

SUNY Downstate Medical Center

**Neurology Department Handbook
SUNY Downstate Medical Center
Adult and Pediatric Neurology**

2017-2018

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I. Program Goals and Objectives

A. For Adult Neurology

The aim of the Adult Neurology Residency Training Program at SUNY-Downstate Medical Center is to provide the graduate with extensive, high-quality, clinical training in neurology so that he or she is prepared to practice neurology competently and independently. The training takes place over four years.

PGY 1 Goals:

- To develop a solid foundation of internal medicine.
- The resident will also begin to develop a foundation in inpatient and outpatient neurology.

PGY 1 Objectives:

- To successfully complete rotations in general medical wards, intensive care, hematology-oncology, and ambulatory care at UHB, KCH, and BVA.
- To successfully complete 1 month each of neurology and psychiatry.
- To successfully attend Neurology continuity clinic.

PGY 2 Goals:

- To develop competency in the neurologic exam and evaluation of neurologic patients for common neurologic conditions including epilepsy, neuroimmunology, neuro-oncology, and neurovascular disorders.
- To develop skills in the neurologic exam and in the evaluation of patients in inpatient and outpatient settings.
- To develop an understanding of the pathophysiologic basis of diseases of the nervous system
- To develop competency presenting at conferences.

PGY 2 Objectives:

- To successfully perform rotations on the ward and consultation services at KCH, the general and stroke services at UHB, EMU, and the neuro-oncology consultation service at MSKCC.
- To successfully complete a rotation in neuropathology.
- To present cases and topics at junior resident conferences (Case conference and Directors Rounds) and morning report.
- To complete the first NEX exam.

PGY 3 Goals:

- To develop consultation skills on the KCH consultation service, and the UHB general and stroke services.
- To gain exposure and develop skills in Neurocritical care setting
- To begin subspecialty elective training.
- To begin to develop skill in pediatric neurology.
- To continue to develop outpatient evaluation skills in Continuity Clinic.

PGY 3 Objectives:

- To complete an initial month of pediatric neurology.
- To complete a month of Neurocritical care at Mount Sinai Neurosurgical Intensive Care Unit.
- To successfully lead clinical teams at UHB as the senior resident for the general and stroke consultation services.
- To present at subspecialty conferences (Neurobehavior and Neurovascular) and morning report.
- To give a mentored, in-depth, departmental presentation.
- To complete 3 NEX exams.

PGY 4 Goals:

- To develop leadership skills on the KCH ward and consultation services.
- To develop subspecialty expertise in the remaining 2 months of pediatric neurology.
- To complete subspecialty elective training.
- To hone outpatient clinical skills in continuity clinic, epilepsy clinic, neuromuscular clinic, and screening clinic.

PGY 4 Objectives

- To successfully serve as a senior resident on the KCH ward and consultation services.
- To complete subspecialty elective training that meets the resident's self-assessed plan of study.
- To give a final departmental presentation.
- To prepare a publication or manuscript of publication quality.
- To present at subspecialty conference (epilepsy conference, other specialty conferences) and morning report.

- To have completed a total of 5 NEX exams in neuromuscular, neurobehaviour, neurocritical care, outpatient, and child neurology.

The ACGME competencies are integrated and developed throughout the residency. In the PGY 1 year, residents acquire the basics of patient care, medical knowledge, practice based learning and improvement, interpersonal communication skills, professionalism, and systems-based practice in the inpatient rotations, their neurology continuity clinic, and in didactic conferences.

In the PGY 2 – 4 years, residents further develop skills in the 6 ACGME competencies. Patient care skills are developed on the ward, consultation, general and stroke services at the various sites. The general services provide exposure to a wide range of neurologic disease while the stroke service provides comprehensive care in this specialty. Medical knowledge is advanced through the residency and is enhanced with the final departmental presentation. Practice based learning and improvement is developed throughout the 4 years with the residents taking on more active roles in journal club, presenting at conferences, and in applying evidence based medicine techniques to seek information to support patient care. Senior residents use this approach to lead their clinical teams. Interpersonal and communication skills are developed as the residents interact with their colleagues, members of other services, and staff. Residents participate in and take leadership roles in interdisciplinary team rounds as they progress to senior residents. Residents evaluate their performance and develop individual plans for improvement. Professionalism is developed throughout the residency. As residents get progressively more responsibility and autonomy, professionalism is stressed and supported. In preparation for the ward senior month, leadership and professionalism skills are discussed in an interactive senior residents meeting. Systems based practice is nurtured throughout the residency as junior residents participate in interdisciplinary rounds and quality assurance meetings and projects. As residents progress to senior residents, they lead these meetings and develop projects to enhance patient safety and quality of care by addressing systems issues.

Sufficient flexibility has been built-in to permit maturation of individual talents within the broad range of the neurological sciences. Our faculty has subspecialty expertise in epilepsy, movement disorders, memory and cognitive disorders, neuro-critical care, neuromuscular diseases, neurovascular disorders, and pediatric neurology. We have partnered with Memorial-Sloan-Kettering Cancer Center for neuro-oncology. Faculty from the related specialties of Neuropathology, Neuroradiology, Neurosurgery, and Psychiatry also participate in didactic and clinical activities in the Neurology residency. Residents perform

self-assessments and plan their subspecialty education tailored to meeting their individual career goals.

B. For Pediatric Neurology

i. General

During the 3 year program residents are provided with a broad and deep foundation in general neurology and, specifically, pediatric neurology, thereby preparing them for independent practice or entry into a subspecialty/fellowship. Extensive clinical experience with diverse populations and bedside teaching are emphasized and are supplemented with a variety of didactic sessions. Particular attention is given to the humanistic, social and ethical aspects of neurology practice, as well as to the acquisition of academic knowledge and appreciation of the intellectual challenges of the specialty.

ii. Year 1:

The main goal of training in the first year is for each resident to achieve competence in the performance of the neurological evaluation and the development of management skills with both inpatients and outpatients. Specifically, the resident should show proficiency in collecting the relevant historical information, performing an accurate general and neurological examination, localizing the lesion to the appropriate areas of the nervous system, and beginning to develop differential diagnoses and management skills for the more common neurological entities. This is accomplished through 6 months of supervised experience on the adult neurology ward and consultation services at our University Hospital and at Kings County Hospital Center. There are 3 months of OPD rotation (one month in 1st, 2nd and 3rd years); this provides an opportunity to concentrate on adult neurology outpatient care. Residents are also assigned to a half day per week in a general pediatric neurology continuity clinic. They attend this continuity clinic all three years. Two months of electives allow the resident to obtain additional training in subspecialties, such as neuroradiology, neuropathology, epilepsy/EEG, neuromuscular/EMG. Early in the academic year, there is an introductory lecture series covering neurological emergencies, and another introductory lecture series on neuroradiology.

All residents are required to take the RITE exam each year. The advisors, the program director and the Neurology Department Education Committee (CEC) review exam results and the advisors meet with residents to review their performance. To prepare for the Board Examination, sessions covering the major topics on the RITE exam and Boards are conducted to motivate self-study.

Throughout the first year, the resident's clinical skills are monitored by the ward, consult, and continuity clinic attendings and the senior residents. Progress is reviewed monthly by the program director and the CEC. When the resident is deemed sufficiently competent, on-call responsibilities in the emergency room (i.e. without the additional presence of a senior resident) are assigned.

Each resident is assigned a faculty advisor. During all three years of training advisors meet with their assigned residents at least twice a year to review the resident's performance and address any concerns. Six-month summary evaluation forms are completed and submitted to the Program Director. Failure to achieve minimum competence (indicated by borderline and/or unsatisfactory evaluations from clinical rotations) is presented to the Education Committee (CEC), and appropriate action is determined (e.g. probation or suspension, need for repetition of a rotation, examination, or complete year or development of a remediation plan). The Committee's decision is reviewed by the Chairman, and, if agreed, the Chairman and Program Director, meet with the resident to discuss the Committee's determination and the plan for remediation.

iii. Year 2:

Pediatric neurology residents begin their 6 months of inpatient rotations on pediatric neurology in the second year. During these rotations the residents develop the skills required to lead a team of rotating residents and students and to responsibly monitor the management of inpatients under the supervision of the attending. They also provide consultations in the emergency rooms at UHB and KCH and on inpatients on other services. They learn to manage pediatric neurology emergencies and to communicate with residents and attendings on other services. During the first several months of the inpatient rotations, the second year resident is closely supervised by a third year resident. Residents also attend their continuity clinic plus the subspecialty and a general pediatric neurology clinic each week.

Residents are also required to spend a full month on child psychiatry. The second month of adult neurology outpatient rotation occurs this year. Three to four months of additional electives or research are available this year. Electives must be approved by the program director.

iv. Year 3:

During their final 6 months of inpatient rotations on pediatric neurology the residents improve the skills required to lead a team of residents as a ward senior. This is monitored closely by the attending. They closely supervise the 2nd year residents during their initial 2-3 months on the pediatric neurology inpatient/consult service and are involved in supervising and teaching rotating residents and students. They also continue to attend the subspecialty clinics and their continuity clinic during this time. As noted previously one month is spent on adult neurology outpatient service.

Six months of elective time allows the resident to pursue other interests, such as neurodevelopmental disabilities, movement disorders, genetic metabolic disorders, neuro-oncology, clinical neurophysiology and research. These must be approved by the program director.

Teaching responsibilities for both 2nd and 3rd year residents involve supervision and training of residents and medical students rotating on pediatric neurology. The residents also participate in teaching medical students during the students' neuroscience block. Residents are also responsible for preparation of 2-3 case presentations/ topic reviews, 1-2 epilepsy reviews, 1-2 journal clubs and a major presentation to the entire department each year. All these are under the direction of an assigned attending.

At the end of training the Program Director, along with input from the advisors and the Education Committee, provide a final evaluation verifying that the resident has achieved adequate ability to practice competently and independently.

The American Board of Psychiatry and Neurology (ABPN) now mandates that demonstration of clinical skills competency is required in order to apply for specialty certification and that this competency should be achieved during residency. Demonstration of competency in evaluating a minimum of five different patients during residency is required. For Child Neurology Residents this involves examination of one adult and four pediatric patients. An ABPN-certified faculty member observes the resident's performance and scores the resident's interviewing skills; neurological exam skills; humanistic qualities, professionalism and counseling skills. The adult patient exam is completed in the 1st year, three of the four pediatric exams in the 2nd year and the final pediatric exam early in the 3rd year.

***Adult neurology residents are required by the RRC to complete three months rotation on Pediatric Neurology during their training. They rotate one month second year and two months during third year.-

II. Hospitals

A. University Hospital of Brooklyn (UHB):

The growing subspecialty services currently provide training in epilepsy, dementia, movement disorders, neuromuscular disorders, and stroke. The consultation and ward services also provide basic neurology training. Residents rotate through UHB throughout their neurology residency.

B. Kings County Hospital Center (KCHC):

The major teaching affiliate. Provides a forum for learning the basics of neurology and a stroke unit. Residents rotate through KCH for all four years of neurology residency.

C. Memorial Sloan-Kettering Cancer Center (MSKCC):

Residents rotate on the neuro-oncology consultation service in their PGY 2 year.

D. Mount Sinai School of Medicine (MSSM).

Residents rotate in the Neurosurgical Intensive Care Unit for one block during their PGY 3 year.

E. Brooklyn Veterans Administration Hospital (BVA):

A Veterans Administration hospital that provides training in general internal medicine, hematology/oncology, intensive care, ambulatory care, and palliative care in the PGY 1 year.

III. Inpatient Rotations

A. Overview

The inpatient exposure takes place in a variety of clinical teaching settings. Throughout all rotations intensive attending teaching and supervision is provided with progressively more autonomy given as each resident's skill increases.

Subspecialty inpatient unit exposure takes place in the Stroke Units at UHB, and KCH, BH, and in the Epilepsy Monitoring Unit at UHB.

B. Neurology Inpatient Services

1. Kings County Hospital Center (KCHC)

CONTACT PERSON: Dr Helen Valsamis (Pager: 917-760-0888)

a. Ward Service

- i. Inpatient general neurology ward and stroke services
- ii. Senior (PGY 4), Neuro juniors (PGY 2), Internal Medicine rotators (PGY 1 & 2), EM-IM rotators (PGY 2) and medical students (MS 3-4)

b. Consultation Service

- i. Inpatient and Emergency Room consultations including
- ii. Senior (PGY 3,4), Neuro juniors are (PGY 2-3), Emergency Medicine rotators (PGY 1 & 2), EM-IM (PGY 2), and medical students (MS 3-4)

2. University Hospital of Brooklyn (UHB)

CONTACT PERSON: Dr Yaacov Anziska (Pager: 917-218-4313)

a. General Service

- i. Inpatient general neurology ward and consultation service
- ii. Neuro senior (PGY 3/4), Neuro Junior (PGY 2), Internal medicine rotators (PGY 1), Psychiatry rotators (PGY 1), and medical students (MS 3-4)

3. Stroke Service

- a. Inpatient stroke ward and consultations service
- b. Neuro resident (PGY 3), Neuro junior (PGY 2), Internal medicine rotators (PGY 2), Psychiatry rotators (PGY 1), and medical students (MS 3-4)

C. Preliminary Internal Medicine Inpatient Rotations

The inpatient exposure takes place in a variety of clinical teaching settings. Throughout all rotations intensive attending teaching and supervision is provided with progressively more autonomy given as each resident's skill increases.

Most of the preliminary year is general internal medicine. Subspecialty inpatient unit exposure takes place in the Intensive Care Units at KCH, and the VA, in the Hematology/Oncology Unit at the VA and in the Emergency Room at KCH.

1. Medicine Inpatient Services:

a. Kings County Hospital Center (KCHC)

i. Ward Service

- Inpatient general medicine services (Blue and Red teams)
- Senior (PGY-3), juniors (PGY 1), medical students (MS3)

ii. Emergency Department

- All adult areas of Emergency Room (CCT, A, B)
- Residents (PGY 1) work directly with the attending

b. University Hospital of Brooklyn (UHB)

i. Ward Service

- Inpatient general Medicine services
- Senior (PGY 2), 2 juniors (PGY1), and medical students (MS3)

ii. Hematology Oncology Service

- Inpatient general Medicine services
- Senior (PGY 2), 2 juniors (PGY1), and medical students (MS3)

c. Brooklyn Veterans Administration Hospital (VA)

i. Ward Service

- Inpatient general Medicine services
- Senior (PGY 2), 2 juniors (PGY1), and medical students (MS3)

ii. Medical Intensive Care Unit

- Inpatient critical care service
- Senior (PGY 2), 2 juniors (PGY1)

2. Psychiatry Inpatient Service:

- Location TBD
- Residents (PGY 1) work directly with the attending

IV. Outpatient Rotations

A. Outpatient Training

Training in outpatient neurology takes place in the general continuity clinic, in subspecialty clinics, and in outpatient rotations.

1. Continuity Clinic (General Neurology Clinic)

- Residents follow patients for four years in the general neurology clinics where they see a wide spectrum of neurologic disorders. The general clinic rotation is designed to provide the opportunity to provide continued care and exposure to a wide variety of neurologic conditions.
- Continuity clinics are at KCH and UHB

2. Subspecialty Outpatient Training

- Second and Third year neurology residents (PGY 3 & 4) spend time in epilepsy, neuromuscular, and ED screening clinics.
- Residents rotate through the following subspecialty clinics at various points in their residency: Epilepsy (UHB/KCH), neuromuscular/MDA (UHB), movement disorders (UHB, KCH), memory disorders (UHB), and pediatrics (UHB/KCH), ED screening (KCH). The subspecialty clinic rotations are designed to provide exposure to state of the art treatment of selected conditions.

3. Outpatient Rotation

- May be done as a 1 month elective.
- Additional subspecialty exposure can be arranged individually. Residents have done outpatient subspecialty months in areas such as neurodegenerative diseases or headache or an outpatient rotation in multiple disciplines.

B. Internal Medicine Outpatient Training

Ambulatory Care

- This is done at the VA in a one month block.
- Medicine general and specialty clinics (pulmonary, rheumatology, GI, Neurology) are attended as well as a didactic curriculum.

C. NYC H+H Kings County Hospital Neurology Clinic

1. Goal:

This handbook is designed to serve as a reference manual for residents rotating through adult neurology outpatient clinics.

2. Objectives:

To define the role of the resident in the care of patients in general and subspecialty neurology clinics (SSNCs).

To define the pathways for patients to enter and exit general and SSNCs

To provide a listing of the Neurology clinics, commonly used outpatient resources, and how to access them.

To provide tools to use

- eConsults
- clinical pathways
- PDSA pathway
- notes for Epilepsy, Movement, Neuropsychiatry, and Stroke Clinic

3. General Clinic Resident Expectations

You are expected to arrive at each clinic on time, with computer access fully operational (including Quadramed, PACS, eprescribing, and narcotics eprescribing).

Planned absences must be scheduled with your chief residents in advance. We have patients scheduled for you for each session you are scheduled to be present.

Unplanned absences must be covered and the usual consequences apply.

a. Subspecialty Clinic Rotation Resident Expectations

You are expected to be on the SUNY Downstate campus Monday – Friday from 9 AM – 5 PM.

You are expected to arrive at each clinic on time, with computer access fully operational (including Quadramed, PACS, eprescribing, and narcotics eprescribing).

Planned absences must be scheduled with your chief residents in advance. We have patients scheduled for you for each session you are scheduled to be present.

Unplanned absences must be covered and the usual consequences apply.

b. Extra-clinic patient care

- i. The SSNC resident is expected to manage the eConsult list.
- ii. The SSNC resident is expected to handle clinic scut such as medication refills.

c. Didactics

i. General clinics: Assigned readings are posted the Neuro Drive

ii. SSNCs:

- Assigned readings are posted on the Neuro Drive
- You are expected to attend the Neurology conferences.

iii. Quality Insurance (QI) project: Each resident is expected to participate in a QI project while on the SSC rotation.

d. Clinic Attending Expectations

- i. You are expected to arrive at clinic on time.
- ii. You are expected to precept the residents and to balance both resident/fellow teaching and patient care, to teach both clinically and theoretically, to assist Bernadette in managing the patient flow, and to sign off on patient notes before leaving clinic.

**e. Neurology Subspecialty Outpatient Clinic Neurology
Resident Schedule**

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--|--|--|---|--|
| 9AM eConsult 10AM meeting with Dr. Valsamis B5110 | 9AM Case Conference 10AM eConsult | 8:30 AM E-8 Ophtho Area Neuro- Ophthalmology | 9AM eConsult | 9AM Grand Rounds 10AM eConsult |
| Noon Conference | | Noon Conference | Noon Conference | Noon Conference |
| 1 PM KCH E-8 Screening Clinic | 1PM E-1 Med Spec* 1st, 3rd, 4th, and 5th are Movement 2nd is LP and Neuro-immuno | 1PM UHB Suite C Neurosurgery ** alternating with eConsult | 1PM E-5 Suite F* 1st, 2nd Epilepsy 3rd No clinic 4th, 5th Neuromuscular | 1PM E-1 Med Spec* 1st is Neuropsychiatry 2nd, 3rd, 4th, 5th are Stroke |

*Of the Month (not block).

- For Wednesdays, only one resident at a time for Neuro-optho. If there are 2 residents then send 1 per half day.
- You do NOT attend your continuity clinic during this rotation. You ONLY attend the KCH subspecialty clinics.
- Check your emails and check in regularly with Bernadette. She will be emailing you the clinic scut and calling you about urgent clinic issues

| Clinic | Supervisor | Contact Information |
|--|--|--|
| Screening Clinic | Helen Valsamis, MD | 718-245-2550 718-790-0446 |
| Movement/Parkinson's LP Clinic 8/8, 9/12, 10/10, 11/14, 12/12, 1/9, 2/13, 3/13, 4/10, 5/8, 6/12 | Mahendra Somasundaram, MD | 718-245-5403 917-760-0915 |
| Neuromuscular Clinic | Jonathan Perk, MD Paul Maccabee, MD | 718-245-5403 / 917-664-6575 718-270-1611 / 917-760-0885 |
| Neuro-immunology Clinic | Jonathan Perk, MD | 718-245-5403 / 917-664-6575 |
| Neuro-ophthalmology Clinic | Valerie Elmalem, MD | 917-533-7796 |
| Neuro-psychiatry Clinic: 7/7, 8/4, 9/1, 10/6, 11/3, 12/1, 1/5, 2/2, 3/2, 4/6, 5/4, 6/1 | Angela Scicutela, MD | 917-836-8645 718-245-5619 |
| Stroke | Susan Law, DO | 917-538-8511 |
| Neurosurgery Clinic** 7/5, 7/19, 8/2, 8/16, 8/30, 9/13, 9/27, 10/11, 10/25, 11/8, 11/22, 12/6, 12/20, 1/3, 1/17, 1/31, 2/14, 2/28, 3/14, 3/28, 4/11, 4/25, | Ali Sadr, MD | 718-245-4707 |

5/8, 5/23, 6/6, 6/20

**f. Neurology Subspecialty Outpatient Clinic Psychiatry
Rotator Schedule**

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|------------|---|--|---|---|---|
| AM | 9 AM KCH Morning Report, KCH B-5103 KCH Consult Rounds | 9 AM Case Conference 10 AM KCH Consult Rounds | 8:30 AM KCH Consult rounds | 8:00 AM EEGs and Epilepsy Monitoring Unit Rounds | 9:00 AM Grand Rounds |
| 12N | Noon Conference | | Noon Conference | Noon Conference | Noon Conference |
| PM | 1 PM UHB Suite C General Neurology | 1 PM E-1 Med Spec Movement Disorders Neuro-Imunol Lumbar Puncture | 1 PM E-8 Neuro General Neurology | Psychiatry Lectures | 1 PM E-1 Med Spec 1 st Friday is Neuropsychiatry 2 nd , 3 rd , 4 th , 5 th , are Stroke |

| Clinic | Supervisor | Contact Information |
|-----------------------------|---|--|
| Screening Clinic | Helen Valsamis, MD | 718-245-2550 718-790-0446 |
| Movement/Parkinson's Clinic | Mahendra Somasundaram, MD Ivan Bodis-Wollner, MD | 718-245-5403 917-760-0915 718-270-2975 917-760-0880 |
| Neuromuscular Clinic | Jonathan Perk, MD Paul Maccabee, MD | 718-245-5403 917-664-6575 718-270-1611 917-760-0885 |
| Neuro-ophthalmology Clinic | Valerie Elmalem, MD | 917-533-7796 |
| Neuro-psychiatry Clinic | Angela Scicutela, MD | 718-245-5619 |
| General Neurology Clinic | Helen Valsamis, MD | 718-245-2550 718-790-0446 |
| Stroke/Lumbar Puncture | Susan Law. DO | 917-538-8511 |

Conference locations are posted on the DMC Neurology website

4. The Clinics

a. General Neurology Clinic (Continuity Clinic)

- Meets Wednesdays and Thursdays, 1-5 PM, in E building, 8th floor.
- Incoming patients
 - Discharges from inpatient services: email patient name, MR#, telephone number, which clinic, which resident, time frame to Bernadette.
 - Most patients 1-2 months, subject line “clinic appointment for inpatient discharge”
 - For earlier appointments send a separate email, subject line “rapid appointment for inpatient discharge”
 - Referrals from other outpatient clinics. This is handled by the SSC resident via eConsults.
 - Referrals from the ED. When you want to see the patient, specify where and when the patient comes to your clinic (unless you are at DMC). They do NOT go to screening clinic.
- Outgoing patients
 - Please discharge any appropriate patients from Neurology Clinic. Primary care is eager to take them. Every Neurology Clinic patient must have primary care.

b. Epilepsy Clinic

- Meets the first and second Thursdays, 1–5 PM, E building, 5th floor, Suite F.
- Incoming patients – referred from General Neurology Clinic or from the Neurology Consult or Ward Services.
 - Please refer patients you think might benefit from extra expertise and attention, particularly young patients.
 - Patients MUST be able to work with their physician to improve seizure control and improve quality of life.
 - Tell the Neuro Clinic clerk or email Bernadette.
- Discharging patients

- Patients who the attending deems unsuitable for clinic will be sent back to primary care or General Neurology Clinic.

c. Lumbar Puncture Clinic

- Meets the second Tuesday of the month, 1 PM, E building, 1st floor, Medical Specialties Area.
- The resident in Movement Clinic performs the LPs, supervised by Dr. Susan Law
- Patient selection – You MUST discuss the procedure in detail with your patient. Once a patient has been determined to need a lumbar puncture, please assess for bleeding risks (history, exam, platelets, coagulation studies) and herniation risks (brain imaging and neuro exam). Once you have determined that a lumbar puncture would be safe, then document in your note the reason for the lumbar puncture and the studies you want to have sent.
- Patient referral – email Bernadette for scheduling.
- How patients enter and exit – this is a procedure clinic so patients come only for their procedure.
- Notes – A procedure note must be completed by the SSNC resident.
- Special assessments – the patient is monitored for 2 hours after the LP.

d. Movement/Parkinson's Disease Clinic

- Meets Tuesdays from 1 – 5 PM, E building, 1st floor, Medical Specialties Area.
- Patient selection – please refer patients with Parkinson's Disease and other movement disorders.
- Patient referral – let the clerks know the patient will be followed up in Parkinson's/Movement Clinic.
- How patients enter and exit – patients are referred ONLY by a Neurologist and complete the initial intake. If a patient is deemed by the attending to not be a good candidate for Movement/Parkinson's Clinic then he or she will be referred back to Neurology Clinic or to another suitable location.

e. Neuromuscular Clinic

- Meets the 4th and when there is on Thursdays of the month, 1-5 PM, E building, 5th floor, Suite F.
- Patient selection
 - patients with neuromuscular disorders who would benefit from subspecialty attention.
 - let the clerks in General Clinic know and they will schedule.
- How patients enter and exit - patients are referred by Neurology. If a patient is deemed by the attending to not be a good candidate for Neuromuscular Clinic then he or she will be referred back to Neurology Clinic or to another suitable location.

f. NeuroPsychiatry Clinic

- Meets the 1st Friday of the month, 1-5 PM, E building, 1st floor, Medical Specialties Area.
- Patient selection – discuss with your attending and present the patient to Dr. Herman Moreno.
- Patient referral – Once Dr. Moreno OKs it, then email Bernadette to schedule. Neuropsychiatry patients have both Neuro and Psych issues. Neuropsychology patients are for Neuropsych evals or dementia patients who are stable neurologically.
- How patients enter and exit – at the discretion of Dr. Moreno and Dr. Scicutela.

g. NeuroScreening Clinic

- Meets Mondays, 1-5 PM, E building, 8th floor.
- This clinic is scheduled by the ED clerks and is ONLY for ED patients who need evaluation by Neurology and have not been evaluated by Neurology in house.

h. Neurosurgery Clinic

- Meets alternate Wednesdays, 1-5 PM in UHB, 1st floor, Suite C.

i. Stroke Clinic

- Meets Fridays, 1-5 PM, E building 1st floor, Medical Specialties Area.
- Patient selection – patients with stroke would benefit from meticulous outpatient stroke attention, after discussion with Dr. Susan Law.

