

## NEUROLOGY FLOOR ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for Neurology Floor (Inpatient Neurology Service) Rotation for Neurology and Pediatric Neurology Residents (PGY2 and PGY4 residents)**

#### **PGY2 goals and objectives:**

##### **Patient Care**

**Goal:** The PGY2 resident rotating on Neurology Floor must be able to manage inpatient care of patients with neurological problems. The resident will assist attendings and senior residents by providing primary evaluation of all patients admitted to the neurology service, and by executing the agreed upon evaluation and treatment plan for these patients. The resident will learn proper evaluation of acute, severe, or debilitating neurologic problems requiring hospitalization. Residents are expected to:

##### **Objectives:**

- Promptly perform the initial evaluation of new patients promptly and will obtain an accurate and specific history and physical examination for recognition of neurological disorders.
- Complete a full admission chart note, including case history, documenting complete neurology exam, and documenting diagnostic considerations, evaluation plan, and differential diagnosis.
- Supervise all chart notes, and write a personal note on a daily basis for all ward patients.
- Integrate history and physical examination with medical knowledge for neurological disorders to arrive at a differential diagnosis and plan.
- Make an informed diagnosis using the most current pathophysiological explanations.
- Make evidence-based treatment decisions.
- Discuss care plan for new patients with the chief resident and attending and write appropriate orders to institute care.
- Prescribe current concepts of therapy including mechanisms of drug action and available surgical intervention.
- Provide timely service and seek appropriate consultation and support in the evaluation and treatment of neurological disease.
- Order, review and evaluate all diagnostic testing for patients on the neurology service.
- Perform diagnostic procedures such as lumbar punctures.
- Round on follow-up patients in the morning before rounds and document findings in the medical record. Resident will follow-up on patients throughout the day and will follow-up on requested studies.
- Dictate a discharge summary at the conclusion of hospital stay.

##### **Medical Knowledge**

**Goal:** The resident rotating on Neurology Floor must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral

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sciences, as well as the application of this knowledge to care of patients with neurological disease. Residents are expected to:

### **Objectives:**

- Demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Gain experience in localization of findings on neurological exam.
- Gain experience in diagnosis and management of neurological emergencies including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.
- Develop neurological exam skills under guidance of neurology attending.
- Gain experience in the inpatient evaluation and management of common neurological problems.
- Develop skills in neurological procedures such as lumbar puncture.

### **Practice-based Learning and Improvement**

The resident rotating on Neurology Floor must demonstrate the ability to investigate and evaluate their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT, EEG, evoked potentials, sleep studies, EMG/NCV and CSF evaluations).
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend teaching rounds six days per week for case presentation and discussion with attending physicians
- Participate in teaching and supervising the medical students and rotators on the rotation and sharing in their evaluation
- Regularly attend weekly neurology conferences including (1) Grand Rounds (2) Clinical Neuroscience Lecture Series; (3) Research Conference when clinical duties permit.

### **Interpersonal and Communication Skills**

The resident rotating on Neurology Floor must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

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### **Objectives:**

- Communicate effectively with other health care professionals.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on Neurology Floor must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on Neurology Floor must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**EVALUATION:** Residents will be evaluated by the fulltime faculty attending working with the resident with additional assessment by the senior resident, nursing staff, patients and students.

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### **PGY4 goals and objective:**

#### **Patient Care**

**Goal:** The PGY4 resident rotating on Neurology Floor must be able to demonstrate increased leadership and responsibility for the care of in-patients and for supervising junior residents and students. The resident will extend their knowledge of proper evaluation of acute, severe, or debilitating neurologic problems requiring hospitalization. Residents are expected to:

#### **Objectives:**

- Assess the level of care required for best management of patients being admitted to the hospital and arrange for intensive care admission where warranted.
- Coordinate the teaching services and plan for evaluation and care of all ward patients under the direct supervision of the attending physician.
- Directly supervise junior resident and provide immediate back-up to the entire service.
- Formulate evaluation and treatment plans under the direction of the attending.
- Advise junior residents call in planning evaluation and treatment of all patients on the ward service.
- Be aware of private patient issues and assist in teaching the junior residents, rotators and students regarding care of all cases on the service.
- Provide emergency phone contact for attending physicians after hours, referring necessary decisions to attendings when indicated.

#### **Medical Knowledge**

**Goal:** The PGY4 resident on Neurology Floor must demonstrate increasing knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with neurological disease. PGY4 residents play a key role in teaching junior residents and students. Residents are expected to:

#### **Objectives:**

- Teach essential elements of neurology to medical students and rotating physicians.
- Demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Further refine their localization and neurological examination skills.
- Gain additional experience and teach junior residents and students regarding the diagnosis and management of neurological emergencies including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.

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- Teach junior residents and students neurological procedures such as lumbar puncture.

### **Practice-based Learning and Improvement**

The PGY4 resident rotating on Neurology Floor must demonstrate the ability to further refine their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT, EEG, evoked potentials, sleep studies, EMG/NCV and CSF evaluations).
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.

### **Interpersonal and Communication Skills**

The resident rotating on Neurology Floor must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Develop leadership and teaching skills while supervising junior residents and students.
- Communicate effectively with other health care professionals.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on Neurology Floor must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.

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- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on Neurology Floor must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**Evaluation:** The PGY4 resident is evaluated primarily by the fulltime faculty attending working with the resident with additional input from the junior residents, nursing staff, patients and students.

## NEUROLOGY CONSULT SERVICE ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for the Neurology Consultation Service (Inpatient Neurology Service) Rotation for Neurology and Pediatric Neurology Residents (PGY2, PGY3 3 and PGY4 residents)**

#### **Goals for PGY2 residents on the Consult service:**

##### **Patient Care**

**Goal:** The resident rotating on the Neurology Consultation Service must be able to provide neurological consultation services on inpatients on all services at Barnes Jewish Hospital. The PGY2 resident will work under the supervision of a PGY3 or PGY4 resident. The resident will gain experience in the evaluation of neurologic complaints complicating medical and surgical in-patient illnesses. The resident will extend their knowledge of proper evaluation of acute, severe, or debilitating neurologic problems requiring hospitalization. Residents are expected to:

##### **Objectives:**

- Evaluate neurological complaints by obtaining a complete history, performing examination, and formulating treatment plans in the setting of a consultative practice for the Barnes-Jewish Hospital complex.
- Provide written consultations in a timely manner in the written and/or electronic medical record.
- Learn to prioritize and organize tasks so as to provide time sensitive appropriate response to subjects with a variety of problems throughout the medical center and to assure that urgent problems are immediately evaluated and treated.
- Participate in daily attending rounds with the faculty attending as required to respond to the problems encountered.

##### **Medical Knowledge**

**Goal:** The PGY2 resident on the Neurology Consultation Service will develop knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with neurological disease. Residents are expected to:

##### **Objectives:**

- Teach physicians throughout the hospital appropriate responses and treatments for neurologic complications
- Demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Develop their localization and neurological examination skills.

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- Gain experience regarding the diagnosis and management of neurological emergencies including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.

### **Practice-based Learning and Improvement**

The PGY2 resident rotating on The Neurology Consultation Service must develop the ability to refine their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT, EEG, evoked potentials, sleep studies, EMG/NCV and CSF evaluations).
- Prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend Grand Rounds and other lectures and seminars.

### **Interpersonal and Communication Skills**

The resident rotating on The Neurology Consultation Service must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

Residents are expected to:

#### **Objectives:**

- Communicate effectively with other health care professionals.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on The Neurology Consultation Service must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Learn effective communications skills with professionals from other areas of medical practice including internal medicine, general surgery, and surgical subspecialties.
- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.

## NEUROLOGY CONSULT SERVICE ROTATION GOALS AND OBJECTIVES

- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on The Neurology Consultation Service must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**Evaluation:** The PGY2 resident is evaluated by the fulltime faculty attending working with the resident and by the senior resident on the consult service, with additional input from the junior residents, nursing staff, patients and students.

## NEUROLOGY CONSULT SERVICE ROTATION GOALS AND OBJECTIVES

**Goals and objectives are similar for PGY3 and PGY4 residents.**

### **Patient Care**

**Goal:** The resident rotating on the Neurology Consultation Service must be able to provide neurological consultation services on inpatients on all services at Barnes Jewish Hospital. The resident will gain experience in the evaluation of neurologic complaints complicating medical and surgical in-patient illnesses. The resident will extend their knowledge of proper evaluation of acute, severe, or debilitating neurologic problems requiring hospitalization. Residents are expected to:

#### **Objectives:**

- Evaluate neurological complaints by obtaining a complete history, performing examination, and formulating treatment plans in the setting of a consultative practice for the Barnes-Jewish Hospital complex.
- Learn to prioritize and organize tasks so as to provide time sensitive appropriate response to subjects with a variety of problems throughout the medical center and to assure that urgent problems are immediately evaluated and treated.
- Provide leadership and direct junior residents, rotating residents from other services and students on the consult team.
- Conduct daily attending rounds with the faculty attending as required to respond to the problems encountered.

### **Medical Knowledge**

**Goal:** The PGY3-4 resident on the Neurology Consultation Service must demonstrate increasing knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with neurological disease. PGY3-4 residents play a key role in teaching junior residents and students. Residents are expected to:

#### **Objectives:**

- Teach physicians throughout the hospital appropriate responses and treatments for neurologic complications
- Provide direct teaching to junior residents and students on the consult service.
- Demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Further refine their localization and neurological examination skills.
- Gain additional experience and teach junior residents and students regarding the diagnosis and management of neurological emergencies including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.

## NEUROLOGY CONSULT SERVICE ROTATION GOALS AND OBJECTIVES

- Teach junior residents and students neurological procedures such as lumbar puncture.

### **Practice-based Learning and Improvement**

The PGY3-4 resident rotating on The Neurology Consultation Service must demonstrate the ability to further refine their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT, EEG, evoked potentials, sleep studies, EMG/NCV and CSF evaluations).
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend Grand Rounds and other lectures and seminars.

### **Interpersonal and Communication Skills**

The resident rotating on The Neurology Consultation Service must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Develop leadership and teaching skills while supervising junior residents and students.
- Communicate effectively with other health care professionals.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on The Neurology Consultation Service must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Learn effective communications skills with professionals from other areas of medical practice including internal medicine, general surgery, and surgical subspecialties.

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- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on The Neurology Consultation Service must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physician's order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**Evaluation:** The PGY3-4 resident is evaluated by the fulltime faculty attending working with the resident with additional input from the junior residents, nursing staff, patients and students.

## NEUROLOGY EMERGENCY DEPARTMENT ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for Neurology Emergency Department Rotation for Neurology and Pediatric Neurology Residents (PGY3 residents)**

#### **Patient Care**

**Goal:** The resident rotating on Neurology Emergency Department will learn to provide initial evaluation of patients presenting in the emergency ward who require urgent neurologic analysis, diagnosis and treatment. The resident will gain experience in the immediate stabilization of patients with neurologic injury and with neurologic complications of medical and surgical conditions in the consultation setting. The resident will gain experience in the administration of treatment for acute stroke, including use of tissue plasminogen activator (t-Pa). Residents are expected to:

#### **Objectives:**

- Provide urgent consultative services for the emergency room of Barnes-Jewish Hospital.
- Learn triage techniques to assure that timely evaluation and therapy is accomplished for many patients.
- Perform initial evaluation of subjects presenting to the emergency ward of Barnes Jewish Hospital with neurologic complaints and consultative evaluations of patients in the emergency wards seen by other medical personnel.
- Obtain focused histories, and examinations on patients with neurologic complaints and formulate a plan for immediate management in consultation with senior residents (PGY4 on Neurology Floor) and attendings on the service.
- Formulate differential diagnosis using the most current pathophysiological explanations. and urgent evidence-based treatment plans for neurologic conditions.
- Perform immediate evaluation of all "stroke" patients to plan necessary acute intervention in conjunction with the stroke service.
- Participate in management of all patients with status epilepticus until they are stabilized or care is transferred to an inpatient team.
- Immediate evaluations and plans are supervised by senior residents and/or attendings from the neurology service.
- The resident may be called upon to assist with urgent consultative services for hospitalized patients on non-neurologic services of Barnes-Jewish Hospital in collaboration with the neurology in-patient Consultation team.
- Present cases for discussion in the attending conference on the morning following evaluations.
- Complete a full consultation chart note, including case history, documenting complete neurology exam, and documenting diagnostic considerations, evaluation plan, and differential diagnosis.

