NEUROLOGY CORE CURRICULUM

The goal of our residency program is to train Neurology physicians who excel in each of the six competency areas and maintain a life-long commitment to continue to grow and develop in these areas. The objectives by which we hope to achieve this goal follow.

PATIENT CARE

Neurology Patient Care (PGY1)		
Objectives	Teaching Methods	Assessment Strategy
 Prioritizes patient problems and a day of work Monitors and follows up patients appropriately Gathers essential accurate information on interviews and physical exams and reviews other data Completely performs some invasive procedures Provides services aimed at prevention and/or maintenance of health Works with all health care professionals to provide patient-focused care 	 Direct Patient Care Performance Feedback Clinical Teaching Modeling 	 Global ratings Procedure logs
Neurology Patient Care (PGY2)		
Objectives	Teaching Methods	Assessment Strategy
Gathers essential and accurate information about hospitalized patients with acute neurological symptoms including neurological emergencies (coma, mental status change, stroke, and seizure)	 Direct Patient Care Performance Feedback 	 Global ratings Focused record review NEX live patient examinations
Gathers essential and accurate information about hospitalized patients with chronic neurological conditions/ neurodegenerative disorders and common neurological problems, including headache, dizziness, and spine pain.	 Direct Patient Care Performance Feedback 	 Global ratings Focused record review NEX live patient examinations

Performs extensive neurological examinations, summarizes their findings and localizes the lesion in the central and/or peripheral nervous system or of another origin (e.g. systemic psychiatric or psychogenic illness) Formulates a differential diagnosis and management plan based upon their	 Clinical Teaching Clinical Experience Performance Feedback Clinical Teaching Direct Patient Care 	 Global ratings NEX live patient examinations Global ratings Focused record review
neurological assessment Makes informed decisions about diagnostic evaluations including neuroimaging and laboratory investigation Identifies and describes abnormalities seen in common neurological disorders on radiographic testing	 Clinical Teaching Performance Feedback Radiology rotation and quiz Clinical Teaching Performance Feedback Radiology Rotations 	 Global ratings Focused record review Global rating of live performance
Demonstrates technical skills in performing lumbar punctures	 Review of LP learning module Simulated LP models Staff instruction/supervision 	Global rating of live performanceSimulation and modelsCase logs
Neurology Patient Care (PGY 3 & 4) Objectives	Teaching Methods	Accomment Strategy
 Evaluate the application and relevance of investigative procedures and interpretation in the diagnosis of neurological disease, including the following: Electroencephalogram Motor and nerve conduction studies 	 Clinical teaching Recommended reading Departmental conferences Didactics Required independent record 	 Assessment Strategy Global rating In-service training examination EMG end of course quiz EEG simulations EEG end of course test
 Electromyography Evoked potentials Polysomnography Psychometry Cerebrospinal fluid (CSF) analysis Vascular imaging (Duplex, transcranial Doppler) Radiographic studies- X-ray, CT, MRI, angiogram, nuclear imaging studies, and myelography Identifies and describes gross and microscopic 	review of EEG with staff review following day observation and instruction in EMG by staff	

Based on a comprehensive neurological assessment, the physician shall demonstrate the ability to recognize and treat neurological disorders commonly encountered in the hospital setting	 Clinical teaching Recommended reading Departmental Conferences Didactics 	 Global rating In-training service examination NEX examination
Based on a comprehensive neurological assessment, the physician shall demonstrate the ability to recognize and treat neurological disorders commonly encountered in the outpatient setting	 Clinical teaching Recommended reading Departmental conferences Didactics 	 Global rating In-training service examination NEX examination