- Patient referral – after discussion with Dr. Law, email Bernadette with the contact information and the time frame.
- How patients enter and exit – at the discretion of Dr. Law.

5. Commonly used resources

- **EEG**

- Order through Quadramed
- The clerk will give the patient an EEG information sheet including the instruction to call 718-245-4715 to schedule.
- Describe the procedure to your patient, particularly the hair requirements.

- **EMG/NCV**

- Order through Quadramed
- The clerk will give the patient the Neuro EMG information sheet including the instruction to call 718-245-5403 to schedule.
- Be sure to describe the procedure to your patient.

- **EMU**

- Refer to Downstate, 718-270-2959
- You will need patient clinical information and insurance information.

- **IV Infusions**

- Protocols are now set up for IVIG and others are being developed. Refer to the specific protocol and check with Dr. Paul Maccabee.

- **Lumbar puncture**

- Discuss the procedure with your patient.
- Document normal coagulation studies within 1 month, negative bleeding history and lack of risk for herniation (negative head CT or MRI).
- Document the reason for the LP and what studies you would like sent in your note.
- You are responsible for following up all results.
- Email Bernadette with the patient name, MR#, phone number, reason for the LP, and desired studies.

- **MRIs**

- Email Bernadette who will schedule the appointment.
- Be sure the patient can tolerate MRI – ie not claustrophobic, etc.

- With contrast requires BUN/creatinine within 1 month.
- MRI safety sheet on all patients.
- Special protocols
 - Epilepsy Protocol (for phase 1). Specify the location of interest for phase 2.
 - Multiple sclerosis
 - Stroke
 - Traumatic Brain Injury (Diffusion Tensor Imaging)
- Email Bernadette with the patient name, MR#, phone number, reason for the LP, and desired studies.
- **Neurosurgery Consultations**
 - Referral via Quadramed.
- **Neuropsychology Evaluations (aka Neuropsych testing)**
 - Neuropsychology referral form – from clinic.
 - A Neuropsychology Clinic is under construction.
- **Pain Clinic**
 - For intractable pain that has not responded to our treatment.
 - Refer via Quadramed.
- **Rehab Clinic**
 - For physical, occupational, and speech/swallowing therapy.
 - Refer via Quadramed.
- **Sleep studies**
 - KCH via Quadramed for pulmonary indications.
 - DMC 718-270-2959 for neurologic indications.
- **Spine Clinic**
 - An interdisciplinary clinic with Rehab, Orthopedics, and Neurosurgery.
 - Refer via Quadramed.
 - Ask the clerk for a Spine Clinic referral and information sheet.
- **Social work**
 - Let the clerk know and they will direct the patient to social work.
- **Legal assistance**
 - There is a Legal Aid Clinic on Fridays. The clerks will direct the patient.

KCHC Outpatient eConsult Scheduling

1. Open QuadraMed CPR
2. Click on “Clinic eConsults” – upper left most tab
3. Click on “Neurology”
4. Click on a patient who has not been reviewed (will be shown as “scheduled”)
5. Click on “Document”
6. Click on “Consultant Recommendation”
7. Review the case and decide on the appropriate follow up.
 - Review previous notes
 - i. Is the patient already followed in Neurology Clinic?
 - ii. Is the patient an appropriate referral to Neurology Clinic? If so, what time-frame.
 - iii. Should the patient be referred back to primary care? If so then do a long form note.
8. If pt will be scheduled for Neuro Clinic, please decide the priority and continue click OK until “Accept as partial.” The chart will now be sent to the clinic manager who will schedule the Neuro Clinic appointment and contact the patient.
 - High = 1 - 2 weeks, Medium = 1 - 2 months, Low = next available
9. If pt doesn't need Neuro Clinic at this point and will return to PMD, please select “eConsult-Do not schedule/remove future appointments.....) and complete “accept as partial”. You may write a comment for the scheduler.
10. For any patient you refer out, you must document what your recommendations are, politely. For example, if there is a pathway, attach it to the note as described below. For other referrals, explain clearly and politely what your recommendations are.
11. How to refer back or out, open patient's chart
12. Under “Item for review”
13. Click “Con:Neurology”
14. Click “documentation”
15. Click on “2 V/e-Consult (non-Visit) Note
16. Click “Long Form Note” and copy/paste the clinic pathway files and save

Note: All “return to PMDs” or “referrals out” should be discussed with Dr. Helen Valsamis and her name assigned as consultant attending.

Dear Colleague,

The Neurology Clinic is oversubscribed and we have developed clinical pathways for selected conditions in conjunction with Ambulatory Care and at this point, the patient falls within the primary care portion. The clinical pathway contains indications for referral to Neurology and other subspecialty clinics. Please follow the pathway and refer to a specialist if the patient meets the criteria. If you have any questions, concerns, or feedback please contact us by email at neurology.service@nychhc.org or by telephone (718-245-5403).

Thank you.

Kings County Hospital - Neurology Clinical Pathway

Acute Low Back Pain

1. Diagnosis

- Pain in the lower back (lumbar-sacral) region, with or without radiation, lasting < 6 weeks in a non-pregnant patient

2. Initial Evaluation by Primary Care Team

- History and physical examination
- Red Flags requiring diagnostic workup
 - i. Age <18 or > 55 years
 - ii. History of malignancy
 - iii. Immunosuppression: HIV, Steroid use etc.
 - iv. Constitutional symptoms (fever, chills, unintended weight loss)
 - v. Structural abnormality of the spine
 - vi. Motor deficit (not due to analgesia)
 - vii. Anal or urinary sphincter disturbance
 - viii. Saddle anesthesia
 - ix. Gait disturbance (other than analgesia)
- Diagnostic workup if red flags are present
 - i. Spine x-rays, MRI or CT as indicated, with contrast if tumor or infection suspected
 - ii. CBC and diff, ESR, C-reactive protein
 - iii. EMG/NCV if indicated
 - iv. Bone scan if indicated
- If red flags are absent, a diagnostic workup is generally not necessary

3. Initial Management

- Initial treatment for 8 weeks
 - i. Reassurance that most episodes resolve within 6 weeks
 - ii. Bed rest x 3 days MAXIMUM
 - iii. Back exercises and stretches
 - iv. Encourage gradual resumption of activity
 - v. Pain relievers: NSAIDs and gabapentin/pregabalin
 - vi. Consider steroid taper
 - vii. Muscle relaxants for up to 1 week
 - viii. Passive modalities (ice, heat) for symptomatic relief

4. Ongoing Management

- If pain has not improved in 8 weeks: reevaluate for red flags, change NSAID
- Consider referral to Physical Therapy for evaluation and treatment
- Consider referral to Pain Management for evaluation and treatment

5. Indications for Specialty Care Referral for Low Back Pain

- **Without radiculopathy or red flags**, refer to Physical Therapy
- **With focal neurologic signs**, refer to Spine Clinic
- **With loss of sphincter control or saddle anesthesia**: If acute - send patient to ED, if subacute to chronic - obtain MRI imaging. If imaging abnormal, refer to Spine or Neurosurgery Clinic. If supporting MRI findings are not present, refer to urology or GI as appropriate.

6. Criteria for Return to Primary Care

- When cause is neurologically stable and plan of care is established

Dear Colleague,

The Neurology Clinic is oversubscribed and we have developed clinical pathways for selected conditions in conjunction with Ambulatory Care and at this point, the patient falls within the primary care portion. The clinical pathway contains indications for referral to Neurology and other subspecialty clinics. Please follow the pathway and refer to a specialist if the patient meets the criteria. If you have any questions, concerns, or feedback please contact us by email at neurology.service@nychhc.org or by telephone (718-245-5403).

Thank you.

Kings County Hospital - Neurology Clinical Pathway

Chronic Low Back Pain

1. Diagnosis

- Pain in the lower back (lumbar-sacral) region, with or without radiation, lasting > 6 weeks in a non-pregnant patient

2. Initial Evaluation by Primary Care Team

- History and physical examination
- Red Flags requiring diagnostic workup
 - i. Worsening of low back pain and/or development of neurologic symptoms
 - ii. Age <18 or > 55 years
 - iii. History of malignancy
 - iv. Immunosuppression: HIV, Steroid use etc.
 - v. Constitutional symptoms (fever, chills, unintended weight loss)
 - vi. Structural abnormality of the spine
 - vii. Motor deficit (not due to analgia)
 - viii. Anal or urinary sphincter disturbance
 - ix. Saddle anesthesia
 - x. Gait disturbance (not due to analgia)
- Diagnostic workup if red flags are present
 - i. Spine x-rays, MRI or CT as indicated, with contrast if tumor or infection suspected
 - ii. CBC and diff, ESR, C-reactive protein
 - iii. EMG/NCV if indicated
 - iv. Bone scan if indicated
- If red flags are absent, a diagnostic workup is generally not necessary

3. Initial Management

- An appropriate trial of adequate medical therapy for 4-6 weeks
 - i. Bed rest x 3 days MAXIMUM
 - ii. Back exercises and stretches
 - iii. Encourage gradual resumption of activity
 - iv. Pain relievers: NSAIDs and gabapentin/pregabalin
 - v. Consider steroid taper
 - vi. Muscle relaxants for up to 1 week
 - vii. Passive modalities (ice, heat) for symptomatic relief
 - viii. Physical Therapy referral for evaluation and treatment

4. Ongoing Management

- If pain has not improved in 8 weeks
 - i. Reevaluate for red flags
 - ii. Referral to Pain Management for evaluation and treatment

5. **Indications for Specialty Care Referral for Chronic Low Back Pain – after step 3**

- **Without radiculopathy or red flags**, refer to Physical Therapy and Pain Management
- **With focal neurologic signs** refer to Spine Clinic
- **With loss of sphincter control or saddle anesthesia**: If acute - send patient to ED, if subacute to chronic - obtain MRI imaging. If imaging abnormal, refer to Spine or Neurosurgery Clinic. If supporting MRI findings are not present, refer to urology or GI as appropriate.

6. **Return to Primary Care**

- When neurologic conditions are stable and a plan of care is established.

Dear Colleague,

The Neurology Clinic is oversubscribed and we have developed clinical pathways for selected conditions in conjunction with Ambulatory Care and at this point, the patient falls within the primary care portion. The clinical pathway contains indications for referral to Neurology and other subspecialty clinics. Please follow the pathway and refer to a specialist if the patient meets the criteria. If you have any questions, concerns, or feedback please contact us by email at neurology.service@nychhc.org or by telephone (718-245-5403).

Thank you.

Kings County Hospital - Neurology Clinical Pathway

Neuropathy in a Diabetic Patient

1. **Diagnosis**

- Most commonly: distal sensory polyneuropathy (DSPN)
- Pain and/or progressive loss of sensation in a symmetric ascending pattern
- Risk of neuropathy correlates with duration of diabetes, glycemic control, and the presence of retinopathy and nephropathy

2. **Initial Evaluation by Primary Care Team**

- History and physical examination including neurologic examination
 - i. Sensory loss in a stocking-glove distribution (feet first, hands later)
 - ii. Depressed or absent reflexes

- iii. Mild atrophy and minimal weakness
- iv. Possibly autonomic features: orthostatic hypotension, gastroparesis, diarrhea, impotence

- Red flags requiring diagnostic workup
 - i. Significant weakness
 - ii. Rapid progression over weeks or days
 - 1. if over days, refer to ED
 - 2. if over weeks, refer to Neurology Clinic
 - iii. Focal neurologic deficits
 - iv. Autonomic symptoms – workup as appropriate to the symptom
- Initial Diagnostic workup
 - i. Hgb C, TFTs, folate, B-12, RPR, SPEP, UPEP
 - ii. EMG/NCV if indicated
 - iii. If red flags are absent, further workup is generally not necessary

3. Initial Management by Primary Care Team

- i. Tight glucose control
- ii. Symptomatic treatment
 - 1. Pain
 - a. Gabapentin or pregabalin for pain
 - b. Tricyclic antidepressants
 - c. Capsaicin cream
 - d. NSAIDs
- iii. Autonomic dysfunction
 - 1. Orthostatic hypotension: fludricortisone
 - 2. Gastroparesis: metoclopramide
 - 3. Diarrhea: clonidine
 - 4. Impotence: sildenafil

4. Ongoing Management by Primary Care Team

- If pain is controlled, continue symptomatic treatment and tight glucose control
- If pain is not improved in 8 weeks despite adequate therapy, refer to Pain Clinic
 - i. Refer to Pain Management for evaluation and treatment
- If other symptoms have not improved, refer to appropriate specialty

5. Indications for Neurology Clinic Referral

- Rapid progression of weakness
- Prominent autonomic features: consider referral to Cardiology Clinic as well

6. Criteria for Return to Primary Care

- Neuropathy diagnosis clarified and neurologic issues are stable

Dear Colleague,

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Thank you.

Kings County Hospital - Neurology Clinical Pathway

Migraine Headache

1. Diagnosis

- Headache present for at least 2 months
- Stereotypical pattern of unilateral throbbing pain which may radiate, lasting hours to days
- Associated symptoms of: photophobia, phonophobia, nausea, or vomiting

2. Initial Evaluation by Primary Care Team

- History consistent with migraine headache
 - i. No history suggestive of malignant, infectious, or other causes
- Physical exam, including neurologic exam, by primary physician
- CT or MRI of brain indicated if:
 - i. Focal neurologic signs or symptoms are present
 - ii. Headache pattern is changing (ie new headaches in the elderly)
 - iii. History suggests a seizure disorder
 - iv. Patient is not in usual age range for migraines

3. Initial Management by Primary Care Team

- Identify and reduce triggers with lifestyle modification
 - i. Sleep deprivation
 - ii. Changes in caffeine consumption (in all its forms)
 - iii. Irregular meals
- Headache diary (date, grade headache 1-10, note provoking or ameliorating factors)
- Abortive therapy if frequency is 1 per week or less and ADLs not affected (NSAIDS | Triptans)

- Prophylactic therapy if more than 1x week or interferes with ADLs
 - i. Neuromodulators: Topiramate, valproate
 - ii. Calcium channel blockers, beta blockers, tricyclic antidepressants
4. **Ongoing Management by Primary Care Team**
 - Assess treatment effectiveness with headache diary, look for patterns
 - Abortive therapy: reduces severity of attacks
 - Prophylactic therapy: reduces frequency and severity of attacks until ADLs minimally impacted
 5. **Indications for Neurology Clinic Referral**
 - Focal neurologic signs or symptoms are present
 - Diagnosis is in doubt
 - Patient has failed at least 2 trials of appropriate therapies
 6. **Criteria for Return to Primary Care**
 - Headache diagnosis clarified and neurologic issues stable
 - Headache pattern stable off medication or on chronic medication

Dear Colleague,

The Neurology Clinic is oversubscribed and we have developed clinical pathways for selected conditions in conjunction with Ambulatory Care and at this point, the patient falls within the primary care portion. The clinical pathway contains indications for referral to Neurology and other subspecialty clinics. Please follow the pathway and refer to a specialist if the patient meets the criteria. If you have any questions, concerns, or feedback please contact us by email at neurology.service@nychhc.org or by telephone (718-245-5403).

Thank you.

Kings County Hospital - Neurology Clinical Pathway

Syncope

1. **Diagnosis**
 - History of impairment or loss of consciousness, lasting < 2 minutes
2. **Initial Evaluation by Primary Care Team**
 - History of transient impairment of consciousness
 - i. No history suggestive of seizure: clonic movements, several minutes of confusion afterwards
 - ii. History of cardiovascular risk factors (MI, CAD, HTN, palpitations, SOB, exercise intolerance etc.)
 - iii. History of seizure risk factors (epilepsy, febrile seizures, severe TBI, meningitis, encephalitis, developmental delay or other neurologic condition predisposing to seizures, family history of hereditary seizures)

iv. Physical exam by primary physician (Orthostatic testing / Neurologic exam)

- EKG
- Serum glucose, thyroid screen
- MRI of brain and EEG indicated if: i. Focal neurologic signs or symptoms are present. ii. History suggests a seizure

3. Initial Management

- Cardiac evaluation, if indicated (Holter monitor, tilt table test)
- Treatment of underlying causes

4. Ongoing Management

- Depends on underlying cause (metabolic, cardiac, neurologic, psychogenic)

5. Indications for Neurology Referral

- Focal neurologic signs or symptoms are present
- MRI or EEG are abnormal
- History is suspicious for seizures or other neurologic condition

6. Criteria for Return to Primary Care

- Neurology opinion that the cause is not within the nervous system
- Underlying cause is treated and stabilized, manageable by Primary Care with occasional or PRN Neurology input

PDSA Worksheet for Testing Change

Aim: (overall goal you wish to achieve)

Every goal will require multiple smaller tests of change

| Describe your first (or next) test of change: | Person responsible | When to be done | Where to be done |
|---|--------------------|-----------------|------------------|
| | | | |

Plan

| <u>List the tasks needed to set up this test of change</u> | Person responsible | When to be done | Where to be done |
|--|--------------------|-----------------|------------------|
| | | | |

| Predict what will happen when the test is carried out | Measures to determine if prediction succeeds |
|---|--|
| | |

Do

Describe what actually happened when you ran the test

Study

Describe the measured results and how they compared to the predictions

Act

Describe what modifications to the plan will be made for the next cycle from what you learned

Epilepsy Initial Visit Note

Epilepsy History:

Description of typical events:

Description of worst event:

Has patient ever had status epilepticus?

Initial seizure onset:

Date of most recent seizure:

Seizure frequency:

sz in past month:

sz in past 3 months:

sz in past year:

Current AEDs:

Current side effects:

Other Meds:

Previous AEDs:

Were they effective?

Past side effects?

Adherence Estimate: __Excellent __Good __Fair __Poor

PMH:

Risk factors for epilepsy:

EEG:

Video-EEG:

Neuro-Imaging:

Other Evaluations (Neuropsych testing, WADA etc.):

Vital Signs:

Neuro Exam:

IMPRESSION:

Epilepsy Dx / Differential Dx:

Epilepsy syndrome:

Etiology:

Seizure control:

PLAN:

AEDs prescribed today:

Reasons for AED changes:

Studies ordered today:

Labs ordered today:

F/u: _____ month(s)

Counseling/Education:

___AED adverse effects ___bone health ___contraception ___driving

___epilepsy surgery

___psychological comorbidity ___pregnancy ___ seizure calendar ___seizure
safety ___VNS

Epilepsy Follow up Note

Interval History:

Date of most recent seizure:

sz in past month:

sz in past 3 months:

sz in past year:

Current Side Effects:

Adherence Estimate: __Excellent __Good __Fair __Poor

PMH:

Risk factors for epilepsy:

Current AEDs:

Other meds:

Prior AEDs:

EEG:

Video-EEG:

Imaging:**Exam:****IMPRESSION:**

Epilepsy Dx / Differential Dx:

Epilepsy syndrome:

Etiology:

Seizure control:

PLAN:

AEDs prescribed today:

Reasons for AED changes:

Studies ordered today:

Labs ordered today:

F/u: __ month(s)

Counseling/Education:

☐ AED adverse effects ☐ bone health ☐ contraception ☐ driving
☐ epilepsy surgery
☐ psychological comorbidity ☐ pregnancy ☐ sz calendar ☐ sz safety
☐ VNS

KINGS COUNTY HOSPITAL CENTER
DEPARTMENT OF NEUROLOGY

PROCEDURE FOR LUMBAR PUNCTURES IN NEUROLOGY CLINIC

- Lumbar punctures are scheduled from Neurology Clinic ONLY.
- They are done on the second Tuesday of the month and there is a limit of two (2) patients per session.
- Only certified PGY 4 residents will be doing LPs in LP clinic. More junior residents may do LPs ONLY under the supervision of the senior certified resident and/or the attending.

IN NEUROLOGY CLINIC – how to refer a patient:

1. **Write a referral note before scheduling a lumbar puncture including:**
 - The **indication** for the lumbar puncture
 - That you have checked and **contraindications** are not present
 - i. bleeding diathesis, ventriculoperitoneal shunt, mass lesion, significant scoliosis etc.
 - ii. PT/PTT within last 4 weeks is normal.
 - iii. Platelet Count within last 4 weeks is normal.
 - The **results and date of most recent head/spine CT or MRI.**
2. **You must then contact Bernadette Lyons to set up an appointment.**
 - She will give you the date and time and will contact your patient.
 - The Subspecialty Clinic resident will perform the LP and will contact you.
3. **You must follow up the results of the lumbar puncture and document your actions.**

IN LP CLINIC

1. **Prior to performing the lumbar puncture**
 - a. Check the indications, contraindications, coagulation history and studies.
 - b. Discuss the purpose of the procedure with the patient, explain the potential risks and benefits and answer any questions.
 - c. Obtain informed consent.
2. **Perform the lumbar puncture**
 - a. Use the procedure you were trained in including a time out.