#### **Medical Knowledge**

**Goal:** The resident rotating on Neurology Emergency Department must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-

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behavioral sciences, as well as the application of this knowledge to urgent care of patients with neurological disease. Residents are expected to:

### **Objectives:**

- Demonstrate an understanding and gain experience in the procedures for diagnosis and management of neurologic emergencies, including status epilepticus, acute stroke, increased intracranial pressure, subarachnoid hemorrhage, spinal cord injury and acute nervous system infections. Residents should have a basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Develop neurological exam skills under guidance of neurology attending.
- Develop skills in neurological procedures such as lumbar puncture in the emergency room setting.

### **Practice-based Learning and Improvement**

The resident rotating on Neurology Emergency Department must demonstrate the ability to rapidly investigate and evaluate their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT and other imaging techniques, EEG and CSF evaluations) in the emergency department setting.
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend teaching rounds for case presentation and discussion with attending physicians.
- Participate in teaching and supervising the medical students and rotators on the rotation and sharing in their evaluation.
- Regularly attend weekly neurology conferences including (1) Grand Rounds (2) Clinical Neuroscience Lecture Series; (3) Research Conference when clinical duties permit.

### **Interpersonal and Communication Skills**

The resident rotating on Neurology Emergency Department must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

### **Objectives:**

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- Learn communication techniques for patients and families in crisis during neurologic emergencies
- Develop communication skills with a full spectrum of medical staff including physicians, nurses, emergency medical technicians, and support personnel to enhance rapid evaluation and treatment of patients
- Communicate effectively with other health care professionals, especially in the ED and other acute care settings.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on Neurology Emergency Department must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on Neurology Emergency Department must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physician's order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

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**EVALUATION**: Residents will be evaluated by the fulltime faculty attending working with the resident (consult attending and neurology inpatient attending physicians) with additional assessment by the senior resident, nursing staff, patients and students. Senior residents are especially involved since most immediate evaluations are reviewed with them.

## NEUROLOGY/NEUROSURGERY ICU ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for Neurology/Neurosurgery Intensive Care Unit (NNICU) Rotation for Neurology Residents (PGY2 and PGY3)**

**Goals and objectives for PGY2 and PGY3 residents in the NNICU are similar.**

#### **Patient Care**

**Goal:** The resident rotating in the NNICU will learn proper evaluation of acute, severe, or debilitating neurologic problems requiring intensive care. The resident will assist attendings and fellows by evaluating all patients admitted to the NNICU and by executing the agreed upon evaluation and treatment plan for these patients

Residents are expected to:

#### **Objectives:**

- Learn intensive care unit procedures for support of critically ill patients with special emphasis on respirator management, blood pressure management, fluid and electrolyte management.
- Develop experience in management of preoperative and post operative neurosurgical conditions including trauma, intracerebral hemorrhage, brain tumor, status epilepticus, and evaluation and management of patients in coma.
- Obtain history and perform the physical exam on patients admitted to the NNICU.
- Develop diagnostic and therapeutic plans and present these plans to the NNICU attending staff for finalization.
- Participate in daily work and teaching rounds with the attending physicians and NNICU fellows.

#### **Medical Knowledge**

**Goal:** The resident rotating in the NNICU must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with neurological disease.

Residents are expected to:

#### **Objectives:**

- Demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of critically ill patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses in the intensive care setting.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Gain experience in localization of findings on neurological exam, particularly in the examination of patients with severe neurological illness and coma.
- Gain experience in diagnosis and management of neurological emergencies including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.

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- Develop skills in neurological procedures such as lumbar puncture.

### **Practice-based Learning and Improvement**

The resident rotating in the NNICU must demonstrate the ability to investigate and evaluate their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT, EEG, evoked potentials, sleep studies, EMG/NCV and CSF evaluations).
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend teaching rounds six days per week for case presentation and discussion with attending physicians.
- Regularly attend weekly neurology conferences including (1) Grand Rounds (2) Clinical Neuroscience Lecture Series; (3) Research Conference when clinical duties permit.

### **Interpersonal and Communication Skills**

The resident rotating in the NNICU must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Communicate effectively with other health care professionals.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating in the NNICU must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.

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- Function well as a team member.

### **Systems-based Practice**

The resident rotating in the NNICU must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**EVALUATION:** Residents will be evaluated by the fulltime faculty attending working with the resident with additional assessment by the senior resident, nursing staff, patients and students.

## NEUROLOGY NIGHT FLOAT ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for Neurology Night Float Rotation for Neurology and Pediatric Neurology Residents (PGY2 and PGY3 residents)**

**PGY2 and PGY3 goals and objectives are similar.**

#### **Patient Care**

**Goal:** The resident rotating on Neurology Night Float will learn to provide initial evaluation of patients presenting in the emergency ward or on other services requiring urgent neurologic analysis, diagnosis and treatment. The resident will gain experience with neurologic complications of medical and surgical conditions in the consultation setting. Residents are expected to:

#### **Objectives:**

- Provide urgent consultative services through night hours for the emergency room of Barnes-Jewish Hospital and for hospitalized patients on non-neurologic services of Barnes-Jewish Hospital.
- Participate in rapid initial review of patients requiring neurologic evaluation.
- Perform focused histories, and examinations on patients with neurologic complaints and formulate a plan for immediate management in consultation with senior residents (PGY4 on Neurology Floor) and attendings on the service.
- Formulate differential diagnosis using the most current pathophysiological explanations. and urgent evidence-based treatment plans for neurologic conditions.
- Present cases for discussion in the attending conference on the morning following evaluations.
- Complete a full consultation chart note, including case history, documenting complete neurology exam, and documenting diagnostic considerations, evaluation plan, and differential diagnosis.

#### **Medical Knowledge**

**Goal:** The resident rotating on Neurology Night Float must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to urgent care of patients with neurological disease. Residents are expected to:

#### **Objectives:**

- Demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Gain experience in localization of findings on neurological exam.
- Gain experience in diagnosis and management of neurological emergencies including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.

## NEUROLOGY NIGHT FLOAT ROTATION GOALS AND OBJECTIVES

- Develop neurological exam skills under guidance of neurology attending.
- Gain experience in the inpatient consultations and evaluation and management of common neurological problems.
- Develop skills in neurological procedures such as lumbar puncture.

### **Practice-based Learning and Improvement**

The resident rotating on Neurology Night Float must demonstrate the ability to investigate and evaluate their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT, EEG, evoked potentials, sleep studies, EMG/NCV and CSF evaluations).
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend teaching rounds for case presentation and discussion with attending physicians.
- Participate in teaching and supervising the medical students and rotators on the rotation and sharing in their evaluation.
- Regularly attend weekly neurology conferences including (1) Grand Rounds (2) Clinical Neuroscience Lecture Series; (3) Research Conference when clinical duties permit.

### **Interpersonal and Communication Skills**

The resident rotating on Neurology Night Float must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Communicate effectively with other health care professionals, especially in the ED and other acute care settings.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

## NEUROLOGY NIGHT FLOAT ROTATION GOALS AND OBJECTIVES

The resident rotating on Neurology Night Float must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Residents are expected to demonstrate:

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on Neurology Night Float must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physician's order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**EVALUATION:** Residents will be evaluated by the fulltime faculty attending working with the resident (consult attending and neurology inpatient attending physicians) with additional assessment by the senior resident, nursing staff, patients and students. Senior residents are especially involved since most immediate evaluations are reviewed with them.

## NEUROLOGY SPECIALTY CLINIC ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for Neurology Specialty Clinic Rotation for Neurology and Pediatric Neurology Residents (PGY2 and PGY4 residents)**

#### **PGY2 Specialty Clinic Rotation**

##### **Patient Care**

**Goal:** The resident rotating on Neurology Specialty Clinics will gain special appreciation for problem-focused examination relative to specialty areas in neurology including neuromuscular diseases, movement disorders, multiple sclerosis, epilepsy and general neurology. The resident will spend time in specialty clinics and will observe senior faculty obtaining histories and performing examinations on patients with a wide variety of neurologic diseases, gaining exposure to the breadth of subspecialty problems encountered in neurologic care. Residents are expected to:

##### **Objectives:**

- Participate in specialty clinics including at least neuromuscle clinic, movement disorders, multiple sclerosis clinic, epilepsy/sleep disorders clinic, and the resident's regular general neurology continuity clinics at St. Louis ConnectCare and Barnes Jewish Hospital.
- Evaluate new and follow-up patients in each of the clinics under the direct observation and supervision of attending doctors with specialty careers in these areas.

##### **Medical Knowledge**

**Goal:** The resident rotating on Neurology Specialty Clinic must demonstrate increasing knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as they pertain to neuromuscular diseases, movement disorders, multiple sclerosis, epilepsy and general neurology. Residents are expected to:

##### **Objectives:**

- Demonstrate an understanding and gain experience in the procedures for diagnosis and management of patients with neuromuscular diseases, movement disorders, multiple sclerosis, epilepsy and other neurological disorders.
- Have a basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses in neurologic subspecialties.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Develop neurological exam skills relevant to the neurologic subspecialties under guidance of senior neurology attendings.

##### **Practice-based Learning and Improvement**

The resident rotating on Neurology Specialty Clinic must demonstrate the ability to rapidly investigate and evaluate their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant

## NEUROLOGY SPECIALTY CLINIC ROTATION GOALS AND OBJECTIVES

self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT and other imaging techniques, EEG and CSF evaluations) in the Specialty Clinic setting.
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Participate in specialty conferences of the specialty groups when they do not conflict with alternate clinics.
- Participate in outpatient conferences approximately monthly (Lunch and Learn Series)
- Regularly attend weekly neurology conferences including (1) Grand Rounds (2) Clinical Neuroscience Lecture Series; (3) Research Conference when clinical duties permit.

### **Interpersonal and Communication Skills**

The resident rotating on Neurology Specialty Clinic must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

### **Objectives:**

- Learn communication techniques for patients and families in neurology specialty outpatient practice.
- Develop communication skills with a full spectrum of medical staff including physicians, nurses, social workers, and support personnel to enhance rapid evaluation and treatment of patients.
- Communicate effectively with other health care professionals.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on Neurology Specialty Clinic must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Residents are expected to demonstrate:

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.

## NEUROLOGY SPECIALTY CLINIC ROTATION GOALS AND OBJECTIVES

- Function well as a team member.

### **Systems-based Practice**

The resident rotating on Neurology Specialty Clinic must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physician's order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**EVALUATION:** Residents will be evaluated by the fulltime faculty attendings working with the resident in the subspecialty clinics.

## **PGY4 Specialty Clinic Rotation**

### **Patient Care**

**Goal:** The PGY4 resident rotating on Neurology Specialty Clinics will gain more a more cutting edge fund of knowledge on appropriate out-patient evaluation and care of specialty neurologic areas including neuromuscular diseases, multiple sclerosis, epilepsy, movement disorders, neurogenetics, dementing illnesses, headaches and infectious processes. The resident will spend time in specialty clinics and will evaluate patients under the supervision of senior faculty. The resident will serve as a senior resident in general neurology outpatient clinics. The emphasis will be on more independent function for the resident. Residents are expected to:

#### **Objectives:**

- Participate in specialty clinics including at least multiple sclerosis, epilepsy, movement disorders, neurogenetics, dementing illnesses, headaches and neurologic infectious disease clinic.
- Participate in the resident's regular general neurology continuity clinics at St. Louis ConnectCare and Barnes Jewish Hospital.
- Assist the clinic nurse and secretary regarding issues arising for patients of residents temporarily unavailable.

### **Medical Knowledge**

**Goal:** The resident rotating on Neurology Specialty Clinic must demonstrate increasing knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences as they pertain to neuromuscular diseases, movement disorders, multiple sclerosis, epilepsy and general neurology. Residents are expected to:

#### **Objectives:**

- Demonstrate an understanding and gain experience in the procedures for diagnosis and management of patients with neuromuscular diseases, movement disorders, multiple sclerosis, epilepsy and other neurological disorders.
- Have a basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses in neurologic subspecialties.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Develop neurological exam skills relevant to the neurologic subspecialties under guidance of senior neurology attendings.

### **Practice-based Learning and Improvement**

The resident rotating on Neurology Specialty Clinic must demonstrate the ability to rapidly investigate and evaluate their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

## NEUROLOGY SPECIALTY CLINIC ROTATION GOALS AND OBJECTIVES-PGY4

### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT and other imaging techniques, EEG and CSF evaluations) in the Specialty Clinic setting.
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Participate in specialty conferences of the specialty groups when they do not conflict with alternate clinics.
- Participate in outpatient conferences approximately monthly (Lunch and Learn Series)
- Regularly attend weekly neurology conferences including (1) Grand Rounds (2) Clinical Neuroscience Lecture Series; (3) Research Conference when clinical duties permit.
- Participate in specialty conferences not conflicting with clinics.

