Professionalism Objectives and Competencies:

- PROF-1: Completes a process of professionalization
- PROF-2: Demonstrates professional conduct and accountability
- PROF-3: Improves systems in which the physician provides care

Objectives:

- Demonstrate respect, compassion, and integrity (PROF-2/level 1).
- Demonstrate commitment to excellence and continuous professional development. (PROF 1/level 3)
- Demonstrate a compassionate approach to the care of the patient who has a neurological disease, within the patient's own cultural, religious, and social context (PROF 3/level 3)

Systems Based Practice Objectives and Competencies

- SBP-1: Provides cost-conscious medical care
- SBP-2: Emphasizes patient safety
- SBP-3: Advocates for individual and community health
- SBP-4: Coordinates team-based care

Objectives:

- Practice cost-effective health care and resource allocation while advocating for quality (SBP-1/level 3)
- Productively and cooperatively participate in safe hand offs and transition of care. (SBP-2/level 2)
- Coordinate team-based care especially for chronic neurological conditions, which may include the use of other modalities such as manipulation, physical therapy, occupational therapy, and alternative or complementary medicine adjuncts (SBP-4/level 2)
- Coordinate ambulatory, inpatient, and institutional care across health care providers, institutions, and governmental agencies (SBP4-level 3)