MEDICAL KNOWLEDGE

Neurology Medical Knowledge (PGY1)		
Objectives	Teaching Methods	Assessment Strategy
 Demonstrates knowledge of basic clinical sciences Applies knowledge to therapy 	Directed readingCore curriculum lectures	Global ratingMonthly didactic tests
Neurology Medical Knowledge (PGY2)	1	
Objectives The physician shall demonstrate knowledge of the pathophysiology of major neurological disorders and familiarity with the scientific basis of neurological diseases. The physician shall demonstrate knowledge of patient evaluation and treatment selection, including: • The nature of patients' history and physical findings and the ability to correlate the findings with a likely localization for neurological dysfunction. • Likely diagnoses and differential diagnoses. • Planning for evaluation and management. • Potential risks and benefits of potential therapies, including surgical procedures.	 Teaching Methods Review of evidence based guidelines and practice parameters proposed by the AAN Clinical teaching Departmental Conferences Recommend readings Didactic lectures including basic science lecture series Grand Rounds Clinical teaching Journal clubs Review of evidence based guidelines and practice parameters proposed by the AAN 	 Assessment Strategy Global ratings In-training examination Didactic lecture pre- and post-tests Global ratings and of journal club performance In-training examination NEX live patient examination Didactic lecture pre- and post-tests

Compares and contrasts the medical and surgical approaches to treatment of ischemic stroke and explain the conditions under which each would be most efficacious Demonstrates the approach to assessing an acute change in mental status/coma and distinguish between different etiologies such as metabolic, toxic, infections, or vascular	 Review of evidence based guidelines and practice parameters proposed by the AAN Clinical teaching Departmental Conferences Reading list Clinical rounds Departmental conferences 	 Global ratings In-training examination Didactic lecture pre- and post-tests Global ratings In-training examination Focused record review Didactic lecture pre- and post-tests
Describes the underlying pathophysiology, diagnostic criteria and common treatment protocols for migraine	 Review of evidence based guidelines and practice parameters proposed by the AAN AHS curriculum computer learning module Didactic lectures 	 Global ratings In-training examination AHS curriculum test Didactic lecture pre- and post-tests
Demonstrate and analytical thinking approach to a patient presenting with acute weakness in order to distinguish whether the lesion can be attributable to the central nervous system (brain or spinal cord) or peripheral nervous system (nerve root, peripheral nerve, neuromuscular junction or muscle) based upon assessment of upper or lower motor neuron signs.	 Review of neuroanatomy Clinical teaching 	 Global ratings In-training examination NEX examination of a live patient
Demonstrate knowledge of relevant neuroanatomy and underlying pathology found in multiple sclerosis, Alzheimer's dementia, Parkinson's disease and cerebrovascular disease	 Review of neuroanatomy Departmental conferences Pathology lectures and brain cutting conference 	 Global ratings In-training examination Didactic lecture pre- and post-tests
The physician shall demonstrate the ability to reference and utilize electronic systems to access medical, scientific, and patient information.	Clinical teachingLibrary services	Global ratings

Neurology Medical Knowledge (PGY3 & 4)		
Objectives	Teaching Methods	Assessment Strategy
 The physician shall demonstrate knowledge of the major disorders, including considerations relating to age, gender, race and ethnicity, based on the literature and standards of practice. This knowledge shall include: The epidemiology of the disorder. The etiology of the disorder, including medical, genetic, and sociocultural factors. The phenomenology of the disorder. The experience, meaning, and explanation of the illness for the patient and family, including the influence of cultural factors and culture-bound syndromes. Effective treatment strategies, course, and prognosis 	 Recommend readings Didactic lectures including basic science lecture series Grand Rounds Clinical teaching Journal clubs Review of evidence based guidelines and practice parameters proposed by the AAN 	 Global ratings In-training examination Didactic lecture pre- and post-tests
Critically evaluates and judiciously applies the latest knowledge of basic neuroscience that is critical to the practice of neurology	 Basic science lecture series Grand Rounds Clinical teaching Journal clubs Review of evidence based guidelines of the AAN 	 Global ratings In-training examination Global rating of journal club performance Didactic lecture pre- and post-tests
The physician shall demonstrate knowledge of basic neuroscience that is critical to the practice of neurology.	EEG and EMG rotation	 Global ratings In-training examination EEG test EMG quiz Didactic lecture pre- and post-tests
The physician shall demonstrate knowledge of the pathophysiology of major neurological disorders and familiarity with the scientific basis of neurological diseases.	 Review of evidence based guidelines and practice parameters of AAN Clinical teaching Departmental Conferences 	 Global ratings In-training examination Didactic lecture pre- and post-tests
Characterizes the main features of neurological disorders and diseases that span across a lifespan, and compare and contrast available	 Recommend readings Didactic lectures including basic science lecture series 	 Global ratings In-training examination EEG examination