- b. The patient should lie supine on a stretcher for 2 hours after the procedure. The nurse will obtain vital signs and monitor the patient.
- c. If there are any significant complications, send the patient to the ED.
- d. Be sure to document appropriately

3. Document the lumbar puncture with a procedure note

- a. The **indication** for the lumbar puncture.
- b. That you have checked and **contraindications** are not present (see above).
- c. The results and date of the most recent head CT or MRI.
- d. PT/PTT and platelet count from within 4 weeks.
- e. **Consent** for the lumbar puncture was obtained from the patient.
- f. The **time out** was performed with the nurse (do not forget to sign the time out sheet).
- g. The site was prepped and draped in sterile fashion.
- h. Lidocaine was used for local anesthesia.
- i. The level where the spinal needle was inserted and the gauge of the spinal needle.
- j. Opening and closing pressures.
- k. Approximately how much CSF was obtained (cc, ml). A description of the CSF (clear, cloudy, yellow, red, etc.).
- l. Whether there were any complications.
- m. **You must then email AND speak with the referring resident and cc the attending that the lumbar puncture was performed and that the referring resident has been informed and has indicated he/she will follow up on the results. The resident and attending contacted should be documented in the procedure note.**

Movement Clinic Initial Visit Note

HPI (include previous workup and treatments):

PMH:

Family History (include movement, neurologic, psychiatric, or developmental disorders):

General Examination:

Vital Signs:

Neuro Exam:

- **Mental Status Exam:**
 - **MMSE Score (see below):**
- **Cranial Nerves:**
- **Motor:**
 - **UPDRS Score (see below)**
- **Sensory:**
- **DTRs:**
- **Plantars:**
- **Coordination:**
- **Gait:**

Impression:

Plan:

Return Visit:

| | | | | |
|---|--|---|--|----------------|
| UPDRS | | SIDE EFFECTS (Grade each item 0-4) | | REMARKS |
| RATED NEUROLOGICAL EXAM (Grade each item 0-4) | | | | |
| FACIAL EXPRESSION | | ANOREXIA/N/N | | |
| SEBORRHEA | | CARDIAC | | |
| SALIVATION | | VIVID DREAMING | | |
| SPEECH | | INSOMNIA | | |
| SUB-TOTAL | | SOMNOLENCE | | |
| TREMOR | | CONFUSION | | |
| RUE | | HALLUCINATION | | |
| LUE | | AGITATION | | |
| FACE (LIPS, TONGUE) | | ANXIETY/DEPRES | | |
| RLE | | | | |
| LLE | | | | |
| SUB-TOTAL | | DYSKINESIS (Grade each item 0-4) | | |
| RIGIDITY | | RUE | | |
| RUE | | LUE | | |
| LUE | | RLE | | |
| NECK | | LLE | | |
| RLE | | | | |
| LLE | | GRIMACING | | |
| SUB-TOTAL | | MOUTH | | |
| COORDINATION | | TONGUE | | |
| FINGER TAPPING (R) | | HEAD BOBBING | | |
| FINGER TAPPING (L) | | | | |
| SUCCESSION MOVEMENTS, RUE | | SHOULDER | | |
| SUCCESSION MOVEMENTS, LUE | | RESPIRATORY | | |
| FOOT TAPPING, R | | ABDOMEN | | |
| FOOT TAPPING, L | | PELVIS | | |
| SUB-TOTAL | | ON/OFF | | |
| ARISING FROM CHAIR | | Random _____ X/Day | | |
| STANDING POSTURE | | End-Dose _____ X/Dose | | |
| STABILITY | | Total hours off daily _____ | | |
| GAIT | | Condition: Off <input type="checkbox"/> On <input type="checkbox"/> | | |
| BRADYKINESIA | | Stage 0 1 11 111 IV V | | |

CARDIOVASCULAR

Lying BP

| | | | | | | | |
|-----------|--|------------------------------------|---------------------|-----|----------|---------|----|
| SUB-TOTAL | | Mental Status (overall Assessment) | | | Sitting | BP | |
| | | 0 Normal | 2 Moderate Dementia | | Standing | BP | |
| | | 1 Mild Dementia | 3 Severe Dementia | | Lying | HR | |
| TOTAL | | QP since last visit | _____/_____/_____ | | | Sitting | HR |
| | | | Month | Day | Year | | |

Mini Mental Status Exam

Maximum

Score

Score

ORIENTATION

5

()

What is the (year) (date) (day) (month)?

5

()

where are we (state) (town r city) (hospital) (floor)?

REGISTRATION

3
“penny”.

()

Name 3 common objects (eg, “apple,” “table,”

Take 1 second to say each. Then ask the patient to

repeat all 3.

Give 1 point for each correct answer. Then ask the

patient to repeat all 3.

Count trials and record. Trials: _____

ATTENTION AND CALCULATION

5

()

Serial 7’s backwards. Stop after 5 answers.

Alternatively, spell “WORLD” backwards. The score is the number of letters in correct order

(D____L____R____O____W____).

RECALL

3
registration above.

()

Ask for the 3 common objects named during

Give 1 point for each correct answer. [Note: recall cannot be tested if all 3 objects were not remembered during registration].

LANGUAGE

2 ()

Name a “pencil” and “watch.” (2 points)

1 ()

Repeat the following: “No ifs, and, or buts.”(1 point)

3 ()

Follow a 3-stage command:

- Take a paper in your right hand,
- Fold it in half, and put it on the floor.” (3 pts)

1 ()

Read and obey the following: CLOSE YOUR EYES.

(1 point)

1 ()

Write a sentence. (1 Point)

1 ()

Copy the intersecting pentagons.

| | | | |
|--------------------|-------|---|----------------|
| Maximum | Total | <i>Suggested guidelines for determining the severity of cognitive</i> | |
| <i>impairment:</i> | | | |
| Total Score | Score | Mild: | MMSE ≥ 21 |
| 30 | _____ | Moderate: | MMSE 10-20 |
| | | Severe: | MMSE > 9 |

Impression:

Plan:

Return Visit:

Movement Clinic Follow Up Visit Note

Summary:

Interim History:

Interval PMH:

General Examination:

Vital Signs:

Neuro Exam:

- **Mental Status Exam:**
 - **MMSE Score (see below):**
- **Cranial Nerves:**
- **Motor:**
 - **UPDRS Score (see below)**
- **Sensory:**
- **DTRs:**
- **Plantars:**
- **Coordination:**
- **Gait:**

Impression:**Plan:****Return Visit:**

| | | | | |
|---|--|---|---------------------|----------------|
| UPDRS | | SIDE EFFECTS (Grade each item 0-4) | | REMARKS |
| RATED NEUROLOGICAL EXAM (Grade each item 0-4) | | | | |
| FACIAL EXPRESSION | | ANOREXIA/N/N | | |
| SEBORRHEA | | CARDIAC | | |
| SALIVATION | | VIVID DREAMING | | |
| SPEECH | | INSOMNIA | | |
| SUB-TOTAL | | SOMNOLENCE | | |
| TREMOR | | CONFUSION | | |
| RUE | | HALLUCINATION | | |
| LUE | | AGITATION | | |
| FACE (LIPS, TONGUE) | | ANXIETY/DEPRES | | |
| RLE | | | | |
| LLE | | | | |
| SUB-TOTAL | | DYSKINESIS (Grade each item 0-4) | | |
| RIGIDITY | | RUE | | |
| RUE | | LUE | | |
| LUE | | RLE | | |
| NECK | | LLE | | |
| RLE | | | | |
| LLE | | GRIMACING | | |
| SUB-TOTAL | | MOUTH | | |
| COORDINATION | | TONGUE | | |
| FINGER TAPPING (R) | | HEAD BOBBING | | |
| FINGER TAPPING (L) | | | | |
| SUCCESSION MVMNTS, RUE | | SHOULDER | | |
| SUCCESSION MVMNTS, LUE | | RESPIRATORY | | |
| FOOT TAPPING, R | | ABDOMEN | | |
| FOOT TAPPING, L | | PELVIS | | |
| SUB-TOTAL | | ON/OFF | | |
| ARISING FROM CHAIR | | Random _____ X/Day | | |
| STANDING POSTURE | | End-Dose _____ X/Dose | | |
| STABILITY | | Total hours off daily _____ | | |
| GAIT | | Condition: Off <input type="checkbox"/> On <input type="checkbox"/> | | |
| BRADYKINESIA | | Stage 0 1 11 111 IV V | | |
| SUB-TOTAL | | Mental Status (overall Assessment) | | |
| | | 0 Normal | 2 Moderate Dementia | |
| | | 1 Mild Dementia | 3 Severe Dementia | |

| | |
|-----------------------|----|
| CARDIOVASCULAR | |
| Lying | BP |
| Sitting | BP |
| Standing | BP |
| Lying | HR |

| | | | | | |
|-------|--|---------------------|----------------|---------|----|
| TOTAL | | QP since last visit | ____/____/____ | Sitting | HR |
| | | | Month Day Year | | |

Mini Mental Status Exam

Maximum

Score

Score

ORIENTATION

5

()

What is the (year) (date) (day) (month)?

5

()

where are we (state) (town r city) (hospital) (floor)?

REGISTRATION

3
“penny”.

()

Name 3 common objects (eg, “apple,” “table,”

Take 1 second to say each. Then ask the patient to

repeat all 3.

Give 1 point for each correct answer. Then ask the

patient to repeat all 3.

Count trials and record. Trials:_____

ATTENTION AND CALCULATION

5

()

Serial 7’s backwards. Stop after 5 answers.
Alternatively, spell “WORLD” backwards. The
score is the number of letters in correct order
(D____L____R____O____W____).

RECALL

3
registration above.

()

Ask for the 3 common objects named during

Give 1 point for each correct answer. [Note: recall
cannot be tested if all 3 objects were not
remembered during registration].

LANGUAGE

2

()

Name a “pencil” and “watch.”

(2 points)

1

()

Repeat the following: “No ifs, and, or buts.”

(1 point)

3

()

Follow a 3-stage command:

Take a paper in your right hand,

Fold it in half, and put it on the floor.”

(3 points)

1

()

Read and obey the following: CLOSE YOUR

EYES. (1 point)

1

()

Write a sentence.

(1 Point)

1

()

Copy the intersecting pentagons.

| | | | |
|-------------------------------|-------|---|----------------|
| Maximum <i>impairment:</i> | Total | <i>Suggested guidelines for determining the severity of cognitive</i> | |
| Total Score | Score | Mild: | MMSE ≥ 21 |
| 30 | _____ | Moderate: | MMSE 10-20 |
| | | Severe: | MMSE < 9 |

Neuropsychiatry Clinic Initial Visit Note

Reason for referral (chief complaint):

History of present illness:

PMH:

Medications:

Habits:

Social History:

Family History:

Vital Signs:

General Physical Exam:

Neuro Exam:

Mental Status

- Level of arousal –
- Orientation-
- Attention-
- Handedness: L/R
- Memory:
 - Immediate
 - 3 words short term
 - long term
- Language: Fluency-

- Naming-
- Repetition-
- Frontal: Luria-
- Short story
- Name and address
- Praxis (imitation)
- Visuospatial (figure drawing)

Findings on rest of Neuro Exam

Cranial Nerves:

Motor:

Sensory:

Reflexes:

Plantar Responses:

Coordination:

Gait:

Pertinent Labs:

Neuro-Imaging:

Other Evaluations (EEG, Neuropsych testing, etc.):

IMPRESSION:

PLAN:

Studies ordered today:

Labs ordered today:

F/u: ___ month(s)

Counseling/Education (time and subject):

Neuropsychiatry Follow Up Visit Note

Summary:

Interim History:

Medications:

Note any change in Medical History, Habits, Social History, or Family History:

Vital Signs:

General Physical Exam:

Neuro Exam:

Mental Status

- Level of arousal –
- Orientation-
- Attention-
- Handedness: L/R
- Memory:
 - Immediate
 - 3 words short term
 - long term
- Language: Fluency-
- Naming-
- Repetition-
- Frontal: Luria-

- Short story
- Name and address
- Praxis (imitation)
- Visuospatial (figure drawing)

Findings on rest of Neuro Exam

Cranial Nerves:

Motor:

Sensory:

Reflexes:

Plantar Responses:

Coordination:

Gait:

Pertinent Labs:

Neuro-Imaging:

Other Evaluations (EEG, Neuropsych testing, etc.):

IMPRESSION:

PLAN:

Studies ordered today:

Labs ordered today:

F/u: ___ month(s)

Counseling/Education (time and subject):

V. Electives

Neurology Department Approved Subspecialty Electives

| | | |
|-----------------------|------------------|---------------------------|
| 1. Epilepsy (EEG/EMU) | Grant | (718) 270-2959 (7105) |
| 2. EMG | Y. Anziska | (718) 270-3215 |
| 3. Neurodegenerative | IBW/Crystal | (718) 270-1482 |
| 4. Movement Disorders | IBW/Cabassa | (718) 270-1482 |
| 5. Neuropathology | TBD (NP) | (718) 245-5325 |
| 6. Neuroradiology | Linden (R) | (718) 270-1118 |
| 7. Dementia | Crystal | (718) 270-2748 |
| 8. Movement Disorders | Shankar/Bressman | (Beth Israel Mount Sinai) |
| 9. Neuroimmunology | Lublin | (Mount Sinai) |
| 10. Neurosurgery | Sadr | (718) 245-4707 |
| 11. Neuro-oncology | DeAngelis | (MSKCC) (212) 639-6340 |

Research electives:

- Research electives are encouraged.
- They must be discussed individually with the program director and the faculty mentor.

Designer electives:

- It is very possible for residents to do other electives or design their own.
- Any elective not on this list must be approved by the program director at least 3 months beforehand to enable us to handle the scheduling.
- Some examples have included headache, neuro-ethics, pain

Away electives:

- You must start the paperwork 3 months before the assignment or it will not be approved- risk management, program letters or agreement and credentialing process can take up to 3 months.
- If you want to do an away elective, there are insurance issues that need time for clarification.
- You must complete risk management forms at the beginning of the process.
- You must meet with the program director to discuss the particular issues for your proposed elective.
- Recent examples include: NICU at CPMC, Movement Disorders at Beth Israel, Multiple Sclerosis at Mount Sinai

VI. Didactics

A. Overview:

Conferences are mandatory, except as noted. You are expected to attend conferences while on elective rotations. The chief residents make up the monthly conference schedule. It is then distributed by email and posted prominently.

PRELIMINARY INTERNAL MEDICINE CONFERENCES

1. Downstate Campus

- a. Introductory Lecture Series (July and August)
- b. Core Lecture Series
- c. Medicine Grand Rounds
- d. Intern Morning Report
- e. UHB Morbidity and Mortality Report (UHB)
- f. KCH Morbidity and Mortality Report (KCH)
- g. Professor Rounds

2. Brooklyn VA Conferences

- a. Core Lecture Series
- b. VA Grand Rounds
- c. Intern Morning Report
- d. EBM/Journal Club
- e. Professor Rounds

NEUROLOGY CONFERENCES

1. Downstate Campus

a. Introductory Conferences (July and August)

- i. Introductory Neurology Lectures*
- ii. Introduction to Neuroradiology

b. Year Round (12 months)

- i. Directors Rounds
- ii. Neuroradiology
- iii. Morning Report (UHB, KCH, and Peds Neuro at UHB)
- iv. Epilepsy Conference*
- v. Morbidity and Mortality Report (UHB, KCH)
- vi. Special Events*

c. Rest of the Year (Sept – June)

- i. Grand Rounds*
- ii. Case conference (adult and pediatric)
- iii. 2nd and 3rd Year Resident Departmental Presentations
- iv. Journal Club (adult and pediatric)
- v. Basic Science Conference*
- vi. Neuropathology
- vii. Neuroradiology
- viii. Neurobehavior Conference (adult and pediatric)
- ix. Neurovascular Conference*
- x. Neuromuscular Conference
- xi. Movement Disorders Conference
- xii. EEG Conference*

d. Other Conferences

- i. Neurophthalmology (April - June)*
- ii. NeuroRehabilitation (May)*
- iii. Ethics (April-May)*

e. Optional Conferences (mandatory while on pertinent rotations)

- i. Clinical Neurophysiology Pediatric
- ii. Pediatric Neurobehavior
- iii. Clinical Electrophysiology
- iv. Pediatric Pathophysiology Lecture Series

2. Memorial Sloan Kettering Cancer Center

- a.** Grand Rounds
- b.** Professor Rounds
- c.** Brain Tumor Conference
- d.** Pediatric Brain Tumor Conference
- e.** Neuropathology Conference
- f.** Pain Conference
- g.** Clinical Research Meeting

B. Didactic Lectures

1. Neuroanatomy

Description: Review of neuroanatomy lecture series based on similar content for first and second year medical students.

Coordinator: John Kubie, PhD

Frequency: Monthly (Monday)

Total Lectures: 10

2. Neuropathology

Description: Pathology residents present overview of neuropathology topics including specimen analysis.

Coordinator: Jennifer Libien, MD

Frequency: Bi-Monthly (1st and 3rd Thursdays)

Total Lectures: 20

3. Neuroradiology

Description: Radiology attendings review brain and spine anatomy and pathology using CT and MR based images.

Coordinators: Craig Linden, MD; Vinodkumar Velayudhan, MD; Sundeep Mangla, MD

Frequency: Bi-Monthly (2nd and 3rd Wednesdays)

Total Lectures: 20

4. Neurovascular

Description: Lecture series overview of pathophysiology and management of stroke intended for fellow-level instruction.

Coordinators: Adrian Marchidann, MD

Frequency: Weekly (Wednesdays)

Total Lectures: 40

5. Neuromuscular

Description: Overview of neuromuscular pathology (myopathies, NMJ disorders, neuropathies) and EMG interpretation.

Coordinators: Johnathan Perk, MD, PhD; Mahsa Mehrizin, MD

Frequency: Monthly (2nd or 3rd Friday)

Total Lectures: 10

6. Movement Disorders

Description: Review of diagnosis and management of various movement disorders with emphasis on advanced treatment of Parkinsons Disease

Coordinator: Jose Cabassa, MD

Total Lectures: 10

Frequency: Monthly (2nd Tuesday)

VII. Teaching

Teaching is an integral part of your neurology residency education. Teaching is one of the best ways to learn. At an academic institution, teaching opportunities abound. Residents interested in additional opportunities should contact the program director.

Your garden variety teaching opportunities will occur on a daily basis. As a junior resident, you will teach/learn from each other. On your clinical teams, medical students and rotators from other disciplines will be plentiful. You will be expected to perform bedside and didactic teaching on a regular basis. As a senior resident, you will have more responsibility for leading bedside and formal teaching.

You will be asked to present (teach) at many conferences, particularly a departmental presentation in your 2nd year of neurology and a grand rounds in your 3rd year.

In particular, residents play a pivotal role in the teaching of medical students.

Medical Student Teaching:

1. Medical Student Neuroscience Curriculum
 - a. First Year
 - i. Anatomy Labs and Neuroscience Course (anatomy dissection demonstrations)
 - b. Second Year
 - i. Neurology Behavior System Block
 1. small group instruction on neuro exam
 - ii. Review of neurology prior to clinical years
 - c. Third/Fourth Year
 - i. Neurology Clerkship
 1. All residents teach students on the wards/consult service. Practical management is taught on work rounds
 2. Students present patients to the junior or consult resident on call and to the team on work rounds
 3. Junior and senior residents review student notes
 4. Senior resident meets with students three times per week for basic neurology teaching at SIUH
 5. Senior residents examine for medical student oral exams
 - ii. Neurology Sub-Internship
 1. Senior resident supervises the sub-intern and provides appropriate guidance in conjunction with the attending (the student functions as an intern whenever possible)

2. Formal Medical Student Teaching During the Neurology Clerkship

The medical students receive lectures and are assigned readings. They also participate in small group exercises. Only the topics formally covered will be tested at the end of the rotation. The following are formally covered in the Friday sessions:

- **Adult Neurology Topics:** Seizures, headache, stroke dizziness, coma, meningitis, dementia, delirium, and back pain
- **Pediatric Neurology Topics:** Hypotonia (and pediatric neuromuscular) disorders, pediatric epilepsy syndromes, neurocutaneous syndromes, congenital malformations, micro, and macrocephaly.

Residents provide a crucial part of the medical student educational experience. When students rotate on the neurology service, the residents provide most of the teaching of the practice of neurology and much of the didactic teaching. At Kings County, and University Hospital, attendings provide much of the didactic teaching.

At all of our institutions the residents are the most important source of bedside teaching. Probably the most important skill you teach your students is your approach to the patient. Your bedside manner and your ability to elicit a coherent history and pertinent findings are best taught by example and practice. Treating patients with courtesy and respect can only be taught by setting a good example. In addition, the process of thinking through a differential is essential to neurology and all aspects of medicine. This is most effectively learned through active participation and discussion in small groups (as in rounds or informal meetings) or one on one.

Students participate as junior members of the ward or consult team. They must attend morning work rounds, carry patients, and participate in patient care with resident supervision. The junior resident participates in student teaching in the daily discussions of patient care. The senior resident includes the students on work rounds and may hold teaching sessions if time permits. The students function as part of the team and should present the patients they follow on work and attending rounds. At the end of the rotation the students will be tested with a both a written and an oral exam.

Teaching medical students is an opportunity for you to review many aspects of neurology. Students often ask unexpected questions and test the thoroughness of your understanding. In addition, communicating knowledge is an important part of being a physician. We hope you find this aspect of your residency training rewarding and fun.

VIII. Evaluations

Neurology Residents are evaluated in several ways. Your evaluations are kept in your portfolio (binder).

- 1. Evaluation of your performance on a rotation**
 - a. Monthly
 - i. Service attendings
 - ii. Medical students (4 week blocks)
- 2. Evaluation of your performance in outpatient clinics**
 - a. Bi-annually (Dec, June)
 - i. Clinic attendings
- 3. Inservice performance**
 - a. AAN-RITE
 - b. Reviewed with program director. Used ONLY for educational purposes.
- 4. 360 Evaluation**
 - a. Annually
 - b. UHB and KCH
- 5. Milestones**
 - a. Semi-annually, from multiple sources
- 6. Your evaluations (the ones you fill out)**
 - a. Attendings for each rotation (monthly)
 - b. Residents (annually)
 - c. Nurses (annually)
 - d. Patients (annually)
 - e. Students (monthly)
 - f. The program (annually)

Blank copies of any of evaluation forms are available in the office. Most of these forms are now on New Innovations.

IX. Policies

Duty Hours in Neurology (ACGME 07/01/2012)

-Minimum Time Off between Scheduled Duty Periods: Intermediate-level residents [as defined by the Review Committee] should have 10 hours free of duty, and must have eight hours between scheduled duty periods. They must have at least 14 hours free of duty after 24 hours of in-house duty.

-Minimum Time Off between Scheduled Duty Periods: Residents in the final years of education [as defined by the Review Committee] must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods.

-Minimum Time Off between Scheduled Duty Periods: This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day-off-in-seven standards. While it is desirable that residents in their final years of education have eight hours free of duty between scheduled duty periods, there may be circumstances [as defined by the Review Committee] when these residents must stay on duty to care for their patients or return to the hospital with fewer than eight hours free of duty.

- Maximum Frequency of In-House Night Float: Residents must not be scheduled for more than six consecutive nights of night float.

Absences and Coverage

1. Emergent Absences

- a. Coverage is provided by the residents on jeopardy in the first instance or secondarily on elective and is set up by the coverage chief resident.
- b. You must contact your coverage chief resident and service (senior resident) by 7am on the day of service.
- c. More than one day in a row or frequent absences require a doctor's note.
- d. Verbal discussion with chief resident before shift begins (7am latest)
- e. Email Marjorie Maxwell
- f. Email Downstate neurology(chief resident email)

2. Planned Absences

- a. Coverage must be arranged by resident IN ADVANCE with residents on NON-CLINICAL rotations.
- b. Permission is granted ONLY for interviews, conferences and urgent issues on an individual basis at the discretion of the program director.
- c. You must arrange for coverage yourself and confer with the Chief Resident to be sure no work hour violations occur.
- d. The Jeopardy rotator can provide coverage in the first instance and secondarily residents on elective, and require pay back.

Age Guidelines for patient care by adult and pediatric neurology services at UHB and KCH

- 1. Consults on all patients in the Adult ER will be seen by the Adult Neurology Service. Consults on patients in the Pediatric ER will be seen by the Pediatric Neurology Service.
- 2. If a patient (less than 21 years of age) seen in the ER, is admitted to an adult floor (ICU, Medicine, Surgery, OB/GYN, Trauma), this patient will be followed by the Adult Neurology Service.
- 3. Consults on inpatients (less than 21 years of age) on an adult floor (ICU, Medicine, Surgery, OB/GYN, Trauma) will be seen by the Adult Neurology Service.
- 4. All Stroke Codes are seen initially by the Adult Neurology Service.
- 5. If the patient (seen in the Adult ER) is admitted to a pediatric floor, the patient will be followed by the Pediatric Neurology Service. If the patient is admitted to an adult floor, the patient will be followed by the Adult Neurology Service.

Charting and Documentation

All History & Physicals, Progress Notes, and Discharge Notes are electronic at KCH and UHB.

1. Inpatient Notes – Ward Services

- a. All notes** document date, time, type of note, and attending input. All resident notes are evaluated and cosigned by the attending.
- b. Admission** (consult, database, RAN)
 - i. The body of the note: in depth history, exam, DDx, assessment, and plan of care
 - ii. Junior Resident – Database
 - iii. Senior Resident – Resident Admission Note
 - iv. These are ON ADMISSION.
- c. Follow up**
 - i. Date, time, type of note, and attending input and signature as above.
 - ii. These are DAILY for active patients and when the patient's condition dictates.
 - iii. For ALOC patients, resident notes are written 3 x week and if the patient condition dictates
 - iv. Routine follow up
 - 1. Daily Progress Note
 - a. Summary of condition, recent events, exam, pertinent lab /test values, assessment, and plan.
 - 2. Addenda
 - v. Changes in condition
 - 1. As needed
 - 2. IMMEDIATELY after an adverse event
 - vi. Procedures
 - 1. LP etc.
 - 2. Procedure notes must document supervision by credentialed supervisor until you are credentialed.

2. Inpatient – Consultation Services

- a. Initial consultation**
 - i. All notes document date, time, type of note, and attending input. All resident notes are evaluated and cosigned by the attending.
 - ii. In depth history, exam, DDx, Assess/Plan
- b. Follow up**
 - i. Date, time, type of note, and attending input and signature as above.
 - ii. Summary of present condition and recent events, pertinent exam, pertinent workup, assessment, and plan.