### **Interpersonal and Communication Skills**

The resident rotating on Neurology Specialty Clinic must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Learn communication techniques for patients and families in neurology specialty outpatient practice.
- Develop communication skills with a full spectrum of medical staff including physicians, nurses, social workers, and support personnel to enhance rapid evaluation and treatment of patients.
- Communicate effectively with other health care professionals.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on Neurology Specialty Clinic must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Residents are expected to demonstrate:

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

## NEUROLOGY SPECIALTY CLINIC ROTATION GOALS AND OBJECTIVES-PGY4

### **Systems-based Practice**

The resident rotating on Neurology Specialty Clinic must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**EVALUATION:** Residents will be evaluated by the fulltime faculty attendings working with the resident in the subspecialty clinics.

## NEURORADIOLOGY GOALS AND OBJECTIVES

### **Goals & Objectives for Neuroradiology Rotation for Neurology and Pediatric Residents**

**This elective is offered to residents at the PGY2, PGY3 and PGY4 level. Objectives are similar for residents at all levels.**

#### **Patient Care**

**Goal:** The resident rotating on Neuroradiology must be able to understand the role of neuroimaging in patient care that is compassionate, appropriate, and effective for the treatment of neurological problems and the promotion of health. Residents are expected to:

#### **Objectives:**

- Understand the indications for neuroimaging examinations and neuroradiological procedures for neurological disease.
- Understand the limitations of neuroimaging examinations for the evaluation of neurological disease.
- Understand the risks, benefits and impact on the patient and family for each procedure.
- Observe and interpret imaging studies of the brain, orbits, facial bones and emergency neuroradiology in the Brain Reading Room.
- Observe and interpret studies of the spine, neck, sinuses and temporal bones in the Spine Reading Room.
- Observe and participate in fluoroscopically-guided lumbar punctures, myelograms and chemotherapy injections.
- Observe catheter-based diagnostic neuroradiology and endovascular surgical neuroradiology procedures.

#### **Medical Knowledge**

**Goal:** The resident rotating on Neuroradiology must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with neurological disease. Residents are expected to:

#### **Objectives:**

- Understand the role of CT attenuation in the diagnosis of CNS disease.
- Understand the role of MR contrast (T1, T2, T2\*, Diffusion) in the diagnosis of CNS disease.
- Understand the process of generating a differential diagnosis based on the imaging findings.
- For cases examined in the Brain and Spine reading rooms, the resident is expected to research relevant history, neurological examination and neurological testing generated by the neurology team in an effort to enhance the diagnostic neuroradiological interpretation.

### **Practice-based Learning and Improvement**

The resident rotating on Neuroradiology must demonstrate the ability to investigate and evaluate their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- During the diagnostic process the resident should use internet-based, peer-reviewed sources of information to enhance the interpretation of the imaging studies.
- The resident will research topics for the Thursday morning conference with Radiology, Neurology and Neurosurgery.

### **Interpersonal and Communication Skills**

The resident rotating on Neuroradiology must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Act as the liaison between the neuroradiologists, the neurologist and the pediatricians.
- Help to educate the neuroradiologist on the dynamics of communication with families and physicians

### **Professionalism**

The resident rotating on Neuroradiology must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Mandatory attendance of all reading session that do not conflict with clinical commitments.
- Knowledge of the role of the referring physician in protecting the patient from excess exposure to ionizing radiation

### **Systems-based Practice**

The resident rotating on Neuroradiology must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to proper image interpretation.
- Learn the relative cost to the patient and society of neurological imaging evaluations.

#### **ADDITIONAL INFORMATION:**

Contact: Pamela Muich Jearls

Phone #: 362-5950  
Where: MIR, 3<sup>rd</sup> Floor  
When: 8:00 am

### **Goals & Objectives for Pediatric Consult Pediatric Neurology Clinics Rotation (PGY4)**

The goal of the Pediatric Neurology Clinics Rotation is to provide the resident with experience in neurological disorders in children in the outpatient setting under the supervision of Board certified Child Neurologists. The resident will see patients requiring neurological consultation in outpatient pediatric neurology clinics at St. Louis Children's Hospital and at the Scottish Rite Hospital.

#### **Patient Care**

**Goal:** The resident rotating on Pediatric Neurology Clinics Rotation will gain experience in the care of infants and children with neurological problems. Residents are expected to:

#### **Objectives:**

- Acquire competence in neurological examination of infants and children.
- Obtain histories from parents and children on the outpatient service in the clinics of St. Louis Children's Hospital and Scottish Rite Hospital.
- Become adept at diagnosing and treating the more common childhood neurological problems including: migraine and other headache disorders, seizure disorders, attentional problems, learning disabilities, developmental delay, mental retardation, movement disorders, muscular dystrophy, ataxia, cerebral palsy, syncope, and neurocutaneous syndromes.
- Develop competence in long term outpatient management and communicating with patients and families - in person and through phone contacts.
- Become familiar with communicating with referring physicians by phone and letter.
- Develop strategies for organizing outpatient diagnostic evaluations and setting priorities for laboratory tests and imaging studies.
- Gain subspecialty outpatient experience: epilepsy, cerebral palsy, neuromuscular diseases.

#### **Medical Knowledge**

**Goal:** The resident rotating on Pediatric Clinics must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with urgent and chronic medical problems. Residents are expected to:

#### **Objectives:**

- Develop competence in interpreting results of laboratory tests and imaging.
- Teach physicians throughout the hospital appropriate responses and treatments for neurologic complications in children and infants.
- Demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.

## Goals and objectives for Pediatric Clinics Pediatric Neurology Clinics Rotation

- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Develop their localization and neurological examination skills.
- Gain experience regarding the diagnosis and management of neurological emergencies in children including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.

### **Practice-based Learning and Improvement**

**Goal:** The resident rotating on Pediatric Clinics must demonstrate the ability to investigate and evaluate their care of medical patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT, EEG, evoked potentials, sleep studies, EMG/NCV and CSF evaluations).
- Prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend teaching rounds on the pediatric division at St. Louis Children's Hospital including teaching rounds three times per week, weekly neuroradiology rounds, the pediatric neurology journal club, the clinical epilepsy conference, pediatric grand rounds, and the Grand Rounds and other lectures and seminars of the Department of Neurology.

### **Interpersonal and Communication Skills**

**Goal:** The resident rotating on Pediatric Neurology Clinics Rotation must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Communicate effectively with other health care professionals.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

**Goal:** The resident rotating on Pediatric Neurology Clinics Rotation must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

## Goals and objectives for Pediatric Clinics Pediatric Neurology Clinics Rotation

### **Objectives:**

- Learn effective communications skills with professionals from other areas of medical practice including internal medicine, general surgery, and surgical subspecialties.
- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member

### **Systems-based Practice**

**Goal:** The resident rotating on Pediatric Neurology Clinics Rotation must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

### **Objectives:**

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**Evaluations:** The pediatric attending physician provides written evaluation of performance.

## **Goals & Objectives for Pediatric Consult Rotation (PGY3)**

The goal of the Pediatric Neurology rotation is to provide the resident with experience in neurological disorders in children under the supervision of Board certified Child Neurologists. The resident will see patients requiring neurological consultation on the inpatient services of St. Louis Children's Hospital and will participate in outpatient pediatric neurology clinics at St. Louis Children's Hospital and at the Scottish Rite Hospital.

### **Patient Care**

**Goal:** The resident rotating on Pediatric Consultation will gain experience in the care of infants and children with neurological problems. Residents are expected to:

#### **Objectives:**

- Acquire competence in neurological examination of infants and children.
- Obtain histories from parents and children on the in-patient service in the clinics of St. Louis Children's Hospital
- Plan appropriate diagnostic evaluations and subsequent therapy for children with serious neurological disorders including: epilepsy, cerebrovascular disease, neuromuscular disorders, central nervous system trauma, brain tumors, movement disorders, neurodegenerative diseases, and neurobehavioral disorders
- Become comfortable with diagnosis and management of neurological disorders in the pediatric intensive care setting, including: status epilepticus, coma, increased intracranial pressure, neurological complications of cardiac and thoracic surgery, peripheral neuropathies, metabolic encephalopathies, and central nervous system infections
- Become experienced in evaluation and management of premature and term infants in the newborn intensive care unit with neurological problems including: intracranial hemorrhage, neonatal seizures, neonatal meningitis, hypoxic/ischemic encephalopathy, brachial plexus palsy, feeding difficulties, hypotonia/weakness, metabolic encephalopathies, structural nervous system malformations, and congenital infections
- Develop experience seeing neurological consultations on other floors of the hospital involving: neurological complications of systemic disease (hematological, cardiac, pulmonary), developmental delay, mental retardation, learning disabilities, headaches, and alterations of consciousness
- Develop expertise in neurological consultations in the emergency room for problems including: seizure management, central and peripheral nervous system trauma, headache, altered mental status, differentiation of acute neurological and psychiatric illness, acute weakness, and pain
- Become familiar with principles of neurological rehabilitation including: appropriate splinting and casting, pharmacological therapy for spasticity, timing of physical, occupational, and speech therapy, bladder/bowel care, and transition from hospital to home and school

## **Medical Knowledge**

**Goal:** The resident rotating on Pediatric Consultation must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with urgent and chronic medical problems. Residents are expected to:

### **Objectives:**

- Develop competence in interpreting results of laboratory tests and imaging.
- Teach physicians throughout the hospital appropriate responses and treatments for neurologic complications in children and infants.
- Demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Develop their localization and neurological examination skills.
- Gain experience regarding the diagnosis and management of neurological emergencies in children including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.

## **Practice-based Learning and Improvement**

**Goal:** The resident rotating on Pediatric Consults must demonstrate the ability to investigate and evaluate their care of medical patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT, EEG, evoked potentials, sleep studies, EMG/NCV and CSF evaluations).
- Prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend teaching rounds on the pediatric division at St. Louis Children's Hospital including teaching rounds three times per week, weekly neuroradiology rounds, the pediatric neurology journal club, the clinical epilepsy conference, pediatric grand rounds, and the Grand Rounds and other lectures and seminars of the Department of Neurology.

## **Interpersonal and Communication Skills**

**Goal:** The resident rotating on Pediatric Consultation must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

### **Objectives:**

- Communicate effectively with other health care professionals.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

**Goal:** The resident rotating on Pediatric Consultation must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Residents are expected to demonstrate:

#### **Objectives:**

- Learn effective communications skills with professionals from other areas of medical practice including internal medicine, general surgery, and surgical subspecialties.
- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member

### **Systems-based Practice**

**Goal:** The resident rotating on Pediatric Consultation must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Residents are expected to:

#### **Objectives:**

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**Evaluations:** The pediatric attending physician provides written evaluation of performance.

## Goals and Objectives for Psychiatry Rotation

### **Goals & Objectives for Psychiatry Psychiatry Rotation (PGY1-4)**

The Barnes inpatient Psychiatry service exposes the resident to patients with a broad variety of psychopathology. A full range of treatment modalities is used to treat inpatients, including pharmacotherapy, electroconvulsive therapy (ECT), and a variety of psychotherapies. Specialized services include a geriatric psychiatry unit, an intensive care unit, and a day hospital. Patients' physical health ranges from healthy to seriously ill. Residents at all levels will be expected to participate in inpatient care, rounds and conferences. PGY1 residents will be expected to develop a basic mastery of these objectives. PGY2-4 residents will be expected to develop more advanced skills and knowledge and to participate in teaching and supervising junior residents and students.

#### **Patient Care**

**Goal:** The resident rotating on Psychiatry will begin to develop their understanding and knowledge concerning the historical, cultural, legal, and ethical aspects of psychiatric treatment.

Residents are expected to:

#### **Objectives:**

- Demonstrate an ability to obtain thorough histories from patients hospitalized in an inpatient psychiatric unit.
- Formulate a basic differential diagnosis and gather appropriate information to narrow the differential.
- Demonstrate an ability to accurately diagnose psychiatric disorders seen in the inpatient setting.
- Develop a biopsychosocial treatment plan.
- Demonstrate safe prescription of psychotropic medications.
- Demonstrate an awareness of appropriate psychotherapeutic techniques for issues arising during inpatient hospitalization.
- Demonstrate the ability to coordinate thorough follow up plans for discharged patients.
- Present cases succinctly and accurately
- Understand the importance of proper documentation in the clinical record
- Gain skills as a teacher

#### **Medical Knowledge**

**Goal:** The resident rotating on Psychiatry Rotation must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with urgent and chronic psychiatric problems. Residents are expected to:

#### **Objectives:**

- Demonstrate the ability to accurately diagnose patients using current DSM criteria.
- Show an ability to appropriately seek consultation from other hospital services when necessary.
- Develop an understanding of the symptomatology, epidemiology, genetics and course of the basic common psychiatric syndromes.