 treatment options for the following: Dementia and behavioral neurology disorders Epilepsy and related disorders Neuromuscular disorders Demyelinating and dysmyelinating disorders of the central nervous system Cerebrovascular disorders Infectious diseases of the nervous system Neoplastic disorders and tumors of the nervous system Nervous system trauma Toxic and metabolic disorders of the nervous system Acute, chronic pain Sleep disorders Changes in mental state secondary to therapy Critical care and emergency neurology Coma and brain death Headache and facial pain Movement disorders including abnormalities caused by drugs 	 Grand Rounds Clinical teaching Journal clubs Review of evidence based guidelines and practice parameters proposed by the AAN 	AHS curriculum test Didactic lecture pre- and post-tests
Demonstrates the employment of principles of quality improvement in practice	CPCM&MClinic rounds	Global ratings

INTERPERSONAL AND COMMUNICATION SKILLS

Neurology Interpersonal & Communication Skills (PGY1)		
Objectives	Teaching Methods	Assessment Strategy
 Writes pertinent and organized notes Documents timely and legible medical records Uses effective listening, narrative and non-verbal skills to elicit and provide information Works effectively as a member of the health care team 	Clinical teaching	 Global ratings 360 evaluations
Neurology Interpersonal & Communicatio	n Skills (PGY2)	·
Objectives	Teaching Methods	Assessment Strategy
Demonstrates the ability to obtain, interpret and evaluate consultations from other medical specialties and to provide consultants with a diagnostic and management plan	Clinical roundsModeling	Global ratings
Provide patients and their families explanations of neurological disorders and treatment that is geared to their educational level, as well as respecting the patient's cultural, ethnic, religious and economic backgrounds	Direct patient careModeling	Global ratingPatient surveys
Convey information to patients in a clear and meaningful fashion and partner with patients to develop an agreed upon healthcare management plan.	Direct patient careModeling	Global ratingPatient surveys
Work collaboratively with the multidisciplinary team involved in the inpatient care of neurological patients	Clinical roundsModeling	Global ratingsPeer assessments360 degree evaluations
To develop and maintain a therapeutic alliance with patients by instilling feelings of trust, honesty, openness, rapport, and comfort in the relationship with the physician.	 Clinical rounds Modeling Clinical experience 	 Global rating Patient surveys 360 degree evaluations

Neurology Interpersonal & Communication Skills (PGY 3 & 4)		
Objectives	Teaching Methods	Assessment Strategy
Provide leadership, direction and instruction to junior members of the team in a way that fosters their skills as a physician.	Clinical RoundsPatient case conference	Global ratings360 degree evaluations
Demonstrate effective communication within the team, with regards to patient's current or change in neurologic status, anticipated problem, therapeutic regimen and diagnostic tests to be reviewed	Clinical roundsSign-out rounds	Peer assessments
To listen to and understand patients and to attend to nonverbal communication.	Clinical roundsClinical experience	Global ratings360 degree evaluationsPeer assessments
To educate patients and professionals about medical, psychosocial, and behavioral issues.	Clinical roundsClinical experienceModeling	 Global ratings 360 degree evaluation Peer assessments
To partner with patients to develop an agreed upon healthcare management plan.	Clinical roundsClinical experienceModeling	 Global ratings 360 degree evaluation Peer assessments
Recognize one's own feelings and behaviors in dealing with difficult situations so that they do not interfere with appropriate treatment	ModelingClinical roundsEthics lectures	 Global ratings Peer assessments 360 degree evaluations from peers and patients