3. **Outpatient – Clinic Notes**

- a. **All notes** document date, time, type of note, and attending input.
All resident notes are evaluated and cosigned by the attending.
- b. **Initial evaluation**
 - i. In depth history, exam, DDx, Assess/Plan
- c. **Follow up**
 - i. Summary of present condition and recent events
 - ii. Pertinent exam
 - iii. Pertinent workup
 - iv. Assess/Plan

4. **General Rules for Documentation**

- a. All notes document date, time, type of note, and attending or senior resident input. All resident notes are evaluated and cosigned by the attending.
- b. “If it’s not in your note, then it didn’t happen”
- c. Be thorough and concise
- d. Procedure notes must document supervision by credentialed supervisor until you are credentialed.

Credentialing

Each hospital requires that each department establish credentialing standards for procedures performed. Resident credentials are maintained by the department. As you may know, when you apply for privileges at hospitals in the future, they contact your residency for privileges. We have pared down the list of privileges to the absolute minimum. If you have not obtained certification, we will not be able to attest to it. You are required to submit completed credentialing slips to the residency coordinator so they can be recorded. Please get these procedures certified promptly.

Here is the list and time frame:

- 1. First Year
 - a. tPA administration
 - b. Lumbar puncture
- 2. Second Year
 - a. Tensilon test
- 3. Third Year
 - a. Brain Death Evaluation

End-of-the-year Guidelines for the Neurology Residency

1. The official end of the year date varies by year. The last full day of work in June will be determined by the program. You are expected to be here on the last day, and you may use part of that day to do your completion paperwork.
2. The resident who is covering Kings County Hospital will have a full last day of work, including completion of paperwork with a sign out in the afternoon.
3. If you are starting a fellowship in another location and have obligations (orientations etc.), you must contact the Neurology program director for approval. If you wish to do this you must speak to the program director at least 2 weeks in advance.
4. Emergency coverage will be provided by 3rd year residents through the last day, if needed.
5. The last 2 weekends of the year will be covered by second years (PGY-3).
6. You are excused from your LAST clinic day of the academic year.
7. There will be consequences for residents who do not meet their obligations in their final days.

Transitions of Care

Duty hour standards for residents have increased the number of transitions of care throughout residency programs. Miscommunications are a leading cause of adverse events in hospitals, and so optimizing the handoff system is essential for patient safety.

At University Hospital of Brooklyn, Kings County Hospital Center, and The Brooklyn Hospital Center, residents will use the I-PASS system at all times when a transition of care needs to happen, as outlined below:

| | | |
|---|---|--|
| I | Illness Severity | Is the patient 'stable', a 'watcher', or 'unstable'? |
| P | Patient Summary | <ul style="list-style-type: none"> * Summary statement * Events leading up to admission * Hospital Course * Ongoing Assessment * Plan |
| A | Action List | <ul style="list-style-type: none"> * To do list * Time line and ownership |
| S | Situation Awareness, Contingency Planning | <ul style="list-style-type: none"> * Know what's going on * Plan for what might happen |
| S | Synthesis by Receiver | <ul style="list-style-type: none"> * Receiver summarizes what was heard * Asks questions * Restates key action/to do items |

Here's a sample handoff:

| | | |
|---|-----------------------|--|
| I | Illness Severity | "Ok, this is our sickest patient and he's full code" |
| P | Patient Summary | Resident presents main points of HPI |
| A | Action List | Resident relays what needs to be done: Check vitals at a certain time, check on certain labs, follow up imaging results, etc. Times should be included if possible |
| S | Situation Awareness | For example: If this patient develops shortness of breath, please obtain a CXR as he/she may be developing an effusion |
| S | Synthesis by Receiver | Receiver summarizes the key points of the HPI as well as when/if to check vitals, labs, and imaging results |

Outlined are the lines of responsibility at each hospital:

University Hospital of Brooklyn

Transitions of care will happen at the following times. The use of the I-PASS system is mandatory during each hand-off process.

- The stroke team and general neurology team will sign out to both the neurology resident on short call and the ward resident on short call, which will occur between 4:00-4:30pm. Both residents **must** be present to receive sign outs simultaneously to give ample opportunity for questions/discussions regarding the patients.
- The next sign out will occur at 8:30pm when the neurology call resident and the ward resident will be present to transition care to the night floater. All three parties **must** be present to give/receive sign out.
- The night floater will sign out to the stroke neurology and general neurology teams at 7 am. All parties for a given team **must** be present for proper sign out to occur.
- Once transition of care is properly established, the pagers can be handed off to the appropriate residents.
- Whenever a transition of care must happen between residents, the I-PASS system is now **mandatory** as the only acceptable form of handing off patient care.
- **All patients, whether admitted to neurology or consulted on, must be transitioned to new residents using the I-PASS system.**

Kings County Hospital Center

Transitions of care will happen at the following times. The use of the I-PASS system is mandatory during each hand-off process:

- The ward team and consult team will sign out to both the neurology resident on short call and the ward resident on short call, which will occur between 4:00-4:30pm. Both call residents **must** be present to receive sign outs simultaneously to give ample opportunity for questions/discussions regarding the patients.
- The next sign out will occur at 8:30pm when the neurology call resident and the ward resident will be present to transition care to the night floater. All three parties **must** be present to give/receive sign out.
- The night floater will sign out to the ward neurology and consult neurology teams at 7 am. All parties for a given team **must** be present for proper sign out to occur.
- Once transition of care is properly established, the pagers can be handed off to the appropriate residents. The stroke code pager and consult pager will go to the neurology consult team (specific pager designation to be determined by the consult senior) and the ward pager to the ward team.
- Consulted patients to be admitted to the ward team **must** be personally presented by the resident who saw the patient to the ward senior, once again using the I-PASS system. Any other form of admitting a patient to the neurology ward is deemed inappropriate and subjects patients to unnecessary danger.
- Whenever a transition of care must happen between residents, the I-PASS system is now **mandatory** as the only acceptable form of handing off patient care.
- **All patients, whether admitted to neurology or consulted on, must be transitioned to new residents using the I-PASS system.**

***** If there is any confusion regarding transitions of care, or if a resident feels that patients are not being transitioned appropriately to their care, it is their responsibility to notify a chief immediately so that the proper action can be taken, whether that be in the form of having a chief present for transitions of care or otherwise. *****

Escalation of Responsibility in Patient Care

- 1) Lines of Responsibility – see **Supervision Policy**
- 2) Moving up the chain of command and mechanisms for doing so
 - a) All residents and attendings must be available either in person or by beeper while on service
 - b) The junior resident contacts the senior resident or the attending directly
 - c) In the event that the attending cannot be reached, the Chief of Service at each hospital is to be paged
 - d) In the event that the Chief of Service cannot be reached, the Department Chair is to be paged
- 3) Events that must be escalated:
 - a) Patient decompensation – ie. ICU transfer, CCU transfer, code 66, 88, or 99, stroke code, DNR, herniation, respiratory or cardiac failure, death
 - b) Disputes over patient disposition ie the ED plans to admit a medically unstable patient
- 4) Monitoring and Compliance
 - a) This is monitored informally at Morning Report on a daily basis
 - b) This is monitored at the monthly Residents' Meeting
 - c) The Neurology Department expects 100% compliance with these policies. Non-compliance may be grounds for dismissal
- 5) Documentation of Attending Input in Decision-Making – See **Chart Documentation Policy**

Moonlighting Policy

1. Please be aware that the policy of the Neurology Residency Regulatory Committee (RRC) is that moonlighting should not interfere with any aspect of residency training.
2. SUNY-Downstate Neurology Department's policy is that the only days available for moonlighting are Fridays and Saturdays as residency schedules allow. Overnight moonlighting is expressly forbidden when you have a working day the next day (ie, Sundays, the last day of a 3 day weekend etc.). The reason for this is that residents are not allowed to remain post call in order to comply with 405 and ACGME regulations. Both clinical and elective rotations are critical components of residency education. Missing residency time from either one is illegal according to the RRC. This is the type of offense that can shut a residency program down.
3. In order to be allowed to moonlight, you must score 70% correct or more on the neurology inservice exam.
4. If the criteria are met and you wish to moonlight, you must meet with the program director to be sure your plans mesh with the 405 and ACGME work hour regulations.

Neurosurgery Consult Guidelines at UHB for Adult Neurology

As Neurosurgery does not have residents in house, they are asked to come in by the ACRC attendings every time anyone writes for a neurosurgery consult. After discussion with Neurosurgery and Emergency Medicine, the following guidelines were agreed upon.

Please remember that guidelines are no substitute for common sense and that the Neurosurgery attendings want to be called if there is any question about consulting them. They are available via the page operator.

1. Please note on your consult if the Neurosurgery consult is EMERGENT OR NON-EMERGENT.
2. If the consult is non-emergent, it will be placed by the admitting team (often us) the next morning.
3. If the consult is emergent the Neurosurgery attending will come in. Please write your note and CALL THE NEUROSURGEON DIRECTLY. We give them a lot more neurologic information than the ER attendings do. In addition, you will benefit from presenting to the neurosurgeon directly.

4. If there is any question, CALL THE NEUROSURGERY ATTENDING.
Yes, you read that correctly. You should directly call the neurosurgery attending on call. They all have PACCS at home. They will be able to go over the case with you and help determine if they need to come in or see the case first thing in the morning.
5. Please note that you are, as always, presenting each case to your very own Neurology Attending who remains your attending for this patient.

Pharmaceutical Industry Interaction Policy : Guidelines for the Relationship between the Pharmaceutical Industry and the SUNY Downstate Department of Neurology

- 1 **Recognize the inherent conflict** between drug company sales motive and department's professionalism ethic
- 2 **Pharmaceutical Gifts to the Department**
 - a. Pharmaceutical gifts to the department of Neurology shall consist solely of the sponsorship of educational activities. No other donations are authorized.
 - b. "Drug lunches": Drug companies may sponsor lunches only for educational activities such as a residency conference or Grand Rounds.
 - i. All drug lunches shall be approved by the conference supervisor.
 - ii. There will be NO unsupervised contact between trainees (residents, fellows, medical students) and drug reps.
 - iii. Drug reps may provide written promotional material.
 - iv. Drug reps MAY NOT SPEAK or make any other presentations
 - v. No gifts without educational value
 - vi. Unrestricted educational grants are encouraged.
 - c. Scholarships: These shall be for the purpose of educational activities such as sponsoring attendance at approved conferences. The drug company shall have no say in the educational content of the conference.
 - d. Fellowship salary support: This shall be for the purpose of supporting the salary of a fellow. The drug company shall have no say in the educational content of the fellowship.
 - e. Book program: Drug companies may make book donations to the residents/fellows. This is to be supervised by the program director.
- 3 **Faculty ties to industry.** These shall be disclosed to the departmental chair and decided on an individual basis.

Selection, Promotion, Dismissal, and Due Process

1. Selection:

The Neurology Department participates in the Neurology Match with NEMP. All residents are selected through that program. Residents must independently obtain a preliminary year in medicine, although Staten Island University Hospital gives candidates matching with us special attention.

Prior to starting Neurology Residency applicants must satisfy the one year of training in Internal Medicine or an acceptable equivalent as required by the guidelines of the RRC for Neurology. The Institutional RRC verifies the qualifications of each resident.

2. Promotion:

The Clinical Education Committee monitors the progress of each resident and assesses their eligibility for promotion. Specifically, the incoming residents are tracked closely for the first three months or until they are progressing satisfactorily. Residents need to pass the in-service neurology department quizzes as part of the promotion process. The progress of each resident is reviewed as necessary at the monthly CEC meetings and at the final yearly meeting for promotion. Residents are given ample information of their progress.

3. Policy on Program Evaluation and Program Review:

- A. Membership (minimum 2 faculty, 1 resident, includes faculty from participating affiliated sites)
- B. Provided with written description of responsibilities
- C. Documentation of participation in:
 - Planning
 - Development
 - Implementation
 - Evaluation educational activities
- D. Review and make recommendations for revision of curriculum goals/objectives
- E. Address areas of non-compliance with ACGME standards
- F. Conducts formal systematic program evaluation resulting in Annual Program Evaluation(APE) including the monitoring and tracking of:
 - Resident Performance
 - Program Quality
 - Faculty Development
 - Graduate Performance
 - Clinical Learning Environment focus areas
- G. Generates a Report of the APE
 - Written improvement action plan
 - Meeting minutes
 - Documentation of presentation to and approval by teaching faculty
- H. Improvement plan must be specific as outlined in the "Policy on Program Evaluation and Annual Program Evaluation Review")

4. Dismissal:

The Clinical Education Committee follows ACGME guidelines for dismissing residents. Residents at risk are warned formally with a plan of remediation and timetable. Failure to comply results in a formal CEC meeting where appropriate action including dismissal is discussed. The resident is required to be present at this meeting.

4. Due Process

The Neurology Department follows the following due process:

- A resident demonstrating unsatisfactory performance is first approached informally by his or her supervising attendings, chief residents, and program director.
- Residents who do not meet the program's expectations despite informal counseling, are discussed at a Clinical Education Committee Meeting and a letter of warning including a plan of remediation and a timetable are developed.
- The program director meets with the resident, reviews the plan, and a copy is given to the resident. A follow up meeting is scheduled.
- If the resident does not meet expectations by the follow up meeting as set up in the timetable, a Clinical Education Meeting is scheduled where the resident's performance is discussed. The resident is present at that meeting. The resident is placed on probation and a final plan including a timetable is developed.
- If the resident still does not meet the conditions of the remediation plan, he or she is dismissed.
- These procedures were developed in accordance with the ACGME guidelines.
- The resident may appeal to the Clinical Education Committee or the Department Chair.

Supervisory Lines of Responsibility for Residents

NEUROLOGY RESIDENCY

1. University Hospital of Brooklyn Neurology Services

a. UHB General Service

- i. This is a general neurology ward and consultation service
- ii. Team complement
 - 1. 1 Attending
 - 2. 1 Senior (N3)
 - 3. 1 Junior (N1)
 - 4. 1 Medicine Rotator (PGY 1)
 - 5. 0-2 Psychiatry Rotators (PGY 1)
 - 6. 2 Medical Students
- iii. Lines of Responsibility and Supervision:
 - 1. The UHB General Attending supervises all of the residents directly and through the Ward Senior.
 - 2. The UHB General Senior supervises medicine and psychiatry rotators, and medical students
 - 3. The rotators do not supervise other residents

b. UHB Stroke Service

- i. This is a Stroke Service and includes both admitted stroke patients and the stroke consultation service. Stroke codes are run by the UHB Stroke Service
- ii. Team complement:
 - 1. 1 Attending
 - 2. 1 Senior (N2)
 - 3. 1 Junior (N1)
 - 4. 1 Medicine Rotator (PGY 1)
 - 5. 0-2 Psychiatry Rotators (PGY1)
 - 6. 2 Medical Students
- iii. Lines of Responsibility and Supervision:
 - 1. The UHB Stroke Attending supervises each resident directly and indirectly through the Stroke Senior.
 - 2. The UHB Stroke Senior supervises medicine and psychiatry rotators, and medical students
 - 3. The rotators do not supervise other residents

2. Kings County Hospital Neurology Services

a. Kings County Hospital Neurology Ward Service

- i. This is a general neurology ward service and includes a stroke ward service
- ii. Team complement:
 - 1. 1 Attending
 - 2. 1 Senior (N3)
 - 3. 2-3 Juniors (N1/N2) residents
 - 4. 0-1 Emergency Medicine/Internal Medicine Rotators (PGY 2)
 - 5. 1-2 Internal Medicine Rotators (PGY 2)
 - 6. 2-4 Medical Students
- iii. Lines of Responsibility and Supervision:
 - 1. The KCH Ward Attending supervises all of the residents directly and through the Neuro 3.
 - 2. The Neuro 3 resident supervises the Neuro 1 resident and the rotators from EM/IM, Medicine, or Psychiatry
 - 3. The Neuro 1 resident, the EM/IM residents, and the medicine residents work as junior residents together.
 - 4. The Neuro 1 residents supervise psychiatry rotators
 - 5. The rotators do not supervise other residents

b. Kings County Hospital Neurology Consult Service

- i. This is a general neurology consultation service and includes a stroke consultation service
- ii. Team complement:
 - 1. 1 Attending
 - 2. 1 Senior (N3)
 - 3. 1 Junior (N1 or N2)
 - 4. 0-2 Emergency Medicine or Emergency/Internal Medicine Rotator (PGY 1-2)
 - 5. 2 Medical Students
- iii. Lines of Responsibility and Supervision:
 - 1. The KCH Consult Attending supervises each resident directly and through the Senior
 - 2. The Senior resident supervises the Junior, EM/IM, and Psychiatry residents.
 - 3. The months when there are Neuro 1 and EM/IM residents they work as junior residents together. A Junior supervises the EM/IM residents when the Senior is in clinic.
 - 4. The months when there are Psychiatry residents, the Senior supervises the Psychiatry residents and the Junior supervises the Psychiatry residents when the Senior is in clinic.

3. **Memorial Sloan-Kettering Neuro-oncology Consultation Service**

a. This is a neurology consultation service in a cancer center

i. Team complement

1. 1 Attending
2. 1 Fellow (PGY 5)
3. 1 Senior (PGY 3 or 4)
4. 3 Juniors (PGY 2)
5. 1-3 Rotators (PGY 1-3)
6. 3 Medical Students

ii. Lines of Responsibility and Supervision:

1. The Attending supervises all of the residents directly and through the Neuro-oncology Fellow.
2. The Fellow supervises the Senior and the rest of the team
3. The Senior supervises the Juniors and the rotators.
4. The Juniors and rotators do not supervise other residents.

4. **Mount Sinai Neurocritical Care Service**

a. Neurosurgical Intensive care Unit and consultation service

i. Team Complement

1. 1 Attending
2. 1 Neurocritical Care Fellow(PGY5 or PGY6)
3. 2 Intensive care fellows(Medical or Surgical)(PGY 5 or PGY6)
4. 1-2 NICU nurse practitioners(NP)
5. 1 Neurology resident (PGY3)
6. 1-2 rotators (Mount Sinai resident/Nurse practitioners)

ii. Lines of responsibility and supervision

1. The Attending supervises all fellows, NPs and residents
2. The NICU fellows supervise the MICU/SICU fellows, and resident(s)
3. The MICU/SICU fellows supervise the residents
4. Residents do not supervise each other

PRELIMINARY YEAR INTERNAL MEDICINE**Teaching Services at all sites****1. Medicine Ward**

- a. Team complement
 - i. 1 Attending
 - ii. 1 Senior Resident (PGY 2 or 3)
 - iii. 1-3 Interns (PGY 1)
 - iv. 0-4 Medical Students
- b. Lines of Responsibility and Supervision:
 - i. The Medicine Ward Attending supervises each resident directly and indirectly through the Senior
 - ii. The Senior supervises the Interns
 - iii. The Attending supervises the interns when the Senior is in clinic
 - iv. The Interns do not supervise other residents

2. Medical Intensive Care Units

- a. Team complement
 - i. 1 Attending
 - ii. 1 Senior Resident (PGY2 or 3)
 - iii. 1 Intern (PGY 1)
 - iv. 0-2 Medical Students
- b. Lines of Responsibility and Supervision:
 - i. The Medicine Ward Attending supervises each resident directly and indirectly through the Senior
 - ii. The Senior supervises the Interns
 - iii. The Attending supervises the interns when the Senior is in clinic
 - iv. The Interns do not supervise other residents

PEDIATRIC NEUROLOGY

SUPERVISORY LINES OF RESPONSIBILITY FOR RESIDENTS

During **1st year** residents establish a basic foundation of knowledge and competency in general neurology. The ACGME now requires 6 months of in-patient adult neurology, 3 months of out-patient adult neurology and 3 months of elective to fulfill the one year adult neurology training. During the **2nd and 3rd years** of training in pediatric neurology residents are given a progressively increasing level of responsibility for managing their patients and supervising rotating residents and students on the inpatient and outpatient services. The increase in responsibility is commensurate with their increase in knowledge, skills, professionalism and demonstrated competence.

During the residents' 6 months of in-patient adult neurology in **1st year**, they cover admissions and consults on the Wards and Consult Services at UHB and KCH under the supervision of the senior adult neurol. resident and attending. They also spend one month on an adult neurology clinic rotation, including general and subspecialty clinics. Throughout the first year, the resident's clinical skills are monitored by the ward, consult, and clinic attendings and the senior residents. Progress is reviewed monthly by the program director and the Education Committee (CEC). ***See the In-patient Rotations for details regarding team complement and supervision during the adult neurol. rotations.* The resident also spends one month on the Pediatric Neurol. Service under the supervision of the senior Pediatric Neurology resident and attending.

During **2nd year** residents have a greater exposure to pediatric neurology and the neurology subspecialties. They learn the pathophysiology and management of more complex conditions encountered in pediatric neurol. including those in the pediatric ERs, PICUs and NICUs. With advancement in knowledge and demonstrated competence **2nd year** residents are given greater supervisory responsibility, particularly during the last 6 months of this year. They are required to give a major presentation to the Dept. during this year plus presentations at case conferences, epilepsy conferences and journal clubs.

During this year, the resident spends 6 months on the pediatric neurol. inpatient service (KCH, UHB). They also attend the subspecialty clinics, an additional general pediatric neurology clinic and their continuity clinic during this time. In clinics the resident initially makes an independent evaluation and presents his/her findings, conclusions and management plans to the attending; the attending sees every patient. A plan of investigation is developed by the resident and implemented if the attending concurs. Diagnosis and management are then discussed with patient and parents. During this year he/she also spends a required month on child psychiatry, a month in outpatient adult neurology clinics and several months on elective.

During **3rd year** the resident spends 5 months on the pediatric neurol. inpatient service plus attending general and specialty clinics, an additional month in adult neurology clinics and 5 months on electives. In the **3rd year** of training residents are expected to refine their neurol. and pediatric neurol. experience and expand on the management of more complex disorders. They are again required to give a major presentation to the Dept. at a more sophisticated and advanced level during this year plus presentations at case conferences, epilepsy conferences and journal clubs. Clinical skills and judgment become more sophisticated. They assume a greater supervisory role during inpatient rotations particularly in the PICUs, NICUs and ERs. The 3rd year resident is expected to serve as an educator of rotating residents, students and other medical personnel.

Team Complement and Supervision: The pediatric neurol. inpatient team consists of the attending, 2nd and/ or 3rd year pediatric neurol. residents (during the last half of the year there are several months with only the 2nd year pediatric neurol. resident), one or two 2nd or 3rd year adult neurol. and one pediatric 2nd or 3rd year resident plus an occasional medical student. This team is responsible for all pediatric neurol. admissions, and all consults (including the ERs, PICUs, NICUs). Rotating residents are assigned patients and consults under the supervision of the senior pediatric neurol. resident. Work rounds under the supervision of the pediatric neurol. residents are made by all the residents prior to morning report. Residents are supervised by the attending child neurologist for the month. There are two attendings on service; the primary attending makes daily rounds and directly supervises the residents. The second attending assumes these responsibilities if the primary attending is absent and also shares coverage on holidays and weekends. All admissions and consultations plus management must be presented to and reviewed with the attending and all patients are examined by the attending. Teaching rounds are made 5 times per week. On weekends and at nights a supervising attending is available to discuss and staff all cases. A schedule of the responsible attending is available at the start of each rotation. An attending is available to residents 24/7. The pediatric neurol. resident is the senior member of the team and is responsible for closely supervising rotators and along with the attending is ultimately responsible for all patient care. He/she is responsible for and is expected to be familiar with all patients on the service (admissions as well as consultations).

Travel Payment Policy

New York State Paid Residents & Fellows

- The Neurology Department provides up to \$500.00 per resident per residency to attend a conference.

Process:

1. All requests must be submitted 1 month prior to travel to ensure timely processing. If you submit later, there may not be enough time.
 2. The following must be submitted to department administrator, Ketty Fleurimont or program coordinator, Marjorie Maxwell
 - a. A completed Travel Approval Request form with official acceptance notice or conference brochure.
 - b. The department will make your airline reservation using State Travel Agency. Please submit in advance via email your roundtrip travel information (dates, destination, preferred airport, time preference, etc.)
 - c. Please discuss other forms of transportation with Ketty or Marjorie, in advance.
 3. The department will process your registration payment directly. Please submit the completed registration form to department administrator for payment processing.
- The Neurology Department provides up to \$1,000.00 per resident per year for a resident to present his or her research (poster or platform presentation) at a conference.

To avoid unnecessary delays please submit all necessary information on time.

Kings County Paid Residents & fellows:

- For conference attendance, you have a separate conference allowance plus the PEP allowance. For more information please visit the CIR website at www.cirseiu.org or contact Ms. Ann Mitchell at 917-687-2504.
- The Neurology Department provides up to \$1,000.00 per resident per year for a resident to present his or her research (poster or platform presentation) at a conference.