## Goals and Objectives for Psychiatry Rotation

- Develop a basic understanding of the pharmacokinetic and pharmacodynamic properties of commonly used psychiatric medications.
- Develop differential diagnosis of psychiatric symptomatology and the importance of biologic, psychologic and social aspects of symptoms.
- Learn the use of ECT
- Learn the appropriate use of laboratory and psychological testing

### **Practice-based Learning and Improvement**

**Goal:** The resident rotating on Psychiatry Rotation must demonstrate the ability to investigate and evaluate their care of medical patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Demonstrate the ability to seek appropriate supervision.
- Demonstrate the ability to incorporate lessons learned from supervision into new knowledge, skills and professional attitudes.
- Demonstrate the ability to educate medical students on basic principles of psychiatry.
- Gain skills of self-education.

### **Interpersonal and Communication Skills**

**Goal:** The resident rotating on Psychiatry Rotation must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Demonstrate an ability to empathically interview patients with psychiatric disorders.
- Demonstrate a basic ability to effectively communicate clinical information to a patient and his/her family.
- Effectively communicate cross coverage issues to resident colleagues to provide continuity of care.
- Demonstrate the ability to effectively communicate with other members of the treatment team.
- Demonstrate competent consultation with other specialists and referring physicians.
- Understand the importance of family in helping with assessment and treatment
- Understand the role of other mental health professionals including psychologists, nursing staff, social work staff, and activity therapy staff

### **Professionalism**

**Goal:** The resident rotating on Psychiatry Rotation must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to:

## Goals and Objectives for Psychiatry Rotation

### **Objectives:**

- Demonstrate sensitivity to patients' ethnicity, gender, age and disabilities
- Demonstrate a commitment to ethical principles such as confidentiality and informed consent.
- Demonstrate respect, compassion and integrity in carrying out patient care duties.
- Demonstrate a commitment to pursuing professional development activities.
- Complete documentation of patient encounters in a timely fashion.

### **Systems-based Practice**

**Goal:** The resident rotating on Psychiatry Rotation must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

### **Objectives:**

- Demonstrate an ability to effectively provide testimony in civil commitment hearings while maintaining a doctor-patient relationship.
- Effectively coordinate patient care with a multidisciplinary team.
- Understand the appropriate use of inpatient services and managed care
- Understand the principles underlying interactions with the court system including involuntary commitment of psychiatrically ill patients

**Evaluations:** The objectives will be measured by attendance and by formal evaluation of the resident's participation and knowledge. Evaluations will be completed by the attending physicians at the end of the rotation.

### **Goals & Objectives for Spinal Cord Injury/Rehabilitation (PGY1)**

Residents rotating on the rehabilitation service will participate in the evaluation and care of patients recovering from neurologic injuries, with special emphasis on rehabilitation for victims of cerebral trauma, stroke, or spinal cord injury. Residents will participate in the care of inpatients at the Rehabilitation Institute of Saint Louis (RISL) and in outpatient rehabilitation clinics. Expectations are similar for PGY3 and PGY4 residents. PGY4 residents are expected to reach a more advanced level of knowledge and may choose to specialize and gain more in-depth experience in specific areas of neurorehabilitation.

#### **Patient Care**

**Goal:** The resident rotating on Rotation will gain experience in understanding modalities of therapy and support available and their appropriate application to patients, and in understanding the prognosis for recovery and for effectiveness of rehabilitation in enhancing recovery. Residents assist in evaluating patients for referral to rehabilitation and assist in direct care for patients undergoing neuro-rehabilitation. They attend teaching rounds and rehabilitation clinics.

Residents are expected to:

#### **Objectives:**

- Directly observe physicians and therapists performing the evaluations and thereby, learn to perform these evaluations themselves.
- Admit as the primary care provider all acute and some chronic spinal cord injury (SCI) inpatients.
- Be responsible for all administrative care related to their patient including but not limited to:
  - Daily progress notes, discharge summaries, team rounds summaries,
  - Daily patient medication orders,
  - Comprehensive therapy orders
  - Family conference summaries
- Diagnose physical, cognitive, and psychosocial impairments in rehabilitation patients with spinal cord injuries.
- Perform a comprehensive musculoskeletal and neurological examination and ASIA examination on selected patients.
- Perform daily examinations on SCI inpatients to prevent medical complications.
- Create a differential diagnosis appropriate to the physical findings.
- Perform tracheobronchial suctioning of a patient with tracheotomy tube.
- Prescribe and understand how a paraplegic and tetraplegic person performs a bed-to-wheelchair transfer.
- Assist a tetraplegic person with rolling from side to side.
- Attend a urodynamic study of a patient.
- Alter bladder management of a person with SCI based on urodynamic data.

## Goals and Objectives for Rehabilitation Rotation (PGY3 required,PGY4 elective)

- Decide when a ventilator-dependent spinal cord injured individual is weanable, and defend your decision utilizing various clinical factors including level of injury, completeness of injury, and measurements of respiratory function.
- Develop a wound care management plan for a patient with pressure ulcers.
- Debride pressure ulcers competently; gain authorization to perform without supervision.
- Assist a tetraplegic person in mat-to-wheelchair transfer, with the supervision of a rehabilitation professional.
- Correctly perform a rectal examination of a spinal cord injured individual, including assessment of reflex function, sensation, and voluntary motor function.
- Recommend appropriate inpatient and outpatient rehabilitation plans based upon the level of spinal cord injury and co-morbid conditions.
- Learn to order appropriate diagnostic tests and interpret the findings of the ordered tests.
- Be knowledgeable about the different types of wheelchair seating, positioning, and orthotics to maximize functional activity.

### **Medical Knowledge**

**Goal:** The resident rotating on Rotation must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with urgent and chronic medical problems. Residents are expected to:

#### **Objectives:**

- Report trends in epidemiology of SCI concerning:
  - Incidence and prevalence
  - Age at injury
  - Gender and ethnicity
  - Etiology
  - Life expectancy and causes of death
  - Associated injuries
- Apply learned anatomy and physiology as appropriate.
- On various radiographic studies of the spine, identify:
  - vertebral body, posterior elements
  - the spinal canal and cord
  - intervertebral discs
  - facet joints
  - locations of important ligaments
- Describe current pharmacologic treatment for acute spinal cord injury.
- Identify reasons for surgical treatment of acute spinal injuries.
- Define spasticity. Describe the Ashworth scale.
- Know the tracts of the spinal cord (neuroanatomy). Become familiar and comfortable with using ASIA classification including recognized spinal cord injury syndromes.
- Describe the risk factors of pressure ulceration, prevention procedures, the international classification, and the management principles of ulcerations.

## Goals and Objectives for Rehabilitation Rotation (PGY3 required,PGY4 elective)

- Identify and treat specific disorders that are commonly seen in the SCI population setting, including but not limited to:
  - Autonomic dysreflexia, DVT and prophylaxis, decubiti, stress ulcers,
  - pneumonia, UTI, ileus, heterotopic ossification, spasticity, depression,
  - neurogenic bowel/bladder, pulmonary/cardiac/GI complications, sexual dysfunction, metabolic changes, obstructive uropathy with and without stones, infertility, and ejaculatory dysfunction
- Design a bowel routine for the spinal cord injured individual with:
  - Upper motor neuron bowel
  - Lower motor neuron bowel
- Identify and manage depression and adjustment disorder with psychological assistance.
- Describe the pathophysiology of autonomic dysreflexia.
- Describe non-pharmacologic and pharmacologic treatment for autonomic dysreflexia.
- Understand the kinesiology of upper extremity function and the use of muscle substitution patterns in retraining.
- Describe the indications and contraindications of muscle and tendon transfers and other operative procedures to enhance function.
- Identify the indications and usage of functional electrical stimulation (FES) in SCI.
- Evaluate and manage outpatient SCI patients with: joint pain, spinal pain, entrapment neuropathies, renal stones, UTI, contractures, spasticity, depression, neuropathic and central pain, respiratory illness, cholesterol disorders, metabolic issues: Learn the physiology and basic science behind these disorders
- Determine appropriate goals for patients with specific levels and degrees of SCI
- Learn the complications of a patient aging with SCI as it applies to inpatient admission and severe illness and outpatient care
- Learn physiology of respiratory disorders associated with SCI
- Apply assistive technology to the patient in the appropriate manner for level of SCI
- Create a wheelchair prescription for a SCI patient
- Write appropriately therapy orders for the SCI patients

### **Practice-based Learning and Improvement**

**Goal:** The resident rotating on Rotation must demonstrate the ability to investigate and evaluate their care of medical patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Evaluate their own exam skills and knowledge and incorporate feedback from others.
- Investigate and apply evidence from scientific studies to enhance patient care throughout the rotation.

## Goals and Objectives for Rehabilitation Rotation (PGY3 required,PGY4 elective)

- Use information technology (computers, journals, etc.) to access and manage patient information and support their own education and treatment decisions.
- Participate in Mortality and Morbidity conference in a manner that critiques and evaluates your own performance and identifies key learning points.
- Facilitate the education of junior residents and medical students who rotate on the SCI unit.
- Attend and participate in conferences and rounds.
- Provide in-service talks to allied health personnel.
- Investigate the outcomes of their treatment decisions.
- Participate in teaching rounds on a weekly basis with Dr. Thach reviewing pathophysiologic principles underpinning rehabilitation and recovery from injury

### **Interpersonal and Communication Skills**

**Goal:** The resident rotating on Rehabilitation must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Elicit information using effective questioning and listening skills.
- Demonstrate caring and respectful behaviors (verbal and non-verbal) with patients.
- Establish trust and maintain rapport with patients and family.
- Complete all chart notes and dictations in a timely manner.
- Present material clearly and accurately to patients and family.
- Regularly visit the therapy areas to observe patients engaged in restorative activities.
- Effectively communicate patient needs, verbally and in writing, to all multidisciplinary staff and other physicians involved with the patient.
- Prescription writing: write inpatient therapy orders and prescribe home health or outpatient prescriptions that include the following essential elements: diagnosis, parts to be treated, procedures to be used with specifications of techniques and time, special instructions or precautions, home instructions for the patient, and number and frequency of treatments.
- Utilize effective listening skills.
- Participate in all relevant rounds and discussions.
- Participate and eventually lead multidisciplinary rounds and family conferences.
- Present their findings clearly and concisely to supervising faculty so that management can be discussed.

### **Professionalism**

**Goal:** The resident rotating on Rotation must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

#### **Objectives:**

- Show leadership and become proficient at organizing and leading a family meeting.

## Goals and Objectives for Rehabilitation Rotation (PGY3 required,PGY4 elective)

- Lead a multidisciplinary team in the care of SCI patients.
- Exemplify respect and compassion towards patients.
- Show reliability, punctuality, integrity, and honesty.
- Accept responsibility for own actions and decisions.
- Apply sound ethical principles in practice, including patient confidentiality, informed consent, provision and withholding of care, and interactions with insurance or disability agencies.
- Complete all required chart documentation including admission notes, progress notes and discharge summaries, admission and discharge ASIA exams.
- Consider the effects of personal, social, or cultural factors in the disease process and patient management.
- Demonstrate sensitivity to the patients who have different ages, social status, races, and genders.

### **Systems-based Practice**

**Goal:** The resident rotating on Rotation must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

#### **Objectives:**

- Gain knowledge about vocational rehabilitation and community resources for persons with spinal cord injury and musculoskeletal injuries.
- Collaborate and work effectively with other health professionals and maintain appropriate behaviors.
- Assess how their decisions affect others – patients, family, other health care professionals.
- Integrate care of patients across hospital and community settings.
- Recognize when tests are appropriate or may be under- or over-utilized.
- Understand the cost of the treatments and diagnostic tests that are ordered.
- Describe the relevance and utility of the Functional Independence Measure (FIM).
- Gain familiarity and participate in completion of the Inpatient Rehabilitation Facility Patient Assessment instrument (IRF-PAI), including identification of impairment codes and co-morbidities.
- Understand which physicians are involved in the treatment of patients with disabilities and what their role is.
- Advocate for patients who need tests and treatments that might be inappropriately denied.
- Describe Medicare and Medicaid requirements as it relates to documentation, elements of the exam, billing procedures, and codes.
- Realize limitations on the ability of patients to pay for their medications, therapies, or equipment.

**Evaluations:** At the end of the rotation, the attending physician who worked with the resident will send a written evaluation to the Neurology Residency Director.