PRACTICE BASED LEARNING & IMPROVEMENT

Neurology Practice Based Learning & Improvement (PGY1)		
Objectives	Teaching Methods	Assessment Strategy
 Understands his or her limitations of knowledge Asks for help when needed Is self-motivated to acquire knowledge Use of computerized sources of results and information to enhance patient care Accepts feedback and develops self- improvement plans 	Performance Feedback	Global ratings

Neurology Practice Based Learning & Improvement (PGY2)		
Objectives	Teaching Methods	Assessment Strategy
Physicians shall recognize limitations in their own knowledge base, clinical skills and understand and address the need for lifelong learning.	M&M conference	Global ratings
The physician shall demonstrate appropriate skills for obtaining and evaluating up to date information from scientific and practice literature and other sources to assist in the quality care of patients. This should include educational courses, conferences	 Internet medical information system, medical searches 	 Global ratings Evaluation of presentations/GR
The physician shall evaluate caseload and practice experience in a systematic manner	 Case logs Modeling Case conference Review of evidence based guidelines and practice parameters proposed by the AAN M&M conference CPC conference 	 Data base of case logs Focused record review
 The physician shall demonstrate responsibility for his/her patients' care, including: Responding to communication from patients and health professionals in a timely manner. Establishing and communicating back- up arrangements, including how to seek emergent and urgent care when necessary. Using medical records for appropriate documentation of the course of illness and its treatment. Providing coverage if unavailable, e.g., out of town, on vacation. Providing for continuity of care, including appropriate consultation, transfer, or referral if necessary. 	 Journal clubs Review of evidence based guidelines and practice parameters proposed by the AAN Patient centered literature review Daily sign out rounds 	 Global ratings 360 degree evaluation Focused review

Neurology Practice Based Learning & Imp	provement (PGY 3 & 4)	
Objectives	Teaching Methods	Assessment Strategy
Evaluate the clinical literature applying knowledge of epidemiology, biostatistics, and research study design	 Teaching conferences including Grand Rounds Journal Clubs 	Global ratings of Journal club performance
Facilitate the learning of medical students	Role ModelingOral presentationsPatient Centered instruction	Peer assessments
 Demonstrate the ability to: review and critically assess scientific literature to determine how quality of care can be improved in relation to one's practice (e.g., reliable and valid assessment techniques, treatment approaches with established effectiveness, practice parameter adherence). Within this aim, the physician shall be able to assess the generalizability or applicability of research findings to one's patients in relation to their sociodemographic and clinical characteristics. Develop and pursue effective remediation strategies that are based on critical review of scientific literature. Learn from one's own and other specialties. 	 Grand Rounds Clinical teaching Journal clubs Review of evidence based guidelines and practice parameters proposed by the AAN Patient centered literature review 	 Grand rounds evaluations Global rating of journal club presentation Global ratings

PROFESSIONALISM

Neurology Professionalism (PGY1)		
Objectives	Teaching Methods	Assessment Strategy
 Establishes trusts with patients and staff Does not refuse to treat patients Is honest, reliable and cooperative and accepts responsibility Shows regard for opinions and skills of colleagues Demonstrates respect compassion and integrity Is responsive to the needs of patients and society, which supersedes self interest 	 Direct patient care Modeling 	Global ratings
Neurology Professionalism (PGY2)		
Objectives	Teaching Methods	Assessment Strategy
Interact responsibly with patients, families and co-workers taking into consideration age, disability, culture and gender issues	Direct patient careModeling	Global ratings
Demonstrate appropriate use of the EMR in regards to patient respect and confidentiality	Direct patient careModeling	Global ratings
The physician shall review his/her professional conduct and remediate when appropriate.	• M&M	Program Director semi-yearly reviewGlobal ratings
The physician shall demonstrate ethical behavior, integrity, honesty, compassion, and confidentiality in the delivery of care, including matters of informed consent/assent, professional conduct, and conflict of interest.	 Direct patient care Modeling Ethics conference 	Global ratings
The physician shall demonstrate understanding of and sensitivity to end of life care and issues regarding provision of care.	 Review of end of life (EOL) care teaching materials. 	Global rating
The physician shall participate in the review of the professional conduct of his/her colleagues.	Teaching roundsM&M	 360 degree evaluation Peer assessment
The physician shall acknowledge and remediate medical errors, should they occur.	Teaching roundsDirect patient careM&M	Global ratingsProgram Director semi-yearly review