Work Hours Guidelines

Apply to ALL training programs, residents, fellows...

1. We follow the ACGME and NYS 405 work hour regulations, whichever is more stringent.
2. No more than 80 hour per week.
3. At least one 24 hour period off per week (without beeper), may be two 24 hour periods over 2 weeks if on call on a Saturday.
4. At least 10 hours between shifts.
5. PGY1s up to 24 hours on a shift
6. PGY 1s - Maximum of 5 days per week night float.
7. Always a bed available. Do not get into a car and drive if you are fatigued.
8. In the RARE circumstance that you stay late to care for a patient, you must record your time of leaving, and come in late enough the next day to offset your lateness and ensure 10 hours between work periods. For example, if you leave 1 hour later, then you come in 1 hour later.

Policy on Supervision: Roles, Responsibility and Patient Care Activities for Residents

A. Overview

Residents develop and learn the skills necessary to becoming independent neurologists through didactic sessions, reading and providing direct patient care under the supervision of qualified attending neurologists and more senior trainees. Residents are given progressively greater responsibility according to their level of education, ability and experience.

B. Levels of Supervision as Defined by the AGCME

1. **Direct Supervision** - the supervising physician is physically present with the resident and patient
2. **Indirect Supervision with direct supervision immediately available** – the supervising physician is physically within the hospital or other site of patient care, and is immediately available to provide Direct Supervision.
3. **Indirect Supervision with direct supervision available** – the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide Direct Supervision
4. **Oversight** - the supervising physician is available to provide review of procedures and clinical encounters with feedback provided after care is delivered.

C. Responsibilities and Patient Care Activities

Residents are part of a team of providers caring for patients. The team includes an attending physician and may include other licensed independent practitioners, other trainees and medical students.

Residents evaluate patients, obtain the medical history and perform physical examinations. They develop a differential diagnosis and problem list. Using this information, they develop a plan of care in conjunction with other trainees and the attending. They document the provision of patient care as required by hospital/clinic policy. Residents write orders for diagnostic studies and therapeutic interventions as specified in the medical center bylaws and rules/regulations. They interpret the results of laboratory and other diagnostic testing. They may request consultation for diagnostic studies, the evaluation by other physicians, physical/rehabilitation therapy, specialized nursing care, and social services. They participate in procedures performed at the bedside under appropriate supervision. Residents coordinate hospital admission and discharge planning.

Residents should discuss the patient's status and plan of care with the attending and the team regularly. All residents help provide for the educational needs and supervision of any junior residents and medical students. The specific role of each resident varies with their clinical rotation, experience, years of clinical training, the patient's illness, and the clinical demands placed on the team.

Residents and attendings should inform patients of their respective roles in patient's care encounters.

D. The following is a guide to the specific patient care responsibilities by year of clinical training

1. PGY 1 (Prelim year, medicine)

Trainees are primarily responsible for the care of patients under the guidance and supervision of the attending physicians and senior residents. They should be the point of first contact when questions or concerns arise about the care of their patients. However, when questions or concerns persist, supervising trainees and/or the attending physician should be contacted. PGY1 trainees provide care for inpatients, outpatients, or patients in the emergency department. They are initially directly supervised and when merited will progress to being indirectly supervised with direct supervision immediately available by an attending or senior resident when appropriate.

2. PGY 2 and 3 (Junior Residents)

Residents are progressively responsible for the day-to-day management of the patient care team under the attending physician's supervision. On some services that do not have interns, the resident may be primarily responsible for the care of patients under the guidance and supervision of the attending physician and more senior trainees. They may serve as part of a team providing consultative services, or care for patients in the inpatient or outpatient setting or emergency department under the supervision of senior trainees and Medical Staff. These residents may coordinate the actions of the team, as well as interact with nursing and other administrative staff. Along with the attending physician they provide for the educational needs of any interns and students.

3. PGY 4 (Senior Residents)

Senior residents should serve in a supervisory role of junior residents in recognition of their progress toward independence, based on the needs of each patient and the skills of the individual resident.

Senior residents participate in the care of patients as appropriate. Over time, the senior resident is expected to assume an increasingly larger role in patient care decision making.

Senior residents participate in administrative committees as required by the Department, coordinate admissions and or transfers from other centers or services, and are responsible for overseeing the education of junior residents and students.

E. Attending of Record

In the clinical learning environment, each patient must have an identifiable, appropriately credentialed and privileged attending physician of record who is ultimately responsible for that patient's care. The attending physician is responsible for assuring the quality of care provided and for addressing any problems that occur in the care of patients and thus must be available to provide direct supervision when appropriate for optimal care of the patient and/or as indicated by individual program policy. The availability of the attending to the resident is expected to be greater with less experienced residents and with increased acuity of the patient's illness. The attending must notify all residents on his or her team of when he or she should be called regarding a patient's status.

F. There are specific circumstances and events in which residents must communicate with appropriate supervising faculty members

1. An unexpected patient death
2. Brain Death Determination or Organ donation
3. Cardiac arrest (code)
4. Patient going to OR for emergent surgery or transfer to another service
5. An unplanned, emergent invasive procedure such as surgery, interventional radiology, cardiac catheterization, or other high-risk invasive procedure
6. Complication of procedure
7. An unexpected transfer to a higher level of care (e.g., transfer to the MICU)
8. Unexpected, significant deterioration in clinical status; for example, new end-organ failure (e.g. unexpected intubation, oliguria, unexpected pressor requirement or increase in dose, substantial increase in FiO₂)
9. A high-risk medical error with or without harm to the patient
10. When the number or acuity of patients or admissions makes it difficult for you to provide safe care.
11. Change in code status
12. Unexpected blood transfusion
13. Missing patient/discharge AMA

In addition to the above situations the individual attending should notify the residents of additional situations that he or she would like to be notified.

The attending and supervisory resident are expected to monitor competence of more junior residents through direct observation, formal ward rounds and review of the medical records of patients under their care.

Faculty supervision assignments should be of sufficient duration to assess the knowledge and skills of each resident and delegate to him/her the appropriate level of patient care authority and responsibility.

G. Supervision of Invasive Procedures- Lumbar puncture

When a resident requires supervision, this may be provided by a qualified member of the medical staff or by a trainee who is authorized to perform the procedure independently. In all cases, the attending physician is ultimately responsible for the provision of care by trainees. When there is any doubt about the need for supervision, contact the attending physician.

PROGRAM EVALUATION COMMITTEE / ANNUAL PROGRAM EVALUATION

A. PURPOSE

To establish a formal, systematic process to annually evaluate the educational effectiveness of the Neurology Residency Program and its curriculum, in accordance with the program evaluation and improvement requirements of the ACGME and the SUNY Downstate Graduate Medical Education Committee.

B. POLICY

The Program Director will appoint a Program Evaluation Committee (PEC) known in the past as Clinical education committee (CEC). The PEC will consist of key faculty members representing all program sites and subspecialties. Namely- Chief of service at Kings County , Chief of service at University hospital, Fellowship directors (stroke , neurophysiology), Pediatric neurology program Director, clerkship director, chief residents (pediatric and adult programs). Research and QI leaders.

The PEC will

1. Review and make recommendations for revision of competency-based curriculum goals and objectives
2. Address areas of non-compliance with ACGME standards
3. Review the program annually using evaluations of faculty, residents and others in addition to additional measures as specified below. A meeting of the PEC will be convened to review the program's goals and objectives, the effectiveness with which the curriculum has achieved those objectives during the academic year, program quality, resident performance, and graduate performance. In addition, accomplishments and additional needs for faculty development will be assessed. The meeting will be documented in the form of written minutes.
4. The PEC will produce a written Annual Program Evaluation (A.P.E.).

The PEC will monitor and track each of the following areas

1. Resident performance
2. Faculty development
3. Graduate performance, including performance of program graduates on the certification examination
4. Program quality
 - a. Residents and faculty must have the opportunity to evaluate the program confidentially and in writing at least annually
 - b. Program must use results of residents' and faculty members' assessments of the program together with other program evaluation results to improve the program.
5. Progress on the previous year's action plan(s)

The PEC will prepare an explicit plan of action, to specify initiatives to improve program performance identified as a result of the review process. The action plan will be presented to and approved by the program teaching faculty. The minutes of the Annual Program Review and the resulting action plan will be submitted to the GMEC as part of an Annual Program Report.

C. PROCEDURE

1. The PEC will meet on a monthly basis.
2. The annual review will be conducted during the autumn of each year, unless rescheduled for other programmatic reasons.
3. The Program Director will:
 - a. Establish and announce the meeting dates
 - b. Assemble the PEC
 - c. Solicit and collate written confidential evaluations from the faculty and written confidential evaluations from the resident body for consideration in the review. These evaluations may be obtained through the institution's annual program evaluation surveys.
 - d. Compile the materials and data, listed below, to be used in the review
 - i. Prior annual programs evaluations and resulting action plans and improvement outcomes
 - ii. Prior ACGME citations, program responses and correction outcomes
 - iii. Prior institutional program review recommendations, program action plan responses and improvement outcomes
 - iv. Measures of resident performance
 1. Aggregate data from resident competency and milestone assessment
 2. Resident in-training examination performance
 3. Resident case and procedure logs
 4. Resident progress and advancement data
 5. Resident participation in scholarly activities
 - v. Measures of graduate performance
 1. Graduate performance on certification examination(s)
 2. Graduate placement
 3. Other graduate outcome information
 - vi. Measures of program quality
 1. Residency program goals and objectives
 2. Aggregate residents' annual confidential written evaluations of the program and of the faculty
 3. ACGME annual resident survey
 4. Aggregate faculty confidential written evaluations of the program
 5. ACGME annual faculty survey
 6. Other survey or evaluation instrument results
 7. Resident attrition
 8. Data on resident recruitment and retention (i.e. NRMP outcomes)

- vii. Measures of faculty development
 - 1. Faculty participation and attendance in development activities
 - 2. Faculty attendance at organized didactics and conferences
 - 3. Faculty participation in department meetings related to education or teaching
 - 4. Faculty academic and scholarly activities
 - viii. Clinical learning environment focus areas
 - 1. Professionalism, personal responsibility, patient safety
 - 2. Quality improvement
 - 3. Transitions of Care
 - 4. Alertness management and fatigue mitigation
 - 5. Supervision
 - 6. Appropriate assignment of progressive clinical responsibilities
 - 7. Teamwork
 - 8. Duty hours
 - ix. Any other issues or concerns that may be raised
- 4. At the time of the meeting, the PEC will review its charges and responsibilities, the program history including past citations and previous year's action plans, responses to prior action plans, and current performance, quality and outcome data such as that described above.
- 5. Additional meetings may be scheduled, as needed, to continue to review data, discuss concerns and potential improvement opportunities, and to make recommendations. Written minutes will be taken of all meetings.
- 6. As a result of the information considered and subsequent discussion, the Committee will:
 - a. identify any deficiencies in the program or areas for improvement and prepare an explicit written plan of action to address them as well as delineate how improvements in performance will be measured and monitored
 - b. develop recommendations for improving the residency program, through enhancement of identified strengths
- 7. The final report and action plan will be reviewed and approved by the program's teaching faculty, and documented in meeting minutes.
- 8. A report of the PEC A.P.E. accompanied by an action plan and meeting minutes will be provided to the GMEC.

Clinical Competency Committee (CCC)- Neurology

A. Membership

Members include the Program Director, Associate Program Directors, and additional faculty as appointed by the Program Director. The membership includes representatives from both major clinical sites (University Hospital of Brooklyn , Kings County Hospital).

B. Semi-annual Resident Evaluations

The CCC will conduct a series of meetings toward the end of each half-year (i.e. November/December and May/June) at which all active residents will be reviewed. The Committee will assign a rating for each resident for each of the ACGME reporting sub-competencies (The Milestones). These semi-annual ratings will be reported to the ACMGE through WebADS by the Program Director and/or his staff. A minimum of three faculty members of the Committee will constitute a quorum for these meetings.

C. Methods

The Committee will review all available information acquired on the resident including data entered into New Innovations for example faculty evaluations for the reporting period.

The Committee will review these evaluations and assign the appropriate ACGME Milestone ratings.

In determining the final semi-annual ratings for each resident, the Committee may adjust the calculated ratings in either direction based on the following sources of information:

- Anonymous peer evaluations
- Anonymous evaluations by nurses and other health professionals
- Anonymous patient/family evaluations
- Specific patient/family compliments and/or complaints
- Resident performance on In-Training Examination
- Resident performance on internal examinations
- Observed trends in clinical performance during the reporting period
- Observations of resident performance and behavior by the Chief Residents, Committee members, and the faculty at-large
- Resident procedure logs, for example a resident must have demonstrated proficiency in performing lumbar puncture.

D. Promotion, Remediation, and Dismissal

The Committee's semi-annual review of each resident serves as a determination as to whether the resident's performance is improving in a trajectory consistent with his/her achieving the ability to practice Internal Medicine safely and independently by the end of his/her training period. Residents whose performance is on this trajectory are recommended for promotion or graduation, as applicable. With the goal being achieving a level of independent practice in each domain.

When the Committee determines that a resident's performance is not meeting the required trajectory, a recommendation will be made to the Program Director regarding remediation or dismissal.

When the Program Director feels that a resident's performance is not meeting the required trajectory, he may request that the Committee issue a recommendation regarding remediation or dismissal. The Committee's consideration of such a request may occur at a regularly scheduled meeting or at a special meeting convened for that purpose.

X. SUNY Downstate Adult Neurology Residency: Rotation Goals and Objectives

Neurology Resident Ward Rotation at Kings County Hospital: KCH Ward Junior (PGY 2)

Patient care

- Goals
 - To perform thorough histories and examinations of neurology ward patients.
 - In conjunction with the Neurology Senior, to use information obtained from history, physical examinations, and ancillary tests to localize lesions and develop a differential diagnosis workup, evaluation and plan of care for neurology admissions.
 - To utilize EBM to guide evaluation and treatment of neurologic entities.
- Objectives
 - To present a thorough neurologic history on attending rounds and at morning report for neurology admissions.
 - To perform the components of the Neurologic examination
 - Mental status
 - Cranial nerves
 - Motor
 - Sensory
 - Reflexes
 - Plantar responses
 - Gait
 - Coordination
 - Special maneuvers – straight leg raises, Romberg
 - To present patient evaluations on rounds in a clear and concise manner.
 - To document appropriately in the electronic medical record
 - Admitting H&P
 - Progress notes
 - Event notes
 - Procedure notes
 - Medication reconciliation
 - Integrated plan of care

Medical knowledge

- Goals
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities.
 - To recognize deviations from common patterns and develop a plan to evaluate rare entities.
- Objectives
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities including:
 - Autoimmune: multiple sclerosis
 - Developmental: epilepsy, hydrocephalus
 - Infectious: bacterial and viral meningitis, herpes encephalitis
 - Neoplastic: primary brain tumors, metastatic brain tumors
 - Vascular: ischemic stroke, primary intracerebral hemorrhage
 - To know the etiology, evaluation, and management of common neurologic emergencies including:
 - Acute stroke
 - Guillain-barre syndrome
 - Increased intracranial pressure
 - Intracerebral hemorrhage
 - Myasthenic crisis.
 - Status epilepticus
 - To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures
 - To obtain certification in lumbar punctures and to interpret the results.
 - To interpret CT scans and MRIs of the brain.
 - To begin to develop expertise in interpreting CT scans and MRIs of the spine.
 - To evaluate and integrate EEG and EMG results.
 - To present patients at Directors Rounds, KCH Morning Report, Neurology Case Conference, and Neuroradiology Conference.

Practice-based learning and improvement

- Goals
 - To learn how to use EBM to obtain medical knowledge for patient care.
 - To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - To assist the KCH Ward Senior in the preparation of monthly morbidity and mortality reports.
 - To apply techniques of EBM to seek information in support of patient care.
 - To present EBM and additional medical information obtained to colleagues at junior resident teaching conferences.
 - To participate in and help develop departmental and institutional performance improvement projects.

-To follow procedures designed to meet national patient safety goals.

Interpersonal and communication skills

- Goals
 - To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - To present patients on rounds in a clear and concise manner.
 - To give and receive sign outs in a collegial, complete, and efficient manner.
 - To effectively present medical information obtained to colleagues at teaching conferences.
 - To effectively teach medical students and rotating residents.
 - To document in the EMR in an accurate, concise, and punctual manner.
 - To work with the Stroke Coordinator to ensure that the documentation of stroke patients complies with NYS and CMS guidelines.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patients' interest ahead of any other considerations.
 - To understand the ethical principles involved in obtaining advance directives and informed consent.
- Objectives
 - To obtain complete and pertinent informed consent for procedures on appropriate patients.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To participate in interdisciplinary team rounds.
 - To practice neurology in a culture of safety and collaboration.
- Objectives
 - To collaboratively develop and implement appropriate discharge plans on through interaction with Rehabilitation Medicine Services, Social Work, and Nursing.
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.

Neurology Ward Rotation at Kings County Hospital:
KCH Ward Senior (PGY 4)

Patient care

- Goals
 - To supervise junior resident in performing neurology inpatient evaluations including the history, examination, interpretation of studies, differential diagnosis, workup and treatment.
 - To independently perform thorough histories and examinations of neurology ward patients.
 - To independently synthesize information from the initial evaluation (history, physical examinations, and ancillary tests) to localize lesions and formulate a differential diagnosis.
 - To supervise resident work rounds independently.
 - To organize attending rounds in conjunction with the attending.
 - To present patients on clinical rounds in a concise and effective manner.
- Objectives
 - To document appropriately in the electronic medical record (senior resident admitting note, other documentation as needed).
 - To supervise the junior residents in documenting neurology inpatient evaluations (admitting H&P, progress notes, and procedure notes, medication reconciliation, and integrated plan of care).
 - To supervise the junior residents in performing the components of the Neurologic examination (mental status, cranial nerves, motor, sensory, reflexes, plantar responses, gait, coordination, and special maneuvers).

Medical knowledge

- Goals
 - To know the presentations, differential diagnoses and treatments of both commonly and rarely encountered neurologic disease entities.
 - To utilize literature searches to guide evaluation and treatment of neurologic entities.
 - To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures and to be able to interpret the results.
 - To supervise junior residents in selection and presentation of patients for neurology case conference, directors rounds, and neuro-radiology conferences.

- Objectives
 - To know the presentations, differential diagnoses and treatments of:
 - Autoimmune: multiple sclerosis, neuromyelitis optica, cerebral vasculitis, neurosarcoidosis
 - Developmental: epilepsy, hydrocephalus
 - Infectious: bacterial and viral meningitis, herpes encephalitis, CNS Lyme disease, CNS parasites
 - Neoplastic: primary brain tumors, metastatic brain tumors, paraneoplastic syndromes, complications of chemotherapy
 - Vascular: ischemic stroke, primary intracerebral hemorrhage, cerebral amyloidosis, vascular malformations, septic emboli
 - To know the etiology, evaluation, and management of common neurologic emergencies including:
 - Acute stroke, complications of tPA administration
 - Guillain-barre syndrome
 - Increased intracranial pressure
 - Intracerebral hemorrhage
 - Myasthenic crisis
 - Neuroleptic malignant syndrome
 - Status epilepticus, refractory status epilepticus
 - To be certified in performing and interpreting lumbar punctures.
 - To interpret the results for:
 - MR spectroscopy of the brain
 - EEG
 - EMG
 - Evoked potentials
 - To be able to interpret
 - MRI scans of the brain and spine
 - CT scans of the brain and spine

Practice-based learning and improvement

- Goals
 - To take a leadership role in departmental QI activities.
 - To understand and implement departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - To prepare monthly morbidity and mortality reports.
 - To present the monthly morbidity and mortality report and lead discussion on identified issues and to develop improvement plans.
 - To use information technology to obtain medical knowledge for patient care.
 - To present medical information obtained to colleagues at teaching conferences.
 - To implement departmental and institutional procedures designed to meet national patient safety goals.
 - To learn PDSA methodology and to conduct a performance

improvement project.

Interpersonal and communication skills

- Goals
 - To set up a climate of inquiry and open communication on the KCH Neuro Ward Team.
 - To supervise the members of the clinical team in patient care activities.
- Objectives
 - To co-manage morning report with the Chief of Service or Attending.
 - To present patients at morning report in a clear and concise manner.
 - To lead daily sign out rounds.
 - To effectively present medical information obtained to colleagues at teaching conferences.
 - To effectively teach medical students and rotating residents.
 - To lead and communicate effectively on interdisciplinary team rounds.

Professionalism

- Goals
 - To model professional behavior as the senior resident leading the clinical team.
 - To put the patients' interest ahead of any other considerations
- Objectives
 - To demonstrate respect for patients, colleagues and staff members.
 - To understand the principles behind and to be able to perform and supervise obtaining advance directives and informed consents.
 - To follow accepted procedures to maintain the confidentiality of personally identifiable patient information.
 - To perform and supervise medical record documentation that is accurate, concise, and punctual.
 - To work with the Stroke Coordinator to ensure that the documentation of all stroke patients on the KCH Ward Service complies with NYS and CMS guidelines.

Systems-based practice

- Goals
 - To lead interdisciplinary team rounds.
 - To implement patient safety systems.
- Objectives
 - To lead collaborative development and implementation of discharge plans on interdisciplinary team rounds.
 - To participate in and understand root cause analysis, sentinel event review, error reporting, and investigation

Neurology Consultation Rotation at Kings County Hospital:
KCH Consult Junior Resident (PGY 2 or 3)

Patient care

- Goals
 - o To perform competent, efficient, and compassionate neurology consultations on inpatient services and in special care areas such as the emergency department, critical care units, and labor and delivery.
 - o To use information obtained from history, physical examinations, and ancillary tests to localize lesions and develop a differential diagnosis workup, evaluation and plan of care for neurology admissions.
 - o To utilize EBM to guide evaluation and treatment of neurologic entities.
- Objectives
 - o To present a thorough and concise neurologic initial evaluation on attending rounds and at morning report.
 - o To present pertinent follow up of consultations on attending rounds.
 - o To perform and become certified in specialized exams
 - Brain death
 - Coma
 - Tensilon test or the equivalent
 - NIH stroke scale, modified Rankin scale, swallowing evaluation
 - o To document thorough and timely Initial consultation, follow-up, and sign off notes in the EMR.

Medical knowledge

- Goals
 - o To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities.
 - o To recognize deviations from common patterns and develop a plan to evaluate rare entities.
 - o To run stroke codes.
- Objectives
 - o To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities including:
 - Autoimmune: multiple sclerosis
 - Developmental: epilepsy, hydrocephalus
 - Infectious: bacterial and viral meningitis, herpes encephalitis
 - Neoplastic: primary brain tumors, metastatic brain tumors
 - Vascular: ischemic and hemorrhagic stroke
 - o To know the etiology, evaluation, and management of common

neurologic emergencies including:

- Guillain-barre syndrome
- Increased intracranial pressure
- Myasthenic crisis.
- Status epilepticus
- Acute stroke
- Intracerebral hemorrhage
- Traumatic brain injury
- o To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures
 - To obtain certification in lumbar punctures and to interpret the results.
 - To interpret CT scans and MRIs of the brain.
 - To begin to develop expertise in interpreting CT scans and MRIs of the spine.
 - To evaluate and integrate EEG and EMG results.
- o To present patients at Directors Rounds, Morning Report, Neuroradiology Conference, and specialty conferences.
- o To achieve certification in tPA administration.

Practice-based learning and improvement

- Goals
 - o To learn how to use EBM to obtain medical knowledge for patient care.
 - o To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - o To apply techniques of EBM to seek information in support of patient care.
 - o To present EBM and additional medical information obtained to colleagues at specialty teaching conferences.
 - o To participate in and help develop departmental and institutional performance improvement projects.
 - o To follow procedures designed to meet national patient safety goals.

Interpersonal and communication skills

- Goals
 - To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - To present patients on rounds in a clear and concise manner.
 - To give appropriate, clear, and concise sign outs on sign out rounds.
 - To effectively present medical information obtained to colleagues at teaching conferences.
 - To effectively teach medical students and rotating residents.
 - To document in the medical record in an accurate, concise, and punctual manner.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patients' interest ahead of any other considerations.
 - To understand the ethical principles in brain death, coma, minimal consciousness, and persistent vegetative state.
- Objectives
 - To become brain death evaluations and coma evaluations in a compassionate and professional manner.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To participate in family and inter-service meetings.
 - To practice neurology in a culture of safety and collaboration.
- Objectives
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.
 - To contribute to the preparation of monthly morbidity and mortality reports.