Goals and Objectives for ADRC Rotation (Elective)  
**Alzheimer's Disease Research Center (ADRC)**  
Dementia & Aging Section, Department of Neurology  
Washington University School of Medicine  
4488 Forest Park Avenue, Suite 101  
St. Louis, MO 63108

314-286-2683 or 314-286-2881  
John C. Morris, Director &  
Principal Investigator

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Alzheimer's Disease Rotation for Residents and Medical Students

Contact Person: Mary Coats, MSN, Clinical Core, 314-286-2303  
Alternate Contact: Barbie Kuntemeier, MA, MS, Education Core, 314-286-2882

Contact Mary Coats to arrange a tour and orientation on your first scheduled day. If she is away or unavailable, contact Barbie Kuntemeier to set up this orientation.

Education Director: James Galvin, MD, MPH  
Clerkship Director: David Carr, MD  
,  
314-286-2706 office, 314-704-0458 cell phone, 314-790-2790 pager.  
dcarr@dom.wustl.edu

Report To: 4488 Forest Park (at Taylor), Lower Level, MAP/ADRC Waiting Room  
Start Time: 8:45 AM on Day 1

**Objectives for Learning**

During this rotation, trainees are exposed to clinical and research methods for the evaluation of older adults with cognitive complaints consistent with Alzheimer's disease or other neurodegenerative disorders. Clinical observation is an important component of this rotation. You are encouraged to observe as many MAP and ADRC affiliated clinicians (physicians and nurses) as possible during your stay, and when appropriate participate in the neurological examination. You may observe in MAP, the Memory Diagnostic Center (MDC), Evaluations are observed live and in-person, as well as via videotape, and cover a range of diagnoses and care issues. Trainees observe clinicians from different specialty backgrounds (Neurology, Geriatrics, Psychiatry) and observe how to administer and score the Clinical Dementia Rating (CDR) interview.

Trainees participate in other educational offerings of the Center, including research seminars and weekly clinical case conferences. Enrichment opportunities include evaluations of older adults in the long term care setting, exposure to clinical trial methodology, and opportunities to use the resources of the Center in the future to conduct in-depth research on a specific dementia-related topic.

This rotation is offered to PGY3 and PGY4 residents; expectations are similar for PGY3 and PGY4 residents.

**Expectations of Residents**

- Residents must complete a trainee registration sheet and sign a confidentiality statement (available from Doris at the MAP front desk) and complete necessary paperwork (and/or training) for compliance with Human Studies and HIPAA regulations by the second day of the rotation.
- Residents should dress in professional attire (office casual is acceptable) and wear a lab coat when interacting with patients or research subjects.
- Supervision for this rotation is provided jointly by ADRC Director, Dr. John Morris, ADRC Clinician, ADRC Clinician & Investigator, Dr. David Carr, ADRC Clinician & Investigator, and Dr. Jim Galvin, ADRC Education Core Leader.

## Goals and Objectives for ADRC Rotation (Elective)

- Trainees should plan to attend at least one of Dr. Carr's MDC or MAP clinics during the rotation. During these clinics, Dr. Carr will review various aspects of dementia diagnosis, treatment and clinical care, and could possibly assign further reading.
- On the 4-week (or longer) rotation, participation in the long-term care experience is highly recommended. Arrange this with Dr. Carr by email; dcarr@dom.wust.edu.
- \*At the end of a 4-week rotation, the resident/student should plan to meet with Dr. Carr after his Thursday pm MDC clinic is finished or attend his Friday MAP clinic at Barnes-West County to discuss the rotation.

## ADRC GOALS and OBJECTIVES

### Patient Care

**Goal:** The resident rotating on the ADRC rotation must be able to obtain a comprehensive interview with a caregiver and patient/participant that is compassionate, appropriate, and effective for the management of dementia and the promotion of health. Residents are expected to:

#### Objectives:

- Understand basic interviewing techniques to elicit pertinent information from patient and family members in support of a diagnosis.
- Be able to perform a standard neurological examination with a focus on those important physical findings that assist in the differential diagnosis of determining the etiology of the dementias.
- Learn to administer the Clinical Dementia Rating (CDR) scale and to assess the presence and severity of dementing disorders.
- Be able to distinguish normal age-related cognitive changes from those suggestive of a progressive neurodegenerative disorder.
- Be able to assess for the presence of delirium, medication-induced cognitive dysfunction and mood disorder induced changes in cognition.
- Participate in clinical and research assessments of older adults with cognitive-functional complaints consistent with Alzheimer's disease and other neurodegenerative disorders. Residents will observe evaluations live and in-person, as well as via videotape, and cover a range of diagnoses, treatment, and care issues.
- Observe clinicians from different specialty backgrounds (Neurology, Geriatrics, Psychiatry).

### Medical Knowledge

**Goal:** The resident rotating on the ADRC rotation must demonstrate knowledge of the differential diagnosis of irreversible degenerative dementias and be able to communicate an effective treatment plan for the management of dementia. Residents are expected to:

#### Objectives:

### Goals and Objectives for ADRC Rotation (Elective)

- Understand symptom patterns and physical exam signs that differentiate Alzheimer's disease from related neurodegenerative disorders (i.e., Dementia with Lewy Bodies, Frontotemporal Dementia, Vascular Dementia) and be comfortable making a differential diagnosis in uncomplicated cases.
- Understand the range of treatments currently available for Alzheimer's disease and how they are prescribed.
- Understand the symptoms and findings that are suggestive of rapidly progressive dementias such as Creutzfeldt-Jakob disease.
- Be aware of emerging treatments and diagnostic modalities, including fluid biomarkers and amyloid imaging.
- Be familiar with health conditions of aging that may complicate Alzheimer's disease presentation and strategies for the management of challenging conditions, such as depression and behavioral problems.

### Practice-based Learning and Improvement

The resident rotating on the ADRC rotation must demonstrate the ability to investigate and evaluate their care of dementia patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation. Residents are expected to develop skills and habits to be able to meet the following goals:

#### Objectives:

- During the rotation the resident should use internet-based, peer-reviewed sources of information to enhance their knowledge of current issues and management of patients with dementia
- All residents should understand his or her limitations of knowledge and judgment; ask for help when needed; and be self-motivated to acquire knowledge
- Accept feedback and learn from own errors
- The resident will research one topic to present to Dr. Carr at the end of the rotation, that will have the potential to impact the evaluation and/or management of dementia care in clinic for attendings and trainees.
- Residents must complete necessary paperwork (and/or training) for compliance with Human Studies and HIPAA regulations by the second day of the rotation.
- Residents participate in other educational offerings of the Center, including research seminars, a weekly clinical case conference, and neuropathology microscopic and brain cutting sessions.

### Interpersonal and Communication Skills

The resident rotating on the ADRC rotation must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients or participants, their families or caregivers, and health professionals. Residents are expected to:

#### Objectives:

- Demonstrate caring and respectful behaviors with patients, families, including those who are angry and frustrated; and all members of the health care team.
- Know the basics of counseling and educating patients with dementia and their families.

### Professionalism

The resident rotating on the ADRC rotation must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Demonstrate respect, compassion, and integrity.

### Goals and Objectives for ADRC Rotation (Elective)

- Develop an appreciation for a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and other aspects of clinical care.
- Develop an appreciation for the ethical, cultural and socioeconomic dimensions of dementia, demonstrating sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

### Systems-based Practice

The resident rotating on ADRC rotation must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Be familiar with broader issues of family and community care for persons with dementia, particularly services available through the community and the Alzheimer's Association.
- Work effectively with others (such as nurses, secretaries, social workers, nutritionist, interpreters, physical and occupational therapists, technicians) as a member of a health care team
- Learn how to manage patients in long term care facilities and nursing homes
- Learn about community resources that can assist dementia patients such as hospice, home health, palliative care, and community outreach.
- Advocate for quality patient care and assist patients in dealing with system complexities
- Know the cost-effective use of diagnostic technology in the evaluation of dementia (e.g. PET scan, LP, EEG, etc).

**Evaluations:** Residents will be evaluated by the education core director (Dr. Jim Galvin), the rotation director (Dr. David Carr) and other attending staff at the end of the rotation. Residents are expected to schedule an "exit interview" with Dr. Carr at the end of the rotation.

Goals and Objectives for ADRC Rotation (Elective)

<p><b>MAP/ADRC/MDC</b> 4488 Forest Park Ave. Lower Level 286-2683 (front desk)</p> <p><b>First Day</b> – Report at 8:45 AM to front desk of MAP. Ask for Mary Coats.</p> <p><b>Reference List</b> E-mail Barbara Kuntemeier for your reading assignment at; <a href="mailto:bkuntemeier@abraxas.wustl.edu">bkuntemeier@abraxas.wustl.edu</a></p>	<p><b>SCHEDULE</b></p> <p><i>Times in clinic are subject to change due to vacations, cancellations, etc. A weekly schedule is posted in the front office. Ask Doris Jones for assistance in reviewing the <b>MAP</b> (research) schedule and Sherry Ellis for reviewing the <b>MDC</b> (clinical) schedule.</i></p> <p><b>Monday</b> 8:30 AM – Jim Galvin, MD <b>MDC</b> 9:30 AM – Monique Williams, MD <b>MAP</b> 12:00 PM – Gene Rubin, MD, PhD <b>MAP</b></p> <p><b>Tuesday</b> 9:30 AM – Jim Galvin, MD <b>MAP</b> (1<sup>st</sup> &amp; 3<sup>rd</sup> Tuesdays) 9:30 AM – Joy Snider, MD <b>MAP</b> (2<sup>nd</sup> &amp; 4<sup>th</sup> Tuesdays) 9:30 AM - Nupur Ghoshal, MD, PhD <b>MAP</b> 1:00 PM – Joy Snider, MD <b>MDC</b></p>	<p><b>LEC</b> <b>TURES</b> <b>Monday</b> (must attend one) 12:00 PM – <b>Hope Center Seminar</b> Shwarz Auditorium <a href="http://hopecenter.wustl.edu/activities.html">http://hopecenter.wustl.edu/activities.html</a></p> <p>12:00 PM – <b>Geriatrics Journal Club</b> ADRC Conference Room <b>For all psychiatry lectures visit the website at <a href="http://www.psychiatry.wustl.edu">www.psychiatry.wustl.edu</a> for the conference topics.</b></p> <p><b>Tuesday</b> 9:00 AM – <b>Psychiatry Grand Rounds</b> Clopton Auditorium</p> <p>12:00 PM – <b>ADRC Research Seminar</b> East Pavilion Auditorium</p> <p><b>Wednesday</b> 09:00 AM – <b>Psych Adv Resident Seminar</b> Renard, 3<sup>rd</sup> Floor Conf Room (Sept-May)</p> <p>11:30 AM- Psychiatry Research</p>
<p><b>*Presentations</b> Trainees are <u>required</u> to give a 30-minute presentation (30 slides max.) on a topic related to dementia for members of the ADRC community. See Dr. Carr or Dr. Galvin for topic suggestions.</p> <p><b>When?</b> - Monday, 12:00 – 1:00 PM</p> <p><b>Where?</b></p>		

Goals and Objectives for ADRC Rotation (Elective)

<p>- ADRC Conference Room</p> <p><b>Media?</b></p> <p>- Use of PowerPoint slides is required. You may also prepare a handout.</p> <p><b>Who?</b></p> <p>-Dr. Stan Birge will need to approve your topic. Please email <a href="mailto:sbirge@im.wustl.edu">sbirge@im.wustl.edu</a> along with Dr. Carr at <a href="mailto:dcarr@im.wustl.edu">dcarr@im.wustl.edu</a></p>	<p>2:00 PM – David Carr, MD <b>Parc Provence</b> (check with Dr. Carr to verify visit)</p> <p><b>Wednesday</b></p> <p>8:30 AM – John Morris, MD <b>MDC</b></p> <p>10:00 AM—David Carr, MD <b>Barnes West County</b></p> <p>1:00 PM – Joy Snider, MD <b>MAP</b></p> <p>1:30 PM – Gene Rubin, MD, PhD <b>MAP</b></p> <p><b>Thursday</b></p> <p>9:00 AM - Teaching Tapes in <b>MAP</b></p> <p>9:30 AM – Pam Millsap, RN <b>MAP</b></p> <p>1:00 PM – David Carr, MD <b>MDC</b></p> <p>1:30 PM – Randy Bateman, MD <b>MAP</b></p> <p>1:30 PM – Jim Galvin, MD <b>MAP</b></p> <p><b>Friday</b></p> <p>9:00 AM – Randall Bateman, MD <b>MDC</b></p> <p>9:30 AM – Joy Snider, MD, <b>MAP</b></p> <p>9:30 AM – John Morris, MD <b>MAP</b></p> <p>10:00 AM—David Carr, MD <b>Barnes West County</b></p> <p><b>REFERENCES</b></p> <p><i>The articles you will be provided in pdf format is a mandatory reading list. The pdf file is very long so do not print out...read it electronically!</i></p> <p><i>The ADRC list of articles is suggested reading that is provided to you to highlight some of the major studies from our center. If you have an interest in other articles from our center, please check with Barbie.</i></p>	<p>Seminar Holden Auditorium in Farrell (Sept-May)</p> <p>12:00 PM – <b>Clinical Neuroscience Series</b> Shwarz Auditorium</p> <p><b>Thursday</b></p> <p>12:00 PM – <b>MAP Clinical Conference</b> Chaired by Dr. John C. Morris ADRC Conference Room</p> <p>12:00 PM -<b>Clinicopathological Conference</b> 3<sup>rd</sup> Thursday of each month</p> <p><b>Friday</b></p> <p>8:00 AM – <b>Neurology Grand Rounds</b> West Pavilion Auditorium</p>
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Goals and Objectives for ADRC Rotation (Elective)