Neurology Professionalism (PGY 3 & 4)		
Objectives	Teaching Methods	Assessment Strategy
Describe the differences of withdrawal of care, termination of care, and non-initiation of care and assist patients and their families in choosing these options in the appropriate clinical setting	 Direct patient care Modeling Review of EOL learning modules 	Global rating
The physician shall participate in the review of	Teaching rounds	360 degree evaluation
the professional conduct of his/her colleagues.	• M&M	Peer assessment
The physician shall acknowledge and	Teaching rounds	360 degree evaluation
remediate medical errors, should they occur.	• M&M	Program Director semi-yearly review

SYSTEM BASED PRACTICE

Neurology Systems-Based Practice (PGY1)		
Objectives	Teaching Methods	Assessment Strategy
 Is a patient advocate Has constructive skepticism Advocates for high quality patient care and assists patients in dealing with system complexity 	Direct patient care	 Global ratings Focused record review
Neurology Systems-Based Practice (PGY2		
ObjectiveThe physician shall have a working knowledgeof the diverse systems involved in treatingpatients of all ages and understand how to usethe systems as part of a comprehensive systemof care in general and as part of acomprehensive, individualized treatment plan.The physician shall be able to:• Use practice guidelines.• Access community, national, and alliedhealth professional resources, which mayenhance the quality of life of patients withchronic psychiatric and neurologicalillnesses.• Demonstrate the ability to lead and	 Teaching Methods Direct patient care Interdisciplinary rounds/conferences Review of evidence based medicine and guidelines of the AAN Departmental conferences including M&M 	 Assessment Strategy Global ratings Focused Record Review In-training examination

 delegate authority to healthcare teams needed to provide comprehensive care for patients with psychiatric and neurological disease. Demonstrate skills for the practice of ambulatory medicine, including time management, clinic scheduling, and efficient communication with referring physicians. Utilize appropriate consultation and referral mechanisms for the optimal clinical management of patients with complicated medical illnesses. Demonstrate awareness of the importance of adequate cross coverage. Use accurate medical data in the communication with and effective management of patients. The physician shall demonstrate knowledge of 	 Direct patient care Clinical Rounds Sign out rounds Data base log system/patient list Direct patient care 	 Global ratings 360 degree evaluation Global ratings
and interact with managed health systems	Clinical teaching	Focused record review
	 Rounds w/case manager/social work 	
Neurology Systems-Based Practice (PGY	3 & 4)	
Objectives	Teaching Methods	Assessment Strategy
 In the community system, the physician shall: Recognize the limitation of healthcare resources and demonstrate the ability to act as an advocate for patients within their sociocultural and financial constraints. Demonstrate knowledge of the legal aspects of psychiatric and neurological diseases as they impact patients and their families. Demonstrate an understanding of risk management. 	 Direct patient care Modeling Clinical rounds 	 Global ratings Focused record review
The physician shall demonstrate knowledge of and interact with managed health systems	 Direct patient care Clinical teaching Rounds with case manager/social work 	Global ratingsFocused record review

The physician shall demonstrate knowledge of	Direct patient care	Global ratings
community systems of care and assist patients	Clinical teaching	Focused record review
to access appropriate care and other support	 Rounds with case manager/social 	
services.	work	