Neurology Consultation Rotation at Kings County Hospital:
KCH Consult Senior Resident (PGY 4)

Patient care

- Goals
 - To supervise Neurology junior and rotating residents on the KCH consultation service.
 - To triage distribute the consultations evenly and with regard to the level of training of the resident.
 - To ensure the smooth running of the service including stroke codes, routine and urgent consultations, follow up and sign off.
 - To perform competent, efficient, and compassionate neurology consultations on inpatient services and in special care areas such as the emergency department, critical care units, and labor and delivery.
 - To use information obtained from history, physical examinations, and ancillary tests to localize lesions and develop a differential diagnosis workup, evaluation and plan of care for neurology admissions.
 - To utilize EBM to guide evaluation and treatment of neurologic entities.
- Objectives
 - To organize the clinical team for presentations on attending rounds and at morning report.
 - To present consultations concisely and thoroughly on attending rounds and at morning report.
 - To become certified in specialized exams
 - Brain death
 - Coma
 - Tensilon test or the equivalent
 - NIH stroke scale, modified Rankin scale, swallowing evaluation
 - To document thorough and timely Initial consultation, follow-up, and sign off notes in the EMR.

Medical knowledge

- Goals
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities.
 - To recognize deviations from common patterns and develop a plan to evaluate rare entities.
 - To run stroke codes.
- Objectives
 - To know the presentations, differential diagnoses and treatments of:
 - Complications of medical disease including, seizures, encephalopathy, syncope, CNS and PNS toxicity of medications
 - Autoimmune: multiple sclerosis, neuromyelitis optica, cerebral vasculitis, neurosarcoidosis
 - Developmental: epilepsy, hydrocephalus
 - Infectious: bacterial and viral meningitis, herpes encephalitis, CNS Lyme disease, CNS parasites
 - Neoplastic: primary brain tumors, metastatic brain tumors, paraneoplastic syndromes, complications of chemotherapy
 - Vascular: ischemic stroke, primary intracerebral hemorrhage, cerebral amyloidosis, vascular malformations, septic emboli
 - To know the etiology, evaluation, and management of common neurologic emergencies including:
 - Acute stroke, complications of tPA administration
 - Guillain-barre syndrome
 - Increased intracranial pressure
 - Intracerebral hemorrhage
 - Myasthenic crisis
 - Neuroleptic malignant syndrome
 - Status epilepticus, refractory status epilepticus
 - To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures
 - To obtain certification in lumbar punctures and to interpret the results.
 - To interpret CT scans and MRIs of the brain.
 - To begin to develop expertise in interpreting CT scans and MRIs of the spine.
 - To evaluate and integrate EEG and EMG results.
 - To present patients at Morning Report, Neuroradiology Conference, and specialty conferences.
 - To complete the critical care NEX exam.

Practice-based learning and improvement

- Goals
 - To learn how to use EBM to obtain medical knowledge for patient care.
 - To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - To apply techniques of EBM to seek information in support of patient care.
 - To present EBM and additional medical information obtained to colleagues at specialty teaching conferences.
 - To follow procedures designed to meet national patient safety goals.
 - To learn PDSA methodology and to develop a PI project.

Interpersonal and communication skills

- Goals
 - To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - To present patients on rounds in a clear and concise manner.
 - To give appropriate, clear, and concise sign outs on sign out rounds.
 - To effectively present medical information obtained to colleagues at teaching conferences.
 - To effectively teach medical students and rotating residents.
 - To document in the medical record in an accurate, concise, and punctual manner.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patients' interest ahead of any other considerations.
 - To understand the ethical principles underlying brain death, coma, minimal consciousness, and persistent vegetative states.
- Objectives
 - To perform brain death and coma evaluations in a compassionate and professional manner.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To participate in family and inter-service meetings.
 - To practice neurology in a culture of safety and collaboration.
- Objectives
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.
 - To coordinate with the KCH Ward Senior in the preparation of monthly morbidity and mortality reports.

Neurology Resident General Rotation at University Hospital of Brooklyn: UHB General (PGY 3/4)

Patient care

- Goals
 - To perform competent, efficient, and compassionate admissions, hospital care, and discharges of patients admitted to the general neurology service at UHB.
 - To perform competent, efficient, and compassionate general neurology consultations at UHB.
 - To use information obtained from history, physical examinations, and ancillary tests to localize lesions and develop a differential diagnosis workup, evaluation and plan of care for neurology admissions.
 - To utilize EBM to guide evaluation and treatment of neurologic entities.
- Objectives
 - To present a thorough and concise neurologic initial evaluation on attending rounds and at morning report for neurology admissions and initial consultations.
 - To present hospital course of admitted patients and follow up of consultations on attending rounds.
 - To perform the components of the Neurologic examination
 - Mental status
 - Cranial nerves
 - Motor
 - Sensory
 - Reflexes
 - Plantar responses
 - Gait
 - Coordination
 - Special maneuvers – straight leg raises, Romberg

- o To document appropriately in the medical record
 - For admissions:
 - Admitting H&P, progress notes, event notes, procedure notes, medication reconciliation, integrated plans of care, discharge documentation.
 - For consultations:
 - Initial consultation, follow-up, and sign off notes.

Medical knowledge

- Goals
 - o To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities.
 - o To recognize deviations from common patterns and develop a plan to evaluate rare entities.
- Objectives
 - o To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities including:
 - Autoimmune: multiple sclerosis
 - Developmental: epilepsy, hydrocephalus
 - Infectious: bacterial and viral meningitis, herpes encephalitis
 - Neoplastic: primary brain tumors, metastatic brain tumors
 - o To know the etiology, evaluation, and management of common neurologic emergencies including:
 - Guillain-barre syndrome
 - Increased intracranial pressure
 - Myasthenic crisis.
 - Status epilepticus
 - o To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures
 - To obtain certification in lumbar punctures and to interpret the results.
 - To interpret CT scans and MRIs of the brain.
 - To begin to develop expertise in interpreting CT scans and MRIs of the spine.
 - To evaluate and integrate EEG and EMG results.
 - o To present patients at Directors Rounds, UHB Morning Report, Neuroradiology Conference, and specialty conferences.

Practice-based learning and improvement

- Goals
 - To learn how to use EBM to obtain medical knowledge for patient care.
 - To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - To apply techniques of EBM to seek information in support of patient care.
 - To present EBM and additional medical information obtained to colleagues at specialty teaching conferences.
 - To participate in and help develop departmental and institutional performance improvement projects.
 - To follow procedures designed to meet national patient safety goals.

Interpersonal and communication skills

- Goals
 - To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - To present patients on rounds in a clear and concise manner.
 - To lead sign out rounds collaboratively with the UHB Stroke resident.
 - To effectively present medical information obtained to colleagues at teaching conferences.
 - To effectively teach medical students and rotating residents.
 - To document in the medical record in an accurate, concise, and punctual manner.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patients' interest ahead of any other considerations.
 - To understand the ethical principles involved in obtaining advance directives, and informed consent.
- Objectives
 - To obtain complete and pertinent informed consent for procedures on appropriate patients.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To participate in interdisciplinary team rounds.
 - To practice neurology in a culture of safety and collaboration.
- Objectives
 - To collaboratively develop and implement appropriate discharge plans on through interaction with Rehabilitation Medicine Services, Social Work, and Nursing.
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.
 - To coordinate with the UHB Stroke Resident in the preparation of monthly morbidity and mortality reports.

Neurology Resident Stroke Service Rotation at University Hospital of Brooklyn: UHB Stroke (PGY 2/3)

Patient care

- Goals
 - To perform competent, efficient, and compassionate admissions, hospital care, and discharges of patients admitted to the stroke service at UHB.
 - To perform competent, efficient, and compassionate stroke consultations at UHB.
 - To run efficient and effective stroke codes
 - To use information obtained from history, physical examinations, and ancillary tests to localize lesions and develop a differential diagnosis workup, evaluation and plan of care for neurology admissions.
 - To utilize EBM to guide evaluation and treatment of neurologic entities.
- Objectives
 - To run stroke codes meeting NYS 5 Time indicators.
 - To care for stroke patients meeting NYS 12 Quality measures.
 - To present a thorough and concise stroke initial evaluations on attending rounds and at morning report for neurology admissions and initial consultations.
 - To present updates on the hospital course of admitted patients and follow up of consultations on attending rounds in a thorough and efficient manner.
 - To perform the components of the Stroke evaluations.
 - NIH Stroke Scale
 - Modified Rankin Scale
 - Swallowing evaluation

- o To document appropriately in the medical record
 - For stroke admissions:
 - Admitting H&P, progress notes, event notes, procedure notes, medication reconciliation, integrated plans of care, and discharge documentation
 - For Stroke codes/consultations:
 - Stroke code consultation, stroke initial consultation, follow -up, and sign off notes.

Medical knowledge

- Goals
 - o To know the presentations, differential diagnoses, workup, and treatments of vascular disease of the nervous system.
 - o To recognize deviations from common stroke entities and develop a plan to evaluate rare ones.
- Objectives
 - o To know the presentations, differential diagnoses and treatments of commonly encountered vascular neurologic disease entities including:
 - Autoimmune: CNS vasculitis
 - Developmental: AVMs, aneurysms, sickle cell disease
 - Infectious: mycotic aneurysms, infectious diseases of blood vessels
 - Neoplastic: direct and indirect vascular effects of malignancy
 - Idiopathic: Moyamoya
 - o To know the etiology, evaluation, and management of common vascular emergencies including:
 - Acute ischemic stroke including tPA administration
 - Intracerebral hemorrhage including post tPA hemorrhage
 - Stroke-in-evolution
 - o To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures.
 - To interpret CT scans and MRIs of the brain.
 - To interpret cerebral angiograms
 - To interpret spinal angiograms
 - o To present patients at UHB Morning Report, Neuroradiology Conference, and vascular conferences.

Practice-based learning and improvement

- Goals
 - To learn how to use EBM to obtain medical knowledge for patient care.
 - To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - To apply techniques of EBM to seek information in support of patient care.
 - To present EBM and additional medical information obtained to colleagues at specialty teaching conferences.
 - To participate in and help develop departmental and institutional performance improvement projects.
 - To follow procedures designed to meet national patient safety goals.

Interpersonal and communication skills

- Goals
 - To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - To present patients on rounds in a clear and concise manner.
 - To lead sign out rounds collaboratively with the UHB General resident.
 - To effectively present medical information obtained to colleagues at teaching conferences.
 - To effectively teach medical students and rotating residents.
 - To document in the medical record in an accurate, concise, and punctual manner.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patient's interest ahead of any other considerations.
 - To understand the ethical principles involved in obtaining advance directives, and informed consent.
- Objectives
 - To obtain complete and pertinent informed consent for procedures on appropriate patients.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To work with the Stroke coordinator to provide quality stroke care.
 - To participate in interdisciplinary team rounds.
 - To practice neurology in a culture of safety and collaboration.
- Objectives
 - To work collaboratively with the stroke coordinator in meeting and documenting NYS time and quality standards.
 - To collaboratively develop and implement appropriate discharge plans on through interaction with the Stroke coordinator, Rehabilitation Medicine Services, Social Work, and Nursing.
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.
 - To coordinate with the UHB General Resident in the preparation of monthly morbidity and mortality reports

Neuro-oncology Rotation at Memorial Sloan-Kettering Cancer Center: Neurology Junior Resident (PGY 2)

Patient care

- Goals
 - To develop skills in neuro-oncologic consultations including history, examination, evaluation and interpretation of neuroimaging and neuropathology, and documentation
 - To develop skill in oral presentations of patients on attending rounds and at conferences
- Objectives
 - To develop skill in writing consultation note
 - To develop skill in the care of patients with neuro-oncologic conditions.

Medical knowledge

- Goals
 - To learn the differential diagnosis and treatment of commonly encountered manifestations of cancer and its treatment on the nervous system
 - To develop skill in the care of patients with neuro-oncologic conditions.

- Objectives
 - To learn the pathophysiology, diagnosis, and treatment of:
 - Primary brain tumors, secondary brain tumors, carcinomatous meningitis and seeding of the spinal cord, primary and secondary tumors of the spinal cord and its coverings, paraneoplastic syndromes.
 - To develop skill in writing consultation notes
 - Know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures, neuroradiologic tests, and electrophysiologic tests (EEG, EMG)
 - To develop appropriate pertinent differential diagnoses and plans of care

Practice-based learning and improvement

- Goals
 - To use EBM to supplement medical knowledge and support patient care.
 - To understand the departmental and institutional performance improvement projects and patient safety goals
- Objectives
 - To develop appropriate pertinent differential diagnoses and plans of care
 - To be able to present information obtained through the use of information technology
 - To implement the departmental and institutional performance improvement projects and patient safety goals

Interpersonal and communication skills

- Goals
 - To improve skill in oral presentations of patients on attending rounds and at conferences
 - To improve communication with other members of the health care team
- Objectives
 - To present patients on attending rounds and at conferences.
 - To participate in interdisciplinary team interactions

Professionalism

- Goals
 - To consistently demonstrate respect for patients, families, and staff members
 - To consistently put the patients' interests ahead of any other considerations

- Objectives
 - o To understand the ethical principles involved in obtaining advance directives and informed consent in patients with cancer
 - o To understand the ethical issues involved in end-of-life care
 - o To maintain the confidentiality of personally identifiable patient information

Systems-based practice

- Goals
 - o To demonstrate ability to obtain needed services for patients
- Objectives
 - o To understand the role of each member of the patient care team
 - o To participate in interdisciplinary team conferences

Curriculum

Knowledge

Residents will be exposed to patients with cancer in a specialized cancer center

Residents will be expected to know the evaluation, diagnosis, and treatment options for patients with cancer of the nervous system

Residents will be expected to know the principles behind, and applications of neurodiagnostic tests such as lumbar puncture, biopsy, EEG, and EMG, and imaging of the CNS and PNS as well as neuropathologic tests

Skill

The resident will initially evaluate, diagnose, and treat patients with neuro-oncologic conditions, including primary and secondary malignancies of the CNS and PNS and the side effects of cancer treatments on the nervous system under resident, fellow, and attending supervision

Attitude

Residents should display a professional and collegial attitude

Educational experiences

Attending Rounds

MSKCC didactic conferences

Neurology ICU Mount Sinai- PGY3

Site-director who will assume administrative, educational, and supervisory responsibility for the resident(s).

| <u>Name</u> | <u>Title</u> | <u>Program Role</u> |
|---------------|--------------|--|
| Stephan Mayer | MD | Director of Neurocritical Care for the Mount Sinai Health System |

Rational:

The NICU is devoted for Adult neurology patients requiring critical care. Unit patients are treated for a wide variety of acute neurologic emergencies including but not limited to severe cerebrovascular pathologies (examples are Ischemic or hemorrhagic stroke and subarachnoid hemorrhage), Coma, Epilepsy, Acute autoimmune demyelinating polyneuropathy, Myasthenia Gravis, Encephalopathy, Herniation. This level of care is fundamental to neurology resident's education.

PGY3 level Downstate Neurology residents will each rotate for a period of one month at the Mount Sinai NICU. They rotating residents will be under the supervision and guidance of the NICU attending and will assume the appropriate responsibilities. The rotating residents will participate in the call schedule as required. Rotating residents will care, round and interact with a multidisciplinary team including neurointensivists, neurosurgeons and neurointerventionalists as well as supporting services and staff. Practical bedside and didactic teaching sessions will supplement the patient care experience.

Educational goals and objectives:

Rotation Goals:

- Perform a detailed neurological history and physical exam of critically ill patients. (Competencies Addressed: Patient Care, Medical Knowledge, Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Professionalism)
- Understand the indications and basic interpretation of monitoring and diagnostic testing in the ICU. (Competencies Addressed: Patient Care, Medical Knowledge, Practice-Based Learning and Improvement)
- Understand the clinical evaluation and treatment of neurological emergencies in the ICU (Competencies Addressed: Patient Care, Medical Knowledge, Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Professionalism, Systems-Based Practice)
- Understand the pathophysiology, diagnosis and management of common neurovascular disorders including: ischemic stroke, hemorrhagic stroke, subarachnoid hemorrhage, and other cerebrovascular malformations. (Competencies Addressed: Patient Care, Medical Knowledge, Practice-Based Learning and Improvement, Interpersonal and

Communication Skills, Professionalism, Systems-Based Practice)

- Understand patient management after neurosurgical and interventional procedures. (Competencies Addressed: Patient Care, Medical Knowledge, Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Professionalism, Systems-Based Practice)

Rotation Objectives:

- Gain an introduction to the neuroanatomy and pathophysiology of acute cerebrovascular disease (Competencies Addressed: Patient Care, Medical Knowledge)
- Develop clinical skills in managing neurological emergencies (Competencies Addressed: Patient Care, Medical Knowledge, Practice-Based Learning, Interpersonal and communication skills, Professionalism, Systems-Based Practice)

Brief description of how resident experience at Affiliate contributes to achieving competence in any of the six ACGME defined competencies:

Core Competencies:

Patient Care-Resident is able to provide compassionate, appropriate and effective patient care for the treatment of health problems and promotion of health. Resident understands how to appropriately prioritize patient problems and develop an appropriate diagnostic plan, prescribes medications appropriately, and shows an appropriate balance between attention to the details of patient care and the overall context of treating the patient's illness. Resident obtains consultations appropriately, and is able to perform technical procedures adequately, when appropriate.

Medical Knowledge-Resident demonstrates knowledge of established and evolving biomedical, clinical, epidemiological, and social/behavioral sciences as well as the application of this knowledge to patient care. Resident is able to assess diagnostic information critically and constructively, and recognizes the psychosocial aspects of illness. Resident is able to critically evaluate the medical literature and apply new knowledge to the delivery of safe and effective patient care.

Practice-Based Learning and Improvement- Resident is able to critically evaluate the care of their patients, appraise and assimilate scientific evidence, and continuously improve patient care delivered on the basis of ongoing self-evaluation and learning. The resident uses knowledge to educate patient families, medical students, allied health personnel, peers, and other health professionals as appropriate. Resident is capable of self-identifying strengths, deficiencies, and the limits of their knowledge and expertise. The Resident is receptive to constructive criticism (formative evaluation feedback) regarding the care of patients and physician performance. Resident is able to set learning and improvement goals, and identify and perform activities appropriate to meeting those goals.

Interpersonal and Communication Skills-The Resident demonstrates interpersonal and communication skills that result in effective information exchange and collaboration with patients, families and other health professionals.

These skills include the ability to communicate across a broad range of socio-economic and cultural backgrounds and ability to communicate with physicians, health professionals, and health related agencies effectively. Resident is able to maintain comprehensive, timely and readable medical records. Resident can work effectively as a member or leader of a healthcare team and serve appropriately as a consultant to other physicians and health professionals. Resident is able to clearly lead daily work rounds, when appropriate.

Professionalism- Committed to carrying out professional responsibilities and adhering to ethical principles. Resident demonstrates respect for patient privacy and autonomy and is accountable to patient, society and the medical profession for actions. Resident demonstrates compassion, integrity and respect for others as well as responsiveness to patient needs that supersede self-interest. The Resident demonstrates sensitivity and responsiveness to a broad patient population including diversity in gender, age, culture, race, religion, disability, and sexual orientation. Resident demonstrates the ability to manage personal stress effectively. Answer pages or messages in a timely fashion. Resident understands how to maintain appropriate professional boundaries, and demonstrates integrity, honesty and compassion. Resident completes assigned tasks in a timely fashion.

Systems-Based Practice-Resident understands and is capable to interact effectively with different systems of care. Demonstrates the ability to provide high-quality care in a cost-effective manner. Resident incorporates consideration of cost-awareness and risk-benefit analysis in patient care decisions. Resident advocates for high quality care for all patients.

Lines of responsibility and supervision for residents and faculty at affiliate.

Residents/fellows shall seek and be provided with supervision in accordance with their demonstrated competency levels and program policies.

The Affiliate Faculty shall provide appropriate supervision of the residents/fellows in patient care activities and maintain a learning environment conducive to educating the residents/fellows in the ACGME competency areas.

Participating institution's responsibilities for teaching and formal evaluation of the residents' performance.

The Affiliate Faculty shall make every effort to ensure that the residents/fellows are able to attain the goals and objectives of each of the competencies described above.

The Affiliate Faculty shall be responsible for (i) the timely written evaluation of each resident/fellow's performance during each such resident/fellow's rotation at the Affiliate and for (ii) providing each resident/fellow engaged in rotations at the Affiliate with the opportunity to review and discuss such evaluation with the Program Director at SUNY-HSCB.

Policies and procedures that govern the residents' education while rotating to the participating institution.

The residents/fellows will be under the general direction of the Policies and Procedures of the SUNY HSCB GME Committee, the Policies and Procedures of their SUNY HSCB Program, as well as the Policies and Procedures of the Affiliate Program.

Both SUNY HSCB and the Affiliate share responsibility for ensuring that all residents/fellows receive the appropriate clinical and professional training. Each entity is mutually obligated to create and encourage an appropriate learning environment that includes positive attitudes and values associated with professionalism, including, but not limited to, respect, standards of excellence, honor and integrity, accountability, compassion, altruism and duty. The Affiliate represents that it has suitable mechanisms to identify and promptly correct violations of professional standards. SUNY HSCB represents that it maintains such standards, and copies of its policies on professionalism and the learning environment are available upon request.

Goals and Objectives: Pediatric Neurology Rotation (UHB and KCH): **Rotating Residents**

Adult neurology residents are required by the RRC to complete three months of Pediatric Neurology rotation during their training. They rotate one month second year and two months third year. Call responsibilities (from home) for adult neurol. residents are 2 nights for 2nd year and 4 nights for 3rd year for each month. Sites include the pediatric floors, PICU, NICU, ER at UHB and KCH plus Child Psychiatry floor at KCH and Epilepsy Monitoring Unit at UHB. Residents are responsible for admissions and consults and are expected to attend their weekly continuity clinic and pediatric neurology clinics. The main objective of the rotation is to gain experience in the recognition, treatment and management of neurological disorders in infants, children and adolescents.

The resident should demonstrate an appropriate level of skill in the six core competencies:

Patient care

1. To develop family-centered, compassionate, development and age - appropriate care that is effective for the treatment of health problems and the promotion of health (e.g., communicate effectively, demonstrate caring and respectful behaviors, counsel and educate patients and families).
2. To develop skills in the evaluation and management of infants and children with neurologic conditions.
3. To provide concise and relevant presentations on rounds and adequate documentation in patient records.
4. To recognize the limitations of the level of training and seek help when appropriate.

Medical knowledge

1. To acquire knowledge about established and evolving biomedical, clinical, and epidemiological and social-behavioral sciences needed by the child neurologist and the application of this knowledge to patient care (e.g., demonstrate an investigatory and analytical thinking approach to clinical situations and know and apply the basic and clinically supportive sciences which are appropriate to neurology).
2. To learn the diagnosis and treatment of neurologic diseases in infants, children and adolescents.
3. To know the indications, contraindications, risks, benefits and alternatives to commonly performed neurodiagnostic procedures in infants and children.
4. To develop appropriate and pertinent plans of care.

Practice-based learning and improvement

1. This should involve investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care. This should include Identifying standardized guidelines for conditions common to child neurology and adapt them to individual patients.
2. To identify personal learning needs related to child neurology and plan for continuing acquisition of knowledge and skills.
3. To learn how to use and present information obtained through the use of information technology.
4. To understand and implement departmental and institutional improvement projects and patient safety goals.

Interpersonal and communication skills

1. To learn skills that result in effective information exchange and teaming with patients, their families, and other health professionals.
2. To provide effective patient and family education.
3. To communicate effectively (discuss findings and recommendations) with primary care and other physicians, families and other health care professionals.
4. To maintain accurate, legible and legally appropriate medical records.
5. To effectively establish rapport and communication with patients and families.

Professionalism

1. Develop a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population (e.g., demonstrate respect, compassion and integrity, a responsiveness to the needs of patients and society that supersedes self interest: demonstrate sensitivity and responsiveness to a patient's culture, age, gender and disability).
2. Demonstrate personal accountability to the well-being of patients (e.g., following up on lab results, writing comprehensive notes and seeking answers to patient care questions).
3. To maintain the confidentiality of patient information.
4. To demonstrate sensitivity to patients age, gender and disabilities.

Systems-based practice

1. Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.
2. Identify key aspects of health care systems as they apply to child neurology; become familiar with special care programs, such as special school facilities, home care, early intervention programs.
3. Demonstrate sensitivity to the costs of clinical care in neurology and take steps to
4. minimize costs without compromising quality.
5. Advocate for families who need assistance in dealing with systems complexities.
6. Recognize one's limits and those of the system; take steps to avoid medical errors.

Evaluation:

Residents: Residents are provided with verbal feedback from attendings. Evaluation forms are also completed by attendings on a monthly basis. Observed history and exams (as per Board requirement – NEX exams) are performed during the residency. Adult neurol. residents must complete one pediatric and four adult neurol. exams during training.

Rotation: Evaluation forms are completed by residents on a monthly basis evaluating the supervising attending and the rotation.