<p><b>Required Observation</b>          Make every effort to sit in on Dr. Carr's MDC assessment each week:          - Thursdays at 1:00 PM          You are welcome to visit Barnes West County and observe Dr. Carr's MAP clinic; call 314-996-8200 for directions.</p>	<p><b>Educational Resources</b></p> <ul style="list-style-type: none"> <li>▪ Trainee workstations are behind the half-wall in the waiting room. See Mary or Barbie for password.</li> <li>▪ ADRC Library (<i>across from ADRC Office, 130</i>)</li> <li>▪ Patient assessment videotape library (<i>see Mary Coats for access and direction</i>)</li> </ul>	<p><b>Where should I sit to work?</b>          In addition to the trainee workstations in the waiting room, you may also sit and work in the Physician's Dictation Room. Address any questions to Mary.</p>
<p><b>Other Opportunities</b></p> <ul style="list-style-type: none"> <li>- Observe family conference (<i>contact Terri Hosto, MSW, for details: 286-2418</i>)</li> <li>- Learn about psychometric testing for dementia (<i>contact Denise Maue Dreyfus, MA, at 286-2688</i>)</li> <li>- Observe in-home assessment. Call Marie Meisel, MSN, 612-5911.</li> <li>- Observe brain cutting (<i>Mondays, 9:15-10:00 am, contact Lisa Taylor-Reinwald at 362-7420</i>).</li> </ul>	<p><b>Helpful Resources on the Internet</b></p> <ul style="list-style-type: none"> <li>▪ Washington University ADRC Home Page: <a href="http://alzheimer.wustl.edu/">http://alzheimer.wustl.edu/</a></li> <li>▪ Clinical Dementia Rating training page: <a href="http://alzheimer.wustl.edu/cdr">http://alzheimer.wustl.edu/cdr</a></li> <li>▪ National Alzheimer's Coordinating Center: <a href="http://www.alz.washington.edu/">http://www.alz.washington.edu/</a></li> <li>▪ National Library of Medicine: <a href="http://www.nlm.nih.gov/">http://www.nlm.nih.gov/</a></li> <li>▪ Alzheimer's Research Forum: <a href="http://www.alzforum.org/">http://www.alzforum.org/</a></li> <li>▪ Alzheimer's Disease Education &amp; Referral Center: <a href="http://www.alzheimers.org/">http://www.alzheimers.org/</a></li> <li>▪ Alzheimer's Association - National: <a href="http://www.alz.org">www.alz.org</a> ; St. Louis : <a href="http://www.alzstl.org">www.alzstl.org</a></li> </ul>	

## EMG ELECTIVE ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for the EMG Elective Rotation for Neurology and Pediatric Neurology Residents (PGY2, PGY3 3 and PGY4 residents)**

The goal of the EMG rotation is to expand basic clinical knowledge base in the diagnosis, evaluation, and treatment of various neuromuscular and peripheral nervous system disorders including a fundamental understanding of EMG and to strengthen knowledge base of the peripheral nervous system.

Junior residents (PGY2) will be expected to master the basic aspects of these objectives, More advanced residents (PGY3 and PGY4) will be expected to develop a more nuanced and complete understanding and engage in more independent patient care and evaluation and more teaching.

#### **Patient Care**

**Goal:** The resident rotating on the EMG Elective must be able to develop skills needed for EMG interpretation including the needle exam. The resident must also develop his abilities for history, examination and differential diagnosis of patients presenting with neuromuscular disorders. The resident is expected to:

#### **Objectives:**

- Observe and then perform EMG and NCV examinations in the neuromuscular diseases laboratory.
- Provide written reports of EMG/NCV studies in a timely manner in the written and/or electronic medical record.
- Keep a log of all cases that he examines.
- Keep a portfolio of his presentations during the rotation.

#### **Medical Knowledge**

**Goal:** The resident on the EMG Elective will develop knowledge of neuroanatomy and electrophysiological norms so that the resident can perform appropriate testing and interpret test results. Residents are expected to:

#### **Objectives:**

- Develop better knowledge of the anatomy of the peripheral nervous system
- Develop better knowledge of the physiology of the nerve and compound motor action potential
- Learn the basics of NCS
  - Sensory NCS
    - Normal adult values committed to memory and NCSs techniques of sural, median and ulnar
  - Motor NCS
    - Normal adult values, committed to memory, and NCSs techniques of median, ulnar, peroneal and tibial
  - Late Responses
    - F wave
    - H wave
    - A wave

## EMG ELECTIVE ROTATION GOALS AND OBJECTIVES

- Blink reflex
  - Repetitive Nerve Stimulation
    - Slow rate (2 Hz)
    - Fast rate (30 Hz)
- Learn the basics of EMG
  - Needle safety and universal precautions
  - Fibrillation potentials
  - Positive Sharp Wave potential
  - Fasciculations
  - Normal vs. abnormal motor unit potential morphology
  - Needle placement and technique
- NCSs and EMG patterns in different diseases
  - Myopathies
  - Neuromuscle junction disorders
  - Peripheral neuropathies
  - Entrapment Neuropathies
  - Plexopathies
  - Radiculopathies
- Anterior horn cell diseases (ALS, SMA, Kennedy's, Polio)

### **Practice-based Learning and Improvement**

The resident rotating on the EMG Elective must develop the ability to refine their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Teach the utility and appropriate use of specialty neurodiagnostic procedures (EMG/NCV and specialty evaluations for autonomic dysfunction).
- Prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend seminars offered by the EMG/Neuromuscle group and by the Neurology Department, including:
  - Case Studies conference- Monday 8 am
  - Resident's Conference – Tuesday 12 pm
  - Neuromuscle/EMG conference Wednesday 8 am
  - Pathology Conference; biopsy room Wednesday 3 pm
  - Clinical Neurophysiology lecture Wednesday 4 pm
  - Journal Club Friday 1230 pm

### **Interpersonal and Communication Skills**

The resident rotating on the EMG Elective must demonstrate interpersonal and communication skills that result in the effective exchange of information and

## EMG ELECTIVE ROTATION GOALS AND OBJECTIVES

collaboration with patients, their families, and health professionals. Residents are expected to:

### **Objectives:**

- Communicate EMG and other electrodiagnostic results effectively with other health care professionals, including those in other fields.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on the EMG Elective must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Learn effective communications skills with professionals from other areas of medical practice including internal medicine, general surgery, and surgical subspecialties.
- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on the EMG Elective must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

## EMG ELECTIVE ROTATION GOALS AND OBJECTIVES

**Evaluation:** The resident is evaluated by the fulltime faculty attending working with the resident, with additional input from the EMG lab staff, nursing staff, patients and students.

### **ADDITIONAL INFORMATION:**

#### **Activities**

- Monday 8 am Case Studies conference
- Tuesday 12 pm Resident's Conference
- Wednesday 8 am Neuromuscle/EMG conference
- Wednesday 3.0 pm Pathology Conference; biopsy room
- Wednesday 4 pm Clinical Neurophysiology lecture
- Friday 12:30 pm Journal Club

#### **Requirements**

- Keep a log of all cases you examine
- Keep a portfolio of your presentations during the rotation

For any questions, contact:

**Muhammad Al-Lozi, MD**  
**Phone 314 362 6981**  
**Beeper 407 3330**

**Goals & Objectives for Adult EEG/Epilepsy Adult EEG/Epilepsy Rotation (PGY 2,3 and 4)**

**Background:** Epilepsy is a common neurological disease. The lifetime risk of a single seizure approaches 10% and approximately 1% of the population has recurrent seizures or epilepsy. For many people, antiepileptic medications completely control their seizures. However, approximately one-third of the people with epilepsy are not completely controlled by medication. For some of these people, epilepsy surgery may provide a cure. Unfortunately, people with refractory seizures suffer for an average of 20 years before undergoing epilepsy surgery.

**Overall Goal:** Provide a focused experience in the inpatient and outpatient evaluation and treatment of epilepsy in adults including an introduction to the interpretation of routine, extended and video EEG recording. Junior residents (PGY2) will be expected to master the basic aspects of these objectives, More advanced residents (PGY3 and PGY4) will be expected to develop a more nuanced and complete understanding and engage in more independent patient care and evaluation and more teaching.

**Patient Care**

**Goal:** The resident rotating on the Adult EEG/Epilepsy Rotation will gain a focused experience in the inpatient and outpatient evaluation and treatment of epilepsy in adults including an introduction to the interpretation of routine, extended and video EEG recording. Residents are expected to:

**Objectives:**

- Participate in the daily review of video/EEG and extended EEG studies
- Participate in the daily review of routine EEG studies
- Evaluate patients in the adult epilepsy clinic. Formulate diagnosis and treatment plan and institute care following discussion with the epilepsy clinic attendings.
- Perform the initial evaluation of patients new patients admitted to the inpatient epilepsy monitoring unit and obtain an accurate and specific history of seizures and other pertinent history and perform a thorough neurological examination.
- Integrate history and physical examination with medical knowledge for neurological disorders to arrive at a differential diagnosis and plan.
- Make an informed diagnosis using the most current pathophysiological explanations.
- Make evidence-based treatment decisions.
- Discuss care plan for new patients with the epilepsy attending.
- Prescribe current concepts of therapy including mechanisms of drug action and available surgical intervention.

**Medical Knowledge**

**Goal:** The resident rotating on Adult EEG/Epilepsy Rotation must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with urgent and chronic medical problems. Residents are expected to:

## Goals and Objectives for Adult Epilepsy/EEG Rotation (Elective)

### **Objectives:**

- Understand how EEG data is displayed including the polarity convention, the difference between bipolar and referential montages and familiarity with commonly used montages.
- Identify the patterns in normal EEG including awake background activity, drowsiness and sleep.
- Identify and lateralize/localize abnormal patterns.
- Distinguish epileptiform from non-epileptiform abnormalities.
- Identify normal variants and be able to distinguish from abnormal patterns.
- Identify artifacts and be able to distinguish from abnormal patterns.
- Identify EEG patterns associated with common epilepsy syndromes.
- Be familiar with the clinical semiology of common seizure types.
- Identification and treatment of convulsive and non-convulsive status epilepticus.
- Identification and evaluation of potential epilepsy surgery candidates.

### **Practice-based Learning and Improvement**

**Goal:** The resident rotating on Adult EEG/Epilepsy Rotation must demonstrate the ability to investigate and evaluate their care of medical patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (EEG including invasive EEG and video/EEG, evoked potentials, sleep studies).
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Participate in teaching and supervising the medical students and rotators on the rotation and sharing in their evaluation
- Attend epilepsy surgery conference
- Attend Clinical Neurophysiology conference
- Attend monthly resident EEG conference
- Regularly attend weekly neurology conferences including (1) Grand Rounds (2) Clinical Neuroscience Lecture Series; (3) Research Conference when clinical duties permit.

### **Interpersonal and Communication Skills**

**Goal:** The resident rotating on Adult EEG/Epilepsy Rotation must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

### **Objectives:**

- Communicate effectively with other health care professionals.

## Goals and Objectives for Adult Epilepsy/EEG Rotation (Elective)

- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

**Goal:** The resident rotating on Adult EEG/Epilepsy Rotation must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

#### **Objectives:**

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

**Goal:** The resident rotating on Adult EEG/Epilepsy Rotation must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

#### **Objectives:**

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**EVALUATION:** Residents will be evaluated by the fulltime epilepsy faculty attending working with the resident with additional assessment by the epilepsy monitoring unit staff, nursing staff, patients and students.

### **ADDITIONAL INFORMATION:**

## Goals and Objectives for Adult Epilepsy/EEG Rotation (Elective)

### Specific Objectives:

1. Participate in the daily review of video/EEG and extended EEG studies
2. Participate in the daily review of routine EEG studies
3. Attend adult epilepsy clinic
4. Attend epilepsy surgery conference
5. Attend Clinical Neurophysiology conference
6. Attend monthly resident EEG conference

**Rotation Coordinator:** R. Edward Hogan, M.D.  
**Contact Person:** Donna Theiss 363-8766

### SPECIFIC INFORMATION FOR EEG COMPONENT:

Where: Epilepsy Monitoring Unit, 11400  
When: 8:00am

### EEG:

- Understand how EEG data is displayed including the polarity convention, the difference between bipolar and referential montages and familiarity with commonly used montages
- Identify the patterns in normal EEG including awake background activity, drowsiness and sleep
- Identify and lateralize/localize abnormal patterns
- Distinguish epileptiform from non-epileptiform abnormalities
- Identify normal variants and be able to distinguish from abnormal patterns
- Identify artifacts and be able to distinguish from abnormal patterns
- Identify EEG patterns associated with common epilepsy syndromes
- Be familiar with the clinical semiology of common seizure types
- Identification and treatment of convulsive and non-convulsive status epilepticus
- Identification and evaluation of potential epilepsy surgery candidates

## MOVEMENT DISORDERS ELECTIVE ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for the Movement Disorders Elective Rotation for Neurology and Pediatric Neurology Residents (PGY2, PGY3 3 and PGY4 residents)**

The goal of the Movement Disorders Elective rotation is to make residents familiar with the basic epidemiology, diagnosis and management of movement disorders. They will see patients in the outpatient Neuromuscle Clinic and may also see inpatient consultations. They attend weekly Movement Disorder conferences, and Neurology Grand Rounds. They participate in the care of patients in the inpatient and outpatient setting. They learn to use a medical electronic database during this rotation.

Junior residents (PGY2) will be expected to master the basic aspects of these objectives, More advanced residents (PGY3 and PGY4) will be expected to develop a more nuanced and complete understanding and engage in more independent patient care and evaluation and more teaching.

#### **Patient Care**

**Goal:** The resident rotating on the Movement Disorders Elective must develop skills needed for diagnosis and management of patients with movement disorders. The resident must also develop his abilities to obtain a history, perform a neurological examination and formulate a differential diagnosis for patients presenting with movement disorders. The resident is expected to:

#### **Objectives:**

- Learn to obtain a focused history pertaining to movement disorders and to obtain a clear description of the patient's symptoms.
- Learn to identify and treat diseases common in this patient population.
- Develop an appropriate treatment plan based on the clinical pharmacology and the pharmacokinetics of the drugs used to treat movement disorders.
- In conjunction with the movement disorders attending, develop and institute a treatment plan for patients seen in the Movement Disorders Clinic and as inpatient Movement Disorders consultations.
- Complete written notes in a timely and comprehensive manner using the MARS database and other electronic medical records.

#### **Medical Knowledge**

**Goal:** The resident on the Movement Disorders Elective will develop a knowledge critical for the diagnosis and treatment of movement disorders. Residents are expected to:

#### **Objectives:**

- Develop better knowledge of the epidemiology of movement disorders.
- Learn the differential diagnosis and diagnostic testing available for movement disorders, including genetic testing.
- Learn the clinical pharmacology and the pharmacokinetics of the drugs used to treat these disorders and learn how to use these medications in this patient population.

#### **Practice-based Learning and Improvement**

## MOVEMENT DISORDERS ELECTIVE ROTATION GOALS AND OBJECTIVES

The resident rotating on the Movement Disorders Elective must develop the ability to refine their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

### **Objectives:**

- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Regularly attend group meetings every Thursday at 3pm in the East Building, 2<sup>nd</sup> floor.
- Attend other neurology conferences as time allows.
- Conduct an independent research project and prepare a presentation.

### **Interpersonal and Communication Skills**

The resident rotating on the Movement Disorders Elective must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

Residents are expected to:

### **Objectives:**

- Communicate effectively with other health care professionals regarding the management of movement disorders, including communication with the patient's primary care physician and other caregivers, and with other treating physicians in the ED and inpatient services as needed.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on the Movement Disorders Elective must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

### **Objectives:**

- Learn effective communications skills with professionals from other areas of medical practice including internal medicine, general surgery, and surgical subspecialties.
- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.

## MOVEMENT DISORDERS ELECTIVE ROTATION GOALS AND OBJECTIVES

- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on the Movement Disorders Elective must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the electronic database and other electronic medical records as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and clinic and via electronic media to improve patient care and outcomes.

**Evaluation:** The resident is evaluated by the fulltime faculty attending working with the resident, with additional input from the Neuromuscle Clinic staff, patients and students.

### ADDITIONAL INFORMATION:

Contact Person: Susan Donovan  
Contact Phone #: 362-6026  
Where? East Building, Room 2113  
When? See below

### Movement Disorder Rotation:

- Project and Presentation
- Attend clinic
- Do consults
- Attend group meetings every Thursday at 3pm in the East Building, 2<sup>nd</sup> floor
- Must use MARS database

Residents that rotate through the Movement Disorders division become familiar with the basic epidemiology of movement disorders. They learn to obtain a focused history pertaining to movement disorders and to obtain a clear description of the patient's symptoms. They learn to identify and treat diseases common in this patient population. They learn the clinical pharmacology and the pharmacokinetics of the drugs used to treat these disorders. They attend weekly Movement Disorder

## MOVEMENT DISORDERS ELECTIVE ROTATION GOALS AND OBJECTIVES

conferences, and Neurology Grand Rounds. They participate in the care of patients in the inpatient and outpatient setting. They learn to use a medical electronic database during this rotation.

Movement Disorder Clinic:

Clinic is on Wednesdays and begins at 7:30am in the CAM building, 6<sup>th</sup> floor.

## MOVEMENT DISORDERS ELECTIVE ROTATION GOALS AND OBJECTIVES

### ADDITIONAL INFORMATION:

Contact Person: Susan Donovan  
Contact Phone #: 362-6026  
Where? East Building, Room 2113  
When? See below

#### Movement Disorder Rotation:

- Project and Presentation
- Attend clinic
- Do consults
- Attend group meetings every Thursday at 3pm in the East Building, 2<sup>nd</sup> floor
- Must use MARS database

Residents that rotate through the Movement Disorders division become familiar with the basic epidemiology of movement disorders. They learn to obtain a focused history pertaining to movement disorders and to obtain a clear description of the patient's symptoms. They learn to identify and treat diseases common in this patient population. They learn the clinical pharmacology and the pharmacokinetics of the drugs used to treat these disorders. They attend weekly Movement Disorder conferences, and Neurology Grand Rounds. They participate in the care of patients in the inpatient and outpatient setting. They learn to use a medical electronic database during this rotation.

#### Movement Disorder Clinic:

Clinic is on Wednesdays and begins at 7:30am in the CAM building, 6<sup>th</sup> floor.

At the end of the rotation, an evaluation is sent by the Neurology Residency Coordinator to the attending(s) who worked with the resident(s).

## **Goals & Objectives for the Neuromuscle Elective Rotation for Neurology and Pediatric Neurology Residents (PGY2, PGY3 3 and PGY4 residents)**

The goal of the Neuromuscle Elective rotation is for residents to learn the clinical, neurophysiological and laboratory aspects of neuromuscular disease and to make residents familiar with the basics of diagnosis, management and treatment of neuromuscular disorders. Residents will see patients in the outpatient Neuromuscle Clinic and will also see inpatients with neuromuscular disorders.

Junior residents (PGY2) will be expected to master the basic aspects of these objectives, More advanced residents (PGY3 and PGY4) will be expected to develop a more nuanced and complete understanding and engage in more independent patient care and evaluation and more teaching.

### **Patient Care**

**Goal:** The resident rotating on the Neuromuscle Elective must develop skills needed for diagnosis and management of patients with neuromuscle disorders. The resident will round with the neuromuscle attending and fellows on hospitalized patients, see new inpatient neuromuscle consultations, and participate in the outpatient neuromuscle clinic and neuromuscle physiology clinic. The resident is expected to:

#### **Objectives:**

- Learn to obtain a focused history pertaining to neuromuscular diseases and to obtain a clear description of the patient's symptoms.
- Learn to identify and treat diseases common in this patient population.
- Round with the neuromuscle attending and fellows on hospitalized patients and see new inpatient neuromuscle consultations.
- See patients in the Neuromuscle clinic.
- In conjunction with the Neuromuscle attending, develop and institute a treatment plan for patients seen in the Clinic and as inpatient consultations.
- Complete written notes in a timely and comprehensive manner.

### **Medical Knowledge**

**Goal:** The resident on the Neuromuscle Elective will develop a knowledge critical for the diagnosis and treatment of neuromuscular disorder. Residents are expected to:

#### **Objectives:**

- Develop better knowledge of the epidemiology of neuromuscular diseases.
- Learn basic clinical concepts:
  - The typical clinical, EMG, nerve conduction and biopsy features of:
    - Myopathy
    - NMJ disorders
    - Neuropathy: Axonal; Demyelinating; Neuronopathy
  - The methods and uses of testing, including:
    - Examination: General; Cranial nerves; Motor; Sensory; Reflexes; Quantitative motor & sensory testing
    - Electrodiagnostic testing
    - Muscle and nerve biopsy

## Neuromuscle Elective Rotation Goals and Objectives

- Antibody testing:
    - Myositis-specific; MG (AChR & MuSK); GM1 ganglioside; MAG; Sulfatide; Hu
  - Rehabilitation concepts & methods
  - Genetic disease syndromes, including the genetic, clinical, physiologic and pathological features of:
    - Duchenne and Becker muscular dystrophy
    - Limb-Girdle MD: Sarcoglycan disorders
    - Myotonic dystrophy (DM1)
    - Facioscapulohumeral (FSH) dystrophy
    - Charcot-Marie-Tooth (CMT) type 1A & HNPP
    - Spinal muscular atrophy
    - SMA 5q
    - Bulbo-spinal muscular atrophy (BSMA; Kennedy's disease)
    - Amyotrophic lateral sclerosis
  - Immune & inflammatory disorders: learn the clinical, immune, physiologic, pathological and treatment features of:
    - Immune myopathies: Childhood dermatomyositis; Polymyositis; Inclusion body
    - Myasthenia gravis
    - Myasthenic syndrome (LEMS)
    - Immune demyelinating neuropathies
    - Chronic immune demyelinating neuropathy (CIDP)
    - Multifocal motor neuropathy
    - Anti-MAG neuropathy
    - Sensory neuronopathy: Anti-Hu syndrome
    - Acute immune neuropathies: GBS; Acute motor; Autonomic; Miller-Fisher
  - Other disorders
    - Neuropathies-differential diagnosis and clinical features of treatable disorders
    - Diabetic neuropathy: Types
    - Focal: Facial paralysis; Carpal tunnel; Neuralgic amyotrophy; Lumbar plexopathy
    - Amyotrophic lateral sclerosis
- Learn principles of treatment of neuromuscular disorders, the clinical pharmacology and the pharmacokinetics of the drugs used to treat these disorders and learn how to use these medications in this patient population, including:
  - Corticosteroids
  - Rituximab
  - Cyclosporine A
  - Methotrexate
  - Azathioprine
  - CellCept
  - Cyclophosphamide

## Neuromuscle Elective Rotation Goals and Objectives

- IVIg
- Plasma exchange

### **Practice-based Learning and Improvement**

**Goal:** The resident rotating on the Neuromuscle Elective must develop the ability to refine their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Regularly attend group meetings including Case Studies conference, Neuromuscular/EMG conference, Pathology Conference, Clinical Neurophysiology lecture, Journal Club and optional Muscle & Nerve biopsy reading.
- Residents will schedule weekly one on one discussion with Neuromuscular Faculty.
- Attend other neurology conferences as time allows.
- Conduct an independent research project and prepare a presentation.

### **Interpersonal and Communication Skills**

**Goal:** The resident rotating on the Neuromuscle Elective must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Communicate effectively with other health care professionals regarding the management of Neuromuscle patients, including communication with the patient's primary care physician and other caregivers, and with other treating physicians in the ED and inpatient services as needed.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

## Neuromuscle Elective Rotation Goals and Objectives

### **Professionalism**

**Goal:** The resident rotating on the Neuromuscle Elective must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

#### **Objectives:**

- Learn effective communications skills with professionals from other areas of medical practice including internal medicine, general surgery, and surgical subspecialties.
- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

**Goal:** The resident rotating on the Neuromuscle Elective must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

#### **Objectives:**

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the electronic database and other electronic medical records as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and clinic and via electronic media to improve patient care and outcomes.

**Evaluation:** The resident is evaluated by the fulltime faculty attending working with the resident, with additional input from the Neuromuscle Clinic staff, patients and students.

### **ADDITIONAL INFORMATION:**

## Neuromuscle Elective Rotation Goals and Objectives

### ACTIVITIES: Schedule

- General
  - Goals: Learning of Clinical, Neurophysiological and Laboratory aspects of NM disease
  - Length of rotation: 2 months
- Conferences
  - Monday 8 am Case Studies conference; Choi McM 2
  - Wednesday 8 am Neuromuscular/EMG conference; McM 4
  - Wednesday 3 pm Pathology Conference; IWJ 406
  - Wednesday 4 pm Clinical Neurophysiology lecture; McM 2
  - Friday 12:30 pm Journal Club; McM 4
  - Saturday 10:00 am Muscle & Nerve biopsy reading (optional); IWJ 406
  - Weekly: 1 on 1 discussion with Neuromuscular faculty; 1 hour q week; Times TBD
    - Weihl; Baloh; Miller; Connolly; Lopate; Al-Lozi; Pestronk; Florence
- Clinical activities
  - Monday
    - 9-12:30: Neuromuscular patient exams & rounds with fellow & attendings; BJH
    - 1-4:30: Clinical NM Neurophysiology; CAM 6
  - Tuesday
    - 9-12:30: Neuromuscular patient exams & rounds with fellow & attendings; BJH
    - 1-4:30: Clinical NM Neurophysiology; CAM 6
    - 2<sup>nd</sup> Tuesday afternoon of each month: Pediatric NM clinic; SLCH Suite 2D
  - Wednesday
    - 9-12:30: Neuromuscular patient exams & rounds with fellow & attendings; BJH
    - Afternoon: Conferences & Reading
  - Thursday
    - 8:15-5: Neuromuscular Clinic; CAM 6
  - Friday
    - 9-12:15: Neuromuscular patient exams & rounds with fellow & attendings; BJH
    - 1:30-5: Clinical NM Neurophysiology; CAM 6
  - Saturday (Optional)
  - Neuromuscular biopsy reading (10:15-1)
  - NOTE: Activity times may be modified to accommodate individual resident's clinic schedule or academic interests

### REQUIREMENTS

- Keep a log of all cases you examine
- Keep a portfolio of your presentations during the rotation
- Discuss consult cases with Neuromuscular Fellow before presentation

Electrodiagnostic topics are covered both in the rotation and in the EMG elective:

### ELECTRODIAGNOSTIC TOPICS

- Anatomy of the peripheral nervous system

## Neuromuscle Elective Rotation Goals and Objectives

- Physiology of the nerve and compound motor action potential
- Learn the basics of NCS
  - Sensory NCS
    - Normal adult values committed to memory and NCSs techniques of sural, median and ulnar
  - Motor NCS
    - Normal adult values, committed to memory, and NCSs techniques of median, ulnar, peroneal and tibial
  - Late Responses
    - F wave
    - H wave
    - A wave
  - Repetitive Nerve Stimulation
    - Slow rate (2 Hz)
    - Fast rate (30 Hz)
- Learn the basics of EMG
  - Needle safety and universal precautions
  - Fibrillation potentials
  - Positive Sharp Wave potential
  - Fasciculations
  - Normal vs. abnormal motor unit potential morphology
  - Needle placement and technique
- NCSs and EMG patterns in different diseases
  - Myopathies
  - Neuromuscle junction disorders
  - Peripheral neuropathies
  - Entrapment Neuropathies
  - Plexopathies
  - Radiculopathies
  - Anterior horn cell diseases (ALS, SMA, Kennedy's, Polio)

### **Goals & Objectives for Neuro-oncology Elective Rotation (PGY2, PGY3 and PGY4)**

The past decade has witnessed significant strides in our ability to manage breast, lung, colon, and prostate cancer. These advances are a direct result of our improved ability to diagnose and treat these cancers. Unfortunately, the survival of patients diagnosed with the most common form of brain cancer has not improved, despite years of scientific investigation and numerous clinical trials. In the United States alone, there are over 17,000 new cases of malignant brain tumor diagnosed per year, and this figure has been increasing by 1-2% per year over the past decade. Unlike other cancers, brain tumors are often undetected until late and represent difficult tumors to completely remove and effectively treat with conventional therapies. In this regard, the majority of patients with malignant brain tumors die within 9-12 months despite aggressive treatment, and less than 3% survive more than 3 years.

Junior residents (PGY2) will be expected to master the basic aspects of these objectives, More advanced residents (PGY3 and PGY4) will be expected to develop a more nuanced and complete understanding and engage in more independent patient care and evaluation and more teaching.

#### **Patient Care**

**Goal:** Provide an outpatient-oriented combined pediatric and adult neuro-oncology experience for adult neurology residents and pediatric neurology fellows. Residents are expected to:

#### **Objectives:**

- Attend multidisciplinary adult and pediatric neuro-oncology clinics and case conferences (tumor boards).
- Attend adult and pediatric radiation oncology clinics.
- Participate in subspecialty brain tumor clinics.
- Evaluate patients in the clinics and formulate diagnosis and treatment plan and institute care following discussion with the neuro-oncology attendings.
- Integrate history and physical examination with medical knowledge for neurological disorders to arrive at a differential diagnosis and plan.
- Make an informed diagnosis using the most current pathophysiological explanations.
- Make evidence-based treatment decisions.
- Discuss care plan for new patients with the neuro-oncology attending.
- Prescribe current concepts of therapy including mechanisms of drug action and available surgical and radiological intervention.

#### **Medical Knowledge**

**Goal:** The resident rotating on the neuro-oncology rotation must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and behavioral aspects of primary and metastatic nervous system tumors, and must learn to use this knowledge in the care of patients with neurologic tumors. Residents are expected to:

## Goals and Objectives for Neurooncology Elective

### **Objectives:**

- Demonstrate an understanding of the basic and neurological science background underlying neurooncology and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for neurological disorders and for the impact of neurologic tumors.
- Further refine their localization and neurological examination skills.

### **Practice-based Learning and Improvement**

**Goal:** The resident rotating on Neuro-oncology must demonstrate the ability to investigate and evaluate their care of oncology patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

### **Objectives:**

- Attend neuropathology brain tumor review
- Attend monthly brain tumor research conferences
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.

### **Interpersonal and Communication Skills**

**Goal:** The resident rotating on Neuro-oncology must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

### **Objectives:**

- Communicate effectively with other health care professionals, particularly those on the multidisciplinary neuro-oncology care team.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

**Goal:** The resident rotating on Neuro-oncology must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

### **Objectives:**

## Goals and Objectives for Neurooncology Elective

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

**Goal:** The resident rotating on neuro-oncology must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

#### **Objectives:**

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.
- Understand how to use community resources, including home nursing and hospice, in the care of patients and their families.

**Evaluations:** Residents will be evaluated by the fulltime faculty attending working with the resident with additional assessment by the neuro-oncology clinic and nursing staff, patients and students.

#### ADDITIONAL INFORMATION:

#### **Specific Objectives:**

1. Attend multidisciplinary adult and pediatric neuro-oncology clinics and case conferences (tumor boards)
2. Attend adult and pediatric radiation oncology clinics
3. Attend neuropathology brain tumor review
4. Participate in subspecialty brain tumor clinics
5. Attend monthly brain tumor research conferences

#### **Rotation Coordinator.**

David H. Gutmann, MD, PhD ([gutmannd@neuro.wustl.edu](mailto:gutmannd@neuro.wustl.edu))

## Goals and Objectives for Neurooncology Elective

**Goals & Objectives for Neuro-otology/Neuro-ophthalmology Elective Rotation (PGY2, PGY3 and PGY4)**

The neuro-ophthalmology portion of the rotation consists of the resident rotating the first two weeks of the ophthalmology / otolaryngology rotation. Patients will be seen in the University Eye Clinic (1st floor McMillan), Pediatric Ophthalmology Clinic (2S89, Children's Hospital), and the Barnes-Jewish Hospital emergency room / hospital floor (7500). Residents will also attend ENT Clinic and Cornea Clinic.

Junior residents (PGY2) will be expected to master the basic aspects of these objectives, More advanced residents (PGY3 and PGY4) will be expected to develop a more nuanced and complete understanding and engage in more independent patient care and evaluation and more teaching.

**Patient Care**

**Goal:** Provide an outpatient-oriented combined pediatric and adult Neuro-otology/Neuro-ophthalmology Elective Rotation experience for adult neurology residents and pediatric neurology fellows. Residents are expected to:

**Objectives:**

- Learn proper approach to history-taking, physical examination, patient management and case presentation in ENT and ophthalmological clinics.
- Attend ENT Clinic and master the following:
  - Perform a concise history and physical exam on the dizzy patient.
  - Utilize a rational therapeutic approach to the management of Meniere's disease, vestibular neuritis, BPV and vestibular migraine.
  - Learn a concise practical neurotologic exam
  - Interpret vestibular function tests, including video-oculography, rotational chair testing and posturography
- Participate in ophthalmology clinics and learn the clinical approach to and differential diagnosis of:
  - An acute decrease in visual acuity (painful/painless)
  - pupillary abnormalities
  - the painful eye
  - the red eye
  - the traumatized eye
  - visual field defects
  - proptosis.
- Learn to perform a comprehensive eye exam and use of ophthalmologic pharmacologic agents
- Learn procedures including: Eye patching, foreign body removal, lid eversion (double), slit lamp exam, tonometry, lid laceration repair
- Observe ophthalmological surgery
- Master these skills:
  - Eye exam (slit lamp / tone)
  - Head and neck exam

## Goals and Objectives for Neuro-otology/Neuro-ophthalmology Elective

- Foreign body removal
- Airways management
- Eye patching / protection
- Laryngoscopy (direct / indir)
- Epistaxis control
- Tracheostomy care
- Cricothyroidotomy

### Medical Knowledge

**Goal:** The resident rotating on the Neuro-otology/Neuro-ophthalmology rotation must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and treatment options for neuro-otological and neuro-ophthalmological disorders.

Residents are expected to:

### Objectives:

- Learn to perform a comprehensive eye exam
- Learn the use of ophthalmologic pharmacologic agents
- Learn the pathophysiology, diagnostic approach, management and complications of:
  - conditions of the eye, including the lids (blepharitis, hordeolum, chalazion)
  - external eye (conjunctivitis, pterygium, foreign bodies, corneal abrasions and burns),
  - lacrimal glands and ducts,
  - the anterior pole (glaucoma, hyphema and iritis),
  - the posterior pole (optic neuritis, papilledema, retinal detachment vitreous hemorrhage and vascular occlusion)
  - the orbit (periorbital and orbital cellulites).
- Recognizing penetrating and/or blunt trauma to the eye or injuries around the eye including:
  - Orbital blow out fractures, globe rupture, retinal detachment, and optic nerve involvement, eyelid lacerations and lacrimal duct injuries.
- Recognize need for immediate therapy for acid/alkali burns.
- Understand when consultation is required and to learn to converse with consultants.
- Learn indications and appropriate choices of diagnostic imaging techniques to rule out foreign body penetration.
- Develop a fund of knowledge on the following:
  - Pathophysiology of eye / head / neck
  - Head / neck cellulitis / abscess
  - Approach to foreign bodies
  - Acute dental conditions
  - Eye and orbit trauma
  - HA / dizziness and vertigo
  - Epistaxis – etiology
  - Acute hearing loss
  - Acute vision disturbances

## Goals and Objectives for Neuro-otology/Neuro-ophthalmology Elective

- Head and neck radiographs
- Facial pain and paralysis
- Head and face trauma
- Eye / orbit inflammation and infection
- Review the anatomy and physiology of the peripheral and central vestibular system.
- Learn a concise practical neurologic exam.
- Appreciate the appropriate use of vestibular function tests.
- Understand the available medical, surgical and rehabilitative therapies for vestibular disorders.

### **Practice-based Learning and Improvement**

**Goal:** The resident rotating on Neuro-otology/Neuro-ophthalmology must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Attend Morning Report, Grand Rounds, Wednesday Night Seminar Series and Cornea Conference
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.

### **Interpersonal and Communication Skills**

**Goal:** The resident rotating on Neuro-otology/Neuro-ophthalmology must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

Residents are expected to:

#### **Objectives:**

- Communicate effectively with other health care professionals, particularly those on the multidisciplinary neuro-oncology care team.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

## Goals and Objectives for Neuro-otology/Neuro-ophthalmology Elective

**Goal:** The resident rotating on Neuro-otology/Neuro-ophthalmology must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

**Objectives:**

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

**Goal:** The resident rotating on Neuro-otology/Neuro-ophthalmology