Suggested texts:

Clinical Pediatric Neurology: A Signs and Symptoms Approach
Gerald Fenichel
Diseases of the Nervous System in Childhood
Jean Aicardi
Pediatric Neurology: Principles and Practice
Kenneth Swaiman and Stephen Ashwal
Neurology of the Newborn
Joseph Volpe
The Treatment of Epilepsy: Principles and Practice
Elaine Willey

Rotation Schedule:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|-----------------------------|--|----------------------------|----------------------------|--|
| 8:30AM Ped. Neurol. Rounds | 8AM M. Report 9AM Case Conf. 10AM Ped.Neurol. Rounds | 8:30AM Ped. Neurol. Rounds | 8:30AM Ped. Neurol. Rounds | 8AM M. Report 9AM Grand Rounds 10:30AM PN Rounds |
| Noon Conference | Noon Conference | Noon Conference | Noon Conference | |
| 1PM KCH Ped. Neurol. Clinic | 1PM UHB Ped. Neurol. Clinic | | 1PM UHB Specialty Clinics | |

Neurology Consultation Rotation at Kings County Hospital
Emergency Medicine Resident (PGY 2)

Patient care

- Goals
 - To perform competent, efficient, and compassionate neurology consultations on inpatient services and in special care areas such as the emergency department, critical care units, and labor and delivery.
 - To use information obtained from history, physical examinations, and ancillary tests to localize lesions and develop a differential diagnosis workup, evaluation and plan of care for neurology admissions.
 - To utilize EBM to guide evaluation and treatment of neurologic entities.
- Objectives
 - To present a thorough and concise neurologic initial evaluation on attending rounds and at morning report.
 - To present pertinent follow up of consultations on attending rounds.
 - To observe and perform specialized exams including:
 - Brain death
 - Coma
 - Tensilon test or the equivalent
 - NIH stroke scale, modified Rankin scale, swallowing evaluation
 - To document thorough and timely Initial consultation, follow-up, and sign off notes in the EMR.

Medical knowledge

- Goals
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities.
 - To recognize deviations from common patterns and develop a plan to evaluate rare entities.
 - To run stroke codes.
- Objectives
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities including:
 - Autoimmune: multiple sclerosis
 - Developmental: epilepsy
 - Infectious: bacterial and viral meningitis, herpes encephalitis
 - Neoplastic: primary brain tumors, metastatic brain tumors
 - Vascular: ischemic and hemorrhagic stroke
 - To know the etiology, evaluation, and management of common neurologic emergencies including:
 - Guillain-barre syndrome
 - Increased intracranial pressure
 - Myasthenic crisis.
 - Status epilepticus
 - Acute stroke code
 - To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures
 - To obtain certification in lumbar punctures and to interpret the results.
 - To begin to develop expertise in interpreting CT scans and MRIs of the brain and spine.
 - To evaluate and integrate EEG and EMG results.
 - To present patients at Directors Rounds and Morning Report.
 - To achieve certification in tPA administration.

Practice-based learning and improvement

- Goals
 - To learn how to use EBM to obtain medical knowledge for patient care.
 - To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - To apply techniques of EBM to seek information in support of patient care.
 - To present EBM and additional medical information obtained to colleagues at specialty teaching conferences.
 - To participate in and help develop departmental and institutional performance improvement projects.
 - To follow procedures designed to meet national patient safety goals.

Interpersonal and communication skills

- Goals
 - To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - To present patients on rounds in a clear and concise manner.
 - To give appropriate, clear, and concise sign outs on sign out rounds.
 - To effectively present medical information obtained to colleagues at teaching conferences.
 - To effectively teach medical students and rotating residents.
 - To document in the medical record in an accurate, concise, and punctual manner.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patients' interest ahead of any other considerations.
 - To understand the ethical principles in brain death, coma, minimal consciousness, and persistent vegetative state.
- Objectives
 - To become brain death evaluations and coma evaluations in a compassionate and professional manner.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To participate in family and inter-service meetings.
 - To practice neurology in a culture of safety and collaboration.
- Objectives
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.
 - To contribute to the preparation of monthly morbidity and mortality reports.

**Neurology Consultation Rotation at Kings County Hospital:
Emergency Medicine/Internal Medicine Resident (PGY 1/2)**

Patient care

- Goals
 - To perform competent, efficient, and compassionate neurology consultations on inpatient services and in special care areas such as the emergency department, critical care units, and labor and delivery.
 - To use information obtained from history, physical examinations, and ancillary tests to localize lesions and develop a differential diagnosis workup, evaluation and plan of care for neurology admissions.
 - To utilize EBM to guide evaluation and treatment of neurologic entities.
- Objectives
 - To present a thorough and concise neurologic initial evaluation on attending rounds and at morning report.
 - To present pertinent follow up of consultations on attending rounds.
 - To observe and perform specialized exams including:
 - Brain death
 - Coma
 - Tensilon test or the equivalent
 - NIH stroke scale, modified Rankin scale, swallowing evaluation
 - To document thorough and timely Initial consultation, follow-up, and sign off notes in the EMR.

Medical knowledge

- Goals
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities.
 - To recognize deviations from common patterns and develop a plan to evaluate rare entities.
 - To run stroke codes.
- Objectives
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities including:
 - Autoimmune: multiple sclerosis
 - Developmental: epilepsy
 - Infectious: bacterial and viral meningitis, herpes encephalitis
 - Neoplastic: primary brain tumors, metastatic brain tumors
 - Vascular: ischemic and hemorrhagic stroke
 - To know the etiology, evaluation, and management of common neurologic emergencies including:

- Guillain-barre syndrome
- Increased intracranial pressure
- Myasthenic crisis.
- Status epilepticus
- Acute stroke code
- o To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures
 - To obtain certification in lumbar punctures and to interpret the results.
 - To begin to develop expertise in interpreting CT scans and MRIs of the brain and spine.
 - To evaluate and integrate EEG and EMG results.
- o To present patients at Directors Rounds and Morning Report.
- o To achieve certification in tPA administration.

Practice-based learning and improvement

- Goals
 - o To learn how to use EBM to obtain medical knowledge for patient care.
 - o To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - o To apply techniques of EBM to seek information in support of patient care.
 - o To present EBM and additional medical information obtained to colleagues at specialty teaching conferences.
 - o To participate in and help develop departmental and institutional performance improvement projects.
 - o To follow procedures designed to meet national patient safety goals.

Interpersonal and communication skills

- Goals
 - o To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - o To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - o To present patients on rounds in a clear and concise manner.
 - o To give appropriate, clear, and concise sign outs on sign out rounds.
 - o To effectively present medical information obtained to colleagues at teaching conferences.
 - o To effectively teach medical students and rotating residents.
 - o To document in the medical record in an accurate, concise, and punctual manner.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patients' interest ahead of any other considerations.
 - To understand the ethical principles in brain death, coma, minimal consciousness, and persistent vegetative state.
- Objectives
 - To become brain death evaluations and coma evaluations in a compassionate and professional manner.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To participate in family and inter-service meetings.
 - To practice neurology in a culture of safety and collaboration.
- Objectives
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.
 - To contribute to the preparation of monthly morbidity and mortality reports.

Neurology General Rotation at University Hospital Brooklyn

Psychiatry Resident Rotating at UHB (PGY 1)

Patient care

- Goals
 - To perform thorough histories and examinations of neurology ward patients.
 - In conjunction with the Neurology Senior, to use information obtained from history, physical examinations, and ancillary tests to localize lesions and develop a differential diagnosis workup, evaluation and plan of care for neurology admissions.
 - To utilize EBM to guide evaluation and treatment of neurologic entities.
- Objectives
 - To present a thorough neurologic history on attending rounds and at morning report for neurology admissions.
 - To perform the components of the Neurologic examination
 - Mental status
 - Cranial nerves
 - Motor
 - Sensory
 - Reflexes
 - Plantar responses
 - Gait
 - Coordination
 - Special maneuvers – straight leg raises, Romberg
 - To present patient evaluations on rounds in a clear and concise manner.
 - To document appropriately in the electronic medical record
 - Admitting H&P
 - Progress notes
 - Event notes
 - Procedure notes
 - Medication reconciliation
 - Integrated plan of care

Medical knowledge

- Goals
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities.
 - To recognize deviations from common patterns and develop a plan to evaluate rare entities.
- Objectives
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities including:

- Autoimmune: multiple sclerosis
- Developmental: epilepsy, hydrocephalus
- Infectious: bacterial and viral meningitis, herpes encephalitis
- Neoplastic: primary brain tumors, metastatic brain tumors
- Vascular: ischemic stroke, primary intracerebral hemorrhage
- o To know the etiology, evaluation, and management of common neurologic emergencies including:
 - Acute stroke
 - Guillain-barre syndrome
 - Increased intracranial pressure
 - Intracerebral hemorrhage
 - Myasthenic crisis.
 - Status epilepticus
- o To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures
 - To understand the risks, benefits, and principles underlying lumbar punctures interpret the results.
 - To begin to develop expertise in interpreting CT scans and MRIs of the brain and spine.
 - To evaluate and integrate EEG and EMG results.
- o To present patients at Directors Rounds and Morning Report.

Practice-based learning and improvement

- Goals
 - o To learn how to use EBM to obtain medical knowledge for patient care.
 - o To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - o To assist the UHB Senior Resident in the preparation of monthly morbidity and mortality reports.
 - o To apply techniques of EBM to seek information in support of patient care.
 - o To present EBM and additional medical information obtained to colleagues at junior resident teaching conferences.
 - o To participate in and help develop departmental and institutional performance improvement projects.
 - o To follow procedures designed to meet national patient safety goals.

Interpersonal and communication skills

- Goals
 - To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - To present patients on rounds in a clear and concise manner.
 - To give and receive sign outs in a collegial, complete, and efficient manner.
 - To effectively present medical information obtained to colleagues at teaching conferences.
 - To document in the EMR in an accurate, concise, and punctual manner.
 - To work with the Stroke Coordinator to ensure that the documentation of stroke patients complies with NYS and CMS guidelines.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patients' interest ahead of any other considerations.
 - To understand the ethical principles involved in obtaining advance directives and informed consent.
- Objectives
 - To obtain complete and pertinent informed consent for procedures on appropriate patients.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To participate in interdisciplinary team rounds.
 - To practice neurology in a culture of safety and collaboration.
- Objectives
 - To collaboratively develop and implement appropriate discharge plans on through interaction with Rehabilitation Medicine Services, Social Work, and Nursing.
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.

Neurology Consultation Rotation at University Hospital Brooklyn:
Psychiatry Rotating UHB Consult Junior Resident (PGY 1)

Patient care

- Goals
 - To perform competent, efficient, and compassionate neurology consultations on inpatient services and in special care areas such as the emergency department, critical care units, and labor and delivery.
 - To use information obtained from history, physical examinations, and ancillary tests to localize lesions and develop a differential diagnosis workup, evaluation and plan of care for neurology admissions.
 - To utilize EBM to guide evaluation and treatment of neurologic entities.
- Objectives
 - To present a thorough and concise neurologic initial evaluation on attending rounds and at morning report.
 - To present pertinent follow up of consultations on attending rounds.
 - To observe and perform specialized exams including:
 - Brain death
 - Coma
 - Tensilon test or the equivalent
 - NIH stroke scale, modified Rankin scale, swallowing evaluation
 - To document thorough and timely Initial consultation, follow-up, and sign off notes in the EMR.

Medical knowledge

- Goals
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities.
 - To recognize deviations from common patterns and develop a plan to evaluate rare entities.
 - To run stroke codes.
- Objectives
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities including:
 - Autoimmune: multiple sclerosis
 - Developmental: epilepsy
 - Infectious: bacterial and viral meningitis, herpes encephalitis
 - Neoplastic: primary brain tumors, metastatic brain tumors
 - Vascular: ischemic and hemorrhagic stroke
 - To know the etiology, evaluation, and management of common neurologic emergencies including:

- Guillain-barre syndrome
- Increased intracranial pressure
- Myasthenic crisis.
- Status epilepticus
- Acute stroke code
- o To know the indications, contraindications, risks, benefits, and alternatives to commonly performed neurodiagnostic procedures
 - To obtain certification in lumbar punctures and to interpret the results.
 - To begin to develop expertise in interpreting CT scans and MRIs of the brain and spine.
 - To evaluate and integrate EEG and EMG results.
- o To present patients at Directors Rounds and Morning Report.
- o To achieve certification in tPA administration.

Practice-based learning and improvement

- Goals
 - o To learn how to use EBM to obtain medical knowledge for patient care.
 - o To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - o To apply techniques of EBM to seek information in support of patient care.
 - o To present EBM and additional medical information obtained to colleagues at specialty teaching conferences.
 - o To participate in and help develop departmental and institutional performance improvement projects.
 - o To follow procedures designed to meet national patient safety goals.

Interpersonal and communication skills

- Goals
 - o To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - o To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - o To present patients on rounds in a clear and concise manner.
 - o To give appropriate, clear, and concise sign outs on sign out rounds.
 - o To effectively present medical information obtained to colleagues at teaching conferences.
 - o To effectively teach medical students and rotating residents.
 - o To document in the medical record in an accurate, concise, and punctual manner.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patients' interest ahead of any other considerations.
 - To understand the ethical principles in brain death, coma, minimal consciousness, and persistent vegetative state.
- Objectives
 - To become brain death evaluations and coma evaluations in a compassionate and professional manner.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To participate in family and inter-service meetings.
 - To practice neurology in a culture of safety and collaboration.
- Objectives
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.
 - To contribute to the preparation of monthly morbidity and mortality reports

Jeopardy Rotation

The Department of Neurology has a jeopardy rotation for PGY3/PGY4 residents where the primary responsibilities will be providing coverage, covering subspecialty clinics and attending all scheduled educational activities. This is also a time to engage scholarly activities including Quality Improvement.

COVERAGE:

- All residents on Jeopardy will be expected to be in-house (at KCH or Downstate) on weekdays from the hours of 9AM-5PM.
- All residents will be expected to carry their pagers at all times.
- If another resident is unable to perform his/ her duties, the Jeopardy resident may be called on *at any time* as backup. Services that may need to be covered include Weekday Ward/ Consult services, Short Call, Weekend Call, Night Float, Clinics.
- Jeopardy is to be used for **illness/ emergencies**. If any resident is unable to come to work due to illness/ emergency, the resident on Jeopardy will be expected to provide coverage with no expectation of "payback." If any resident has scheduled interviews/ appointments, he/ she may use the resident on Jeopardy to cover service, but ***WILL*** be expected to pay back coverage at a future date.

ACTIVATING JEOPARDY:

Activation of jeopardy particularly in emergent situations must undergo the formal process outlined below to facilitate a safe and efficient coverage system expeditiously whilst also accurately recording absences which is mandatory information for all departments to obtain and report to ACGME.

If any resident needs to call out urgently you must complete **ALL** of the following steps:

- o Call/Page the coverage chief as soon as possible but no later than 7 am to discuss the situation.
- o E-mail the coverage chief(downstate.neurology@gmail.com) as soon as possible- ideally more than 12 hours when possible before the shift begins but no later than 7am on the morning of the shift.
- o E mail the senior resident on service as soon as possible but no later on 7 am on the day
- o E mail the attending on service
- o E mail Marjorie Maxwell
- o Absences for more than 1 day in a row will ultimately require a Doctor's note
- o Residents calling out/notifying team later than 7am on consecutive occasions will incur added calls

SUBSPECIALTY CLINICS:

Residents on Jeopardy cover:

- **Monday KCH Screening Clinic** (E-Building 8th Floor at 1pm),

- **Tuesday UHB MDA Clinic** (UHB 4th Floor at 1pm),
- **Thursday UHB Epilepsy Clinic** (3rd, 4th and 5th Thursdays of the month at UHB Suite C at 1pm).
- If the Jeopardy resident has Continuity Clinic on Tuesday/ Thursday, he/ she will be expected to attend Continuity Clinic in place of Specialty Clinic.
- Residents may be required to switch their continuity clinic in certain instances when adequate coverage for EMU clinic or MDA clinic (You will be notified if this is the case)

JEOPARDY/EMG

There are instances during which residents will be assigned to the Jeopardy/EMG rotation. During this time all of the Jeopardy responsibilities remain exactly the same (including coverage and aforementioned clinic coverage) but additionally residents will also rotate with the EMG department from Monday to Friday

EDUCATIONAL ACTIVITIES:

- Residents on Jeopardy will be expected to attend all scheduled lectures/ activities.

QUALITY IMPROVEMENT:

- Residents on Jeopardy will be expected to engage in Quality Improvement activities. This includes attending any scheduled RCA meetings/ Committee meetings.
- Residents may also pursue their own Quality Improvement Projects during this time as part of their scholarly activity .

SCHOLARLY ACTIVITIES:

- Residents on Jeopardy will be expected to take advantage of the time to pursue scholarly activities. This may include research projects, writing up case reports, book chapters, etc. Residents may contact the Chiefs/ Faculty regarding available projects.

Electroencephalography Rotation (EEG):
Neurology Resident (PGY 3, 4, 5, 6)

Patient care

- **Goals**
 - To be able to perform a comprehensive evaluation of an Epilepsy Monitoring Unit Patient.
 - To be able to evaluate an epilepsy outpatient.
 - To be able to evaluate a first seizure patient.
- **Objectives**
 - To learn how to take a detailed epilepsy history
 - To learn the parts of the neuro exam that are pertinent to epilepsy patients
 - Signs of AED toxicity
 - Signs of focality
 - To know the indications for testing
 - Epilepsy workup
 - Epilepsy monitoring

Medical Knowledge

- **Goals**
 - To understand and apply the basis for the management of patients with epilepsy including first seizure, epilepsy, complex or intractable epilepsy
- **Objectives**
 - To know the principles of treatment of patients with epilepsy (e.g. starting and stopping therapy, monitoring therapy, management of complications of epilepsy)
 - To understand the use of old and new antiepileptic medications, including pharmacokinetics, spectrum of efficacy, dosing, and adverse effects and to apply this knowledge
 - To understand the basis of and to learn the classification of epilepsy
 - To understand the principles behind and the steps involved in epilepsy surgery evaluation
 - To learn the indications for, and utility of
 - EEG, video EEG monitoring, WADA, neuropsychological testing, epilepsy phase 1 and 2 MRIs, ictal PET and SPECT
 - To know the indications for EEGs and EPs
 - To know the technical aspects of EEGs and EPs
 - To demonstrate the recognition of normal EEG patterns of patients of various ages
 - To demonstrate the recognition of abnormal EEG patterns, including diffuse, focal, and epileptiform abnormalities

- To demonstrate the interpretation of EEG findings in relation to the clinical question
- To understand the basics of visual, brainstem auditory and somatosensory evoked potentials
- To understand the basis for diagnosis of a variety of paroxysmal disorders

Practice-based learning and improvement

- **Goals**
 - Know how to use EBM to help guide decision making
 - Understand the departmental and institutional performance improvement projects and patient safety goals
- **Objectives**
 - To be able to use information obtained through the use of EBM in developing evaluation and treatment plans
 - To implement the departmental and institutional performance improvement projects and patient safety goals

Interpersonal and communication skills

- **Goals**
 - To improve skill in oral presentations of patients on attending rounds and at epilepsy conferences
 - To participate productively in interdisciplinary team interactions.
- **Objectives**
 - To identify and treat special issues in women with epilepsy.
 - To identify and treat psychiatric and cognitive issues in persons with epilepsy
 - To effectively teach medical students and rotating residents.

Professionalism

- **Goals**
 - To consistently demonstrate respect for patients and staff members
 - To consistently put the patients' interests ahead of any other considerations
- **Objectives**
 - To understand the ethical principles involved in obtaining consent for video EEG monitoring
 - To maintain the confidentiality of personally identifiable patient information

Systems-based practice

- **Goals**
 - To demonstrate ability to obtain medical information on EEG patients including interacting with
- **Objectives**
 - To collaborate with referring services, neuroradiology, and Epilepsy Clinic

The initial introduction to the rotation will be done by the EMU attending of the month, who will also be responsible for the evaluation at the end of the month.

I. Curriculum

- a. Required reading:
 - i. Ebersole and Pedley, Current Practice of Clinical Electroencephalography

| | |
|----------|-------------------------------------|
| Chapters | Artifacts |
| | Physiologic basis of EEG |
| | Orderly approach to visual analysis |
| | Benign EEG variants |
| | Epilepsy and syncope |
| | Focal brain lesions |
| | Coma and brain death |
 - ii. Bruce Fisch, Spehlmann's EEG Primer
- b. Residents should go through the EEG teaching file and slide presentations, which provide a broad overview of a variety of topics in epilepsy.
- c. Teaching materials available in the Epilepsy Monitoring Unit
 - Videotaped series of lectures
 - PowerPoint slide presentations
 - Textbooks
 - Journal article references
- d. Residents should go through the videotaped lectures and slide presentations, which provide a broad overview of a variety of topics in epilepsy.

II. Responsibilities

- a. Daily attendance at EEG reading.
 - i. Fellows read in the morning, attendings generally in the afternoon. Check with the fellow regarding the reading time.
 1. Week 1:
 - a. Observe EEG reading. Basic teaching by attending and fellow
 - b. Observe EEG technologists performing at least one EEG and each EP modality from start to finish
 2. Week 2-4:
 - a. Review and write report of one EEG per day; discuss with attending
 3. **Every resident must write at least 10 EEG reports (supervised by the corresponding attending of that day) by the end of the rotation.**
 - b. Attendance at EP readings. Schedule is variable
 - c. Attendance at Clinical Neurophysiology Lectures
 - i. Monday, 8AM or 12 noon as scheduled.
 - d. Attendance at Epilepsy Conference
 - i. Thursdays 12N, EMU
 - e. Rotation in UHB Epilepsy Monitoring Unit
 - i. Residents will attend EMU rounds daily with the fellow from 8-9AM and with the attending/team from 9-10AM.
 - ii. Residents will become familiar with the Epilepsy Intake Database and will admit at least one patient to the EMU weekly. They will be responsible for the admission database and daily progress notes on this patient, under the supervision of the responsible attending physician.
 - f. Attendance at Epilepsy Clinic (1:00 - 5:00 pm) on the 3rd, 4th (and 5th) Thursday of each month, UHB, Suite C
 - i. Residents will see new and follow-up patients in Epilepsy Clinic

III. Evaluation

- a. Evaluation will be by written performance evaluation, which is the responsibility of the attending physician of the EMU during that month.
- b. Of the rotation: evaluation form filled out by residents on a monthly basis evaluating the supervising attending, the didactics, and the patient care responsibilities

Neurology Resident EMG Rotation:
Neurology Resident PGY 3, 4

Patient care

- **Goals**
 - To be able to perform a comprehensive neuromuscular history and evaluation.
- **Objectives**
 - To learn how to take a detailed neuromuscular history
 - To learn the parts of the neuro exam that are pertinent to neuromuscular patients
 - To learn the indications for EMG/NCV testing
 - To observe and perform 3 EMGs and NCVs

Medical Knowledge

- **Goals**
 - To know the principles of disease and treatment of patients with neuromuscular diseases(e.g. symptomatic or etiologic treatment, monitoring therapy)
 - To know the principles of management of complications of neuromuscular diseases and their treatments
- **Objectives**
 - To know the indications for EMG/NCV testing
 - To know the basis of EMGs and NCVs
 - To demonstrate the recognition of normal EMG and NCV patterns
 - To demonstrate the interpretation of EMG and NCV findings in relation to the clinical question
 - To develop appropriate pertinent differential diagnoses and plans of care in persons with neuromuscular disease
 - To know the basis and utility of genetic testing
 - To know the basis and utility of nerve/muscle biopsy

Practice-based learning and improvement

- **Goals**
 - Know how to use EBM to help guide decision making
 - Understand the departmental and institutional performance improvement projects and patient safety goals
- **Objectives**
 - To be able to use information obtained through the use of EBM in developing evaluation and treatment plans
 - To implement the departmental and institutional performance

improvement projects and patient safety goals

Interpersonal and communication skills

- **Goals**
 - o To improve skill in oral presentations of patients on attending rounds and at neuromuscular conferences
 - o To participate productively in interdisciplinary team interactions.
- **Objectives**
 - o To present a neuromuscular case at case conference or neuromuscular conference
 - o To identify and treat special issues in children and women with neuromuscular disease

Professionalism

- **Goals**
 - o To consistently demonstrate respect for patients and staff members
 - o To consistently put the patients' interests ahead of any other considerations
- **Objectives**
 - o To understand the ethical principles involved in obtaining consent for EMG/NCV testing.
 - o To maintain the confidentiality of personally identifiable patient information

Systems-based practice

- **Goals**
 - o To demonstrate ability to obtain medical information on Neuromuscular patients.
- **Objectives**
 - o To coordinate with Pediatric Neurology, Adult Neurology, Orthopedics, Neurosurgery, Rehabilitation Medicine, and Social Work services to obtain needed information for studies, diagnosis and development and implementation of treatment plans.
 - o To coordinate with EMG fellow for electrophysiologic testing
 - o To coordinate with Pathology for genetic testing

Curriculum

- o Knowledge
- o Skill
 - Residents are expected to be able to perform EMGs and NCVs with guidance
- o Attitude
 - Residents should display a professional and collegial attitude
- o Educational experiences
 - Residents will observe and participate in performing EMG's and NCV's
 - Residents will attend the biweekly MDA Clinic at UHB
 - Residents will review Neuromuscular study simulation set
 - Residents will attend Clinical Neurophysiology Conference

Residents will attend Neuromuscular Conference

 - Direct participation in at least 10 complete NCV and EMG studies

Responsibilities:

2. Daily attendance at EMG laboratory
3. Attendance at Clinical Neurophysiology Lectures
 - a. Mondays, 8AM or 12 noon as scheduled.
4. Attendance at Neuromuscular Conference
 - a. 2nd Friday 1 PM
5. Attendance at MDA Clinic (1:00 - 5:00 pm) on the 2nd and 4th Tuesdays of each month

Evaluation

Evaluation will be by written performance evaluation, which is the responsibility of the attending physician in charge of the EMG rotation, Dr. Paul Maccabee or his designee.

EMG Rotation Schedule

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------------------------------|--------------------|------------------|-----------------|-------------------------------|
| 8AM Clinical Neurophysiology Lecture | | 8 AM EEG Reading | | |
| 9AM EMGs UHB | 9AM EMGs KCH | 9AM EMGs KCH | 9AM EMGs UHB | |
| | | | | 10 AM EMGs UHB or KCH |
| | 1PM MDA Clinic UHB | | | 1 PM Neuromuscular Conference |

Neuropathology Rotation: **Neurology Resident**

Patient care

- **Goals**
 - o To understand the indications and the utility of neuropathologic studies
- **Objectives**
 - o To know the indications for and the limitations of brain biopsies, nerve biopsies and CSF histopathology
 - o To understand the principles of proper preparation of pathologic studies such as tissue samples, CSF

Medical knowledge

- **Goals**
 - o To improve skill in the ordering, follow up, and integration of neuropathologic procedures
 - o To understand the pathophysiologic basis for neuropathologic studies
- **Objectives**
 - o To develop understand the principles of interpretation of neuropathologic studies such as
 - light microscopy, electron microscopy, routine staining, antibody staining, special staining of tissue and CSF
 - o To review study slide sets of
 - Brain tumors, vascular diseases of the brain, developmental abnormalities, and autoimmune processes

Practice-based learning and improvement

- **Goals**
 - To use EBM to supplement medical knowledge
 - To understand pathology laboratory quality standards
 - To understand departmental and institutional performance improvement projects and patient safety goals
- **Objectives**
 - To implement the departmental and institutional performance improvement projects and patient safety goals
 - To use EBM to assist in diagnosis and prognosis be able to present information obtained through the use of information technology

Interpersonal and communication skills

- **Goals**
 - To improve communication between the neuropathologist and neurologist in approaching a diagnosis
- **Objectives**
 - To understand the utility of pathologic evaluations
 - To understand how to maximize the yield of a pathologic evaluations

Professionalism

- **Goals**
 - To consistently demonstrate respect for patients and staff members
- **Objectives**
 - To consistently put the patients' interests ahead of any other considerations
 - To maintain the confidentiality of personally identifiable patient information

Systems-based practice

- **Goals**
 - To collaboratively obtain clinical information for pathologic evaluations
- **Objectives**
 - To obtain medical information on patients including interacting with referring services such as neurology, neuroradiology, and neurosurgery

IV. Curriculum

- a. The required text, Greenfield's Neuropathology is available in the Pathology Department, selected readings will be assigned.
- a. Residents should go through the neuropathology teaching files and slide presentations, which provide a broad overview of a variety of topics

V. Responsibilities

- a. Attendance at Brain Cutting
- b. Daily attendance for teaching sets
- c. Attendance at frozen sections as they occur
- d. Attendance at Neuropathology Conference
- e. Attendance at Neuropathology Grand Rounds

VI. Evaluation

- a. Evaluation of the resident will be by written performance evaluation, which is the responsibility of the Neuropathology Attending, or his designee
- b. Of the rotation: evaluation form filled out by residents on a monthly basis evaluating the supervising attending, the didactics, and the patient care responsibilities

VII. Neuropathology Rotation Schedule:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------------------------|--------------------------------|--|--------------------------------------|---------------------------------|
| | | | 8 AM Neuropathology Conference | 8 AM Brain Cutting |
| 9AM NPath Teaching Sets | 9AM NPath Teaching Sets | 9AM NPath Teaching Sets | 9AM EMU Rounds | 9AM NPath Teaching Sets |
| | | 12 N Neuropathology Grand Rounds | 12PM Neuropathology Conference | 1 PM Neurology Conference |
| 1 PM NPath Teaching Sets | 1 PM NPath Teaching Sets | 1 PM NPath Teaching Sets | 1 PM NPath Teaching Sets | 1 PM NPath Teaching Sets |

Neuroradiology Rotation:
Neurology Resident (PGY 3 or 4)

Patient care

- **Goals**
 - To understand the indications for and the role of the Neurologist in ordering neuroradiologic tests
 - To understand the principles of informed consent
- **Objectives**
 - To understand the utility of, indications for and contraindications to
 - Head CTs with and without contrast, CT angiograms, MRI of the brain and spinal cord with and without contrast,
 - To understand the principles of contrast reactions and their monitoring and prevention

Medical knowledge

- **Goals**
 - To understand the bases for neuroradiologic studies
 - To develop skills in evaluation of neuroradiologic procedures specifically CT and MRI imaging of the CNS and PNS
- **Objectives**
 - To improve skill in the ordering, follow up, and integration of neuroradiologic procedures in patient care
 - To develop skill in evaluation of neuroradiologic procedures such as CT (head, spine, skull, CT angiography), MRI of brain and nerves, MRA of head and neck, xrays of spine, angiograms, MRS of brain, PET and SPECT scans of brain
 - To understand the basis of CT and MRI contrast interactions
 - To understand the basic physics of CT and MRI

Practice-based learning and improvement

- **Goals**
 - To use EBM to supplement medical knowledge
 - To understand the departmental and institutional performance improvement projects and patient safety goals
- **Objectives**
 - To be able to present information obtained through the use of information technology
 - To implement the departmental and institutional performance improvement projects and patient safety goals

Interpersonal and communication skills

- **Goals**
 - o To improve communication over performing and interpretation of neurologic studies
 - o To improve skill in oral presentations of patients on attending rounds and at conferences
- **Objectives**
 - o To understand the indications, risks, benefits, and contraindications for neuroradiologic studies
 - o To present patients for neuroradiology conference

Professionalism

- **Goals**
 - o To consistently demonstrate respect for patients and staff members
- **Objectives**
 - o To consistently put the patients' interests ahead of any other considerations
 - o To maintain the confidentiality of personally identifiable patient information

Systems-based practice

- **Goals**
 - o To collaboratively obtain clinical information for radiologic studies
- **Objectives**
 - o To obtain medical information on patients including interacting with referring services such as neurology, neuropathology, and neurosurgery

VIII. Curriculum

- a. The required text, Osborne's Neuroradiology is available in the Neuroradiology Reading Room, selected readings will be assigned by the Neuroradiology Attending.
- b. Residents should go through the neuroradiology teaching files

IX. Responsibilities

- a. Daily attendance at Neuroradiology Reading at KCH
- b. Attendance at procedures such as angiograms and myelograms as they occur
- c. Attendance at Neuroradiology Conference

X. Evaluation

- a. Evaluation of the resident will be by written performance evaluation, which is the responsibility of Dr. Vin Velayndhan, or his designee
- b. Of the rotation: evaluation form filled out by residents on a monthly basis evaluating the supervising attending, the didactics, and the patient care responsibilities

XI. Neuroradiology Rotation Schedule:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---------------------------|---------------------------|--------------------------------|---------------------------|---|
| 9AM Imaging review | 9AM Imaging review | 9AM Imaging review | 9AM Imaging review | 9AM Neurology Grand Rounds 10:15 AM Imaging review |
| 1 PM Neurology Conference | 12 N Neurology Conference | 12 N Neuroradiology Conference | 12 N Neurology Conference | 1 PM Neurology Conference |
| 1 PM NRays Teaching Sets* | 1 PM NRays Teaching Sets* | 1 PM NRays Teaching Sets* | 1 PM NRays Teaching Sets* | 1 PM NRays Teaching Sets* |

- o *Coordinate with Drs. Vin Velayndhan and Sundeep Mangla for possible procedures such as angiograms or lumbar punctures. To collaboratively obtain clinical information for pathologic evaluations
- **Objectives**
 - o To obtain medical information on patients including interacting with referring services such as neurology, neuroradiology, and neurosurgery

Neurology Psychiatry Rotation at University Hospital of Brooklyn:
Neurology Resident (PGY 1)

Patient care

- Goals
 - To perform thorough histories and examinations of psychiatry ward patients.
 - In conjunction with the Psychiatry Attending, to use information obtained from history, psychiatric examinations, and ancillary tests to develop a differential diagnosis and treatment plan.
 - To utilize EBM to guide evaluation and treatment of psychiatric entities.
- Objectives
 - To learn how to use DSM IV criteria to develop a comprehensive diagnostic and treatment plan for the 5 axes.
 - To perform the components of the Psychiatric examination
 - Alertness, orientation, mood, affect, clarity of thinking, calculations
 - To learn the biopsychosocial approach to the psychiatric patient.
 - To document appropriately in the electronic medical record
 - Admitting H&P
 - Progress notes
 - Event notes
 - Procedure notes
 - Medication reconciliation
 - Integrated plan of care

Medical knowledge

- Goals
 - To know the presentations, differential diagnoses and treatments of commonly encountered psychiatric disease entities.
 - To recognize deviations from common patterns and develop a plan to evaluate rare entities.
- Objectives
 - To know the presentations, differential diagnoses and treatments of commonly encountered neurologic disease entities including:
 - Psychotic disorders: schizophrenia, psychotic features of dementia and depression, schizoaffective
 - Mood Disorders: depression, bipolar
 - Anxiety Disorders: anxiety, panic attacks, obsessive compulsive disorder
 - Personality Disorders: histrionic, narcissistic,
 - To know the etiology, evaluation, and management of common psychiatric emergencies including:
 - Acute psychosis

- Suicidality
- Violence, homicidal thoughts
- Neuroleptic malignant syndrome
- Acute dystonic reactions
- o To know the indications, actions and side effects of psychiatric medications.
 - Antipsychotic medications: typical, atypical
 - Antidepressants: MAOIs, SSRIs, atypical
- o To present patients on Attending Rounds.

Practice-based learning and improvement

- Goals
 - o To learn how to use EBM to obtain medical knowledge for patient care.
 - o To understand the departmental and institutional performance improvement projects and patient safety goals.
- Objectives
 - o To assist the Psychiatry Attending in the preparation of monthly morbidity and mortality reports.
 - o To apply techniques of EBM to seek information in support of patient care.
 - o To follow procedures designed to meet national patient safety goals.

Interpersonal and communication skills

- Goals
 - o To improve skill in patient presentations to colleagues on attending rounds, sign out rounds, and at morning report.
 - o To communicate effectively with team members in interdisciplinary team rounds.
- Objectives
 - o To present patients on rounds in a clear and concise manner.
 - o To give and receive sign outs in a collegial, complete, and efficient manner.
 - o To effectively present medical information obtained to colleagues at teaching conferences.
 - o To effectively teach medical students and rotating residents.
 - o To document in the medical record in an accurate, concise, and punctual manner.

Professionalism

- Goals
 - To demonstrate respect for patients and staff members.
 - To put the patients' interest ahead of any other considerations.
 - To understand the ethical principles involved in competency.
- Objectives
 - To obtain complete and participate in competency evaluations.
 - To maintain the confidentiality of personally identifiable patient information.
 - To interact with colleagues in a collegial and respectful manner.

Systems-based practice

- Goals
 - To participate in interdisciplinary team rounds.
 - To practice psychiatry in a culture of safety and collaboration.
- Objectives
 - To collaboratively develop and implement appropriate discharge plans on through interaction with psychiatric social workers, therapists, and nursing..
 - To understand and participate in root cause analysis, sentinel event review, error investigation and reporting, health care systems, and patient advocacy.

**SUNY Downstate Pediatric Neurology Residency (UHB & KCH)
Rotation Goals and Objectives**

Second Year (Junior) Pediatric Neurology Residents:

The resident should demonstrate an appropriate level of skill in the six core competencies:

Patient care

1. To develop family-centered, compassionate, development, age - appropriate and effective care for the management of pediatric neurol. problems (e.g., communicate effectively, demonstrate caring and respectful behaviors, counsel and educate patients and families).
2. To improve skills in the evaluation and management of infants and children with neurologic conditions.
3. To gain proficiency in the evaluation of inpatients and outpatients with a wide variety of pediatric neurological problems.
4. To be able to perform a proficient neurologic history and examination on infants and children.
5. To be able to formulate neurol. differential diagnosis, appropriate workup and prescribe appropriate treatment and follow up and to counsel, patients, parents and families.
6. To gain experience in acute care and management of pediatric neurol. patients in the ERs, PICUs and NICUs and to participate in the continued management of these patients.
7. To demonstrate improvement on presentations on rounds and documentation in patient records.

Medical knowledge

1. To acquire knowledge about established and evolving biomedical, clinical, and epidemiological and social-behavioral sciences needed by the child neurologist and the application of this knowledge to patient care (e.g., demonstrate an investigatory and analytical thinking approach to clinical situations and know and apply the basic and clinically supportive sciences which are appropriate to neurology).
2. To learn the diagnosis and treatment of neurologic diseases in infants and children, including seizures, developmental delay and regression of development, CNS tumors, neuromuscular disorders, CNS infections, headaches, behavioral disorders, such as ADHD, autism, complications of drugs and systemic disorders.

3. To know the indications, contraindications, risks, benefits, costs and alternatives to commonly performed neurodiagnostic procedures at various ages (radiologic, LP, electrophysiologic tests).
4. To recognize age related changes and normal values in neurodiagnostic tests.
5. To acquire sufficient knowledge to develop appropriate and pertinent plans of care.

Practice-based learning and improvement

1. This should involve investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care. This should include Identifying standardized guidelines for conditions common to child neurology and adapt them to individual patient needs and Identifying personal learning needs related to neurology and plan for continuing acquisition of knowledge and skills.
2. To learn how to use and present information obtained through the use of information technology.
3. To understand and implement departmental and institutional improvement projects and patient safety goals.

Interpersonal and communication skills

1. To learn skills that result in effective information exchange and teaming with patients, their families, and other health professionals.
2. To provide effective patient and family education.
3. To communicate effectively with primary care, other physicians and other health care professionals.
4. To maintain accurate, legible and legally appropriate medical records.
5. To effectively teach students, other residents and other health care professionals.

Professionalism

1. To develop a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population (e.g., demonstrate respect, compassion and integrity, a responsiveness to the needs of patients and society that supersedes self interest; demonstrate sensitivity and responsiveness to a patient's culture, age, gender and disability).
2. To demonstrate personal accountability to the well-being of patients (e.g., following up on lab results, writing comprehensive notes and seeking answers to patient care questions).
3. To maintain the confidentiality of patient information and be aware of

HIPPA guidelines..

4. To understand ethical principals involved in informed consent and advanced directives.

Systems-based practice

1. Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.
2. Identify key aspects of health care systems as they apply to child neurology.
3. Demonstrate sensitivity to the costs of clinical care in child neurology and take steps to minimize costs without compromising quality.
4. Demonstrate the ability to obtain needed services for patients and families. Advocate for families who need assistance in dealing with systems complexities, such as referral processes, lack of insurance, multiple medication refills, multiple appointments, etc.
5. Recognize one's limits and those of the system; take steps to avoid medical errors.

EVALUATION:

Residents: Residents are provided with verbal feedback from attendings. Evaluation forms are also completed by attendings on a monthly basis. These forms address the six core competencies. Additionally, "360 degree" evaluations by support staff, other residents and patients and attending clinic evaluations are completed once a year. Additionally residents' inpatient and outpatient notes and records are reviewed and evaluated on a regular basis by attendings. Observed history and exams (as per Board requirement – NEX exams) are performed during the residency. Child neurol. residents must complete four pediatric and one adult neurol. exam during training.

Rotation: Evaluation forms are completed by residents on a monthly basis evaluating the supervising attending and the rotation.

Orientation: occurs on day 1 of the rotation. Duties, goals and objectives of the rotation are discussed.

SUGGESTED TEXTS:

Clinical Pediatric Neurology: A Signs and Symptoms Approach

Gerald Fenichel

Diseases of the Nervous System in Childhood

Jean Aicardi

Pediatric Neurology: Principles and Practice

Kenneth Swaiman and Stephen Ashwal

Neurology of the Newborn

Joseph Volpe

The Treatment of Epilepsy: Principles and Practice

Elaine Willey

ROTATION SCHEDULE:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|-----------------------------|--|----------------------------|----------------------------|---|
| 8:30AM Ped. Neurol. Rounds | 8AM M. Report 9AM Case Conf. 10AM P. N. Rounds | 8:30AM Ped. Neurol. Rounds | 8:30AM Ped. Neurol. Rounds | 8AM M. Report 9AM Grand Rounds 10:30AM P. N. Rounds |
| Noon Conference | Noon Conference | Noon Conference | Noon Conference | |
| 1PM KCH Ped. Neurol. Clinic | 1PM UHB Ped. Neurol. Clinic | | 1PM UHB Specialty Clinics | 2PM Conference |

XI. SUNY Downstate Pediatric Neurology Residency (UHB & KCH): Rotation Goals and Objectives

Third Year (Senior) Pediatric Neurology Residents:

The resident should demonstrate an appropriate level of skill in the six core competencies:

Patient care

5. To maintain family-centered, compassionate, development, age - appropriate and effective care for the management of pediatric neurol. problems (e.g., communicate effectively, demonstrate caring and respectful behaviors, counsel and educate patients and families).
6. To continue to improve skills in the evaluation and management of infants and children with neurologic conditions.
7. To gain experience and become proficient in the evaluation of inpatients and outpatients with a wide variety of pediatric neurological problems.
8. To be able to perform an efficient and focused neurologic history and examination on infants and children.
9. To improve the formulation of neurol. differential diagnosis, appropriate workup and prescribe appropriate treatment and follow up and to counsel patients, parents and families.
10. To continue to improve and become proficient in the acute care and management of pediatric neurol. patients in the ERs, PICUs and NICUs and to participate in the continued management of these patients.
11. To demonstrate concise presentations on rounds and accurate and complete documentation in patient records.

Medical knowledge

5. To expand and improve knowledge about established and evolving biomedical, clinical, and epidemiological and social-behavioral sciences needed by the child neurologist and the application of this knowledge to patient care (e.g., demonstrate an investigatory and analytical thinking approach to clinical situations and know and apply the basic and clinically supportive sciences which are appropriate to neurology).
6. To expand knowledge regarding the diagnosis and treatment of neurologic diseases in infants and children, including seizures, developmental delay and regression of development, CNS tumors, neuromuscular disorders, neurodegenerative disorders, CNS infections, headaches, behavioral disorders, such as ADHD, autism, complications of drugs and systemic disorders.
7. To know the indications, contraindications, risks, benefits, costs and alternatives to commonly performed neurodiagnostic procedures at various ages (radiologic, LP, electrophysiologic tests).
8. To appreciate and utilize age related changes and normal values in diagnostic and neurodiagnostic tests.
9. To expand the knowledge base to develop and utilize appropriate and pertinent plans of care.

Practice-based learning and improvement

5. To continue to investigate and evaluate their own patient care and to appraise and assimilate scientific evidence in order to improve patient care. This should include Identifying standardized guidelines for conditions common to child neurology and adapt them to individual patient needs and Identifying personal learning needs related to neurology and plan for continuing future acquisition of knowledge and skills.
6. To continue to acquire and effectively present information obtained through the use of information technology.
7. To continue to implement departmental and institutional improvement projects and patient safety goals.
8. Use evidence based medicine and accepted guidelines in decision making.

Interpersonal and communication skills

6. To continue to acquire skills that result in effective information exchange and teaming with patients, their families, and other health professionals.
7. To provide effective patient and family education; accurately describe and explain procedures to patients and families
8. To continue to improve effective communication with primary care, other physicians and other health care professionals.
9. To maintain accurate, legible and legally appropriate medical records.
10. To effectively teach students, other residents and other health care professionals.
11. To learn to effectively supervise members of the child neurol. in-patient team and to provide bedside education to rotating residents and students.

Professionalism

5. To continue a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population (e.g., demonstrate respect, compassion and integrity, a responsiveness to the needs of patients and society that supersedes self interest: demonstrate sensitivity and responsiveness to a patient's culture, age, gender and disability).
6. To demonstrate integrity and personal accountability to the well-being of patients (e.g., following up on lab results, writing comprehensive notes and seeking answers to patient care questions).
7. To maintain the confidentiality of patient information and be aware of HIPPA guidelines.
8. To understand ethical principals involved in informed consent, advanced directives and clinical research.

Systems-based practice

7. Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.
8. To continue to identify key aspects of health care systems as they apply to child neurology.
9. Demonstrate sensitivity to the costs of clinical care in child neurology and take steps to minimize costs without compromising quality.
10. To work with other health care professionals to obtain needed high quality services for patients and families and to advocate for families who need assistance in dealing with systems complexities.
11. To recognize one's limits and those of the system and take steps to avoid medical errors.

EVALUATION:

Residents: Residents are provided with verbal feedback from attendings. Evaluation forms are also completed by attendings on a monthly basis. These forms address the six core competencies. Additionally, “360 degree” evaluations by support staff, other residents and patients and attending clinic evaluations are completed once a year. Additionally residents’ inpatient and outpatient notes and records are reviewed and evaluated on a regular basis by attendings. Observed history and exams (as per Board requirement – NEX exams) are performed during the residency. Child neurol. residents must complete four pediatric and one adult neurol. exam during training.

Rotation: Evaluation forms are completed by residents on a monthly basis evaluating the supervising attending and the rotation.

Orientation: occurs on day 1 of the rotation. Duties, goals and objectives of the rotation are discussed.

GOALS AND OBJECTIVES - CHILD PSYCHIATRY ROTATION **Kings County Hospital**

Pediatric neurology residents are required by the RRC to complete a month rotation in child psychiatry. Second year pediatric neurology residents spend a full month rotation in Child Psychiatry under the supervision of the Child Psychiatry Director and faculty. The residents attend rounds on the inpatient child and adolescent psychiatry service at Kings County Hosp. They also attend selected outpatient clinics with Child Psychiatry faculty and fellows. They also participate in the Child Psychiatry clinics at the KCH Developmental Evaluation Center.

Goals: To improve his/her skills in the evaluation and management of children and adolescents with psychiatric disorders in both in-patient and outpatient settings and to improve skills in the six core competencies: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.

Specific goals and objectives:

The resident should:

1. Patient Care

Learn to obtain an adequate in-take history from child psychiatry patients and their parents.

Improve skills in the diagnosis and management of children and adolescents with psychiatric disorders, such as, conduct disorder, schizophrenia, depression/bipolar disorder, anxiety and obsessive-compulsive disorders

Learn about the psychological aspects patient-physician relationship and the importance of personal, social and cultural factors in disease processes and their expression.

2. Medical Knowledge

Become familiar with the principles of psychopathology, psychiatric diagnosis and therapy.

Learn the indications for, mechanism of action and complications of drugs used in psychiatry.

Improve knowledge base for child psychiatry conditions

Learn indications for other psychiatric interventions

3. Practice based learning and improvement

Appreciate the interplay between psychogenic and neurologic clinical manifestations including somatization and conversion.

Be able to use and present information obtained through use of information technology.

Be able to implement institutional performance improvement projects related to patient safety.

4. Interpersonal and communication skills

- Improve communication skills with child psychiatry patients and their families
- Improve communication with other members of the health care team.
- Participate in interdisciplinary team meetings.

5. Professionalism

Demonstrate respect for patients, families and staff.

Put patients' interests ahead of other considerations.

Maintain confidentiality of personal patient information.

6. System Based Practice

Demonstrate the ability to obtain needed services for patients

Communicate effectively with various schools and other support services.

Suggested texts:

Child and Adolescent Psychiatry; A Comprehensive Textbook

Edited by Melvin Lewis

Diagnostic and Statistical Manual of Mental Disorders (DSM-V-TR)

Evaluation:

Residents: An evaluation form is filled out by the child psychiatry attending at the end of the month rotation; these forms address the 6 core competencies

Rotation: An evaluation form is filled out by the resident at the end of the month rotation evaluating the supervising attending, the didactics and the patient care responsibilities

The pediatric neurology program director and child psychiatry program director maintain open lines of communication and there is frequent informal feedback about the interactions between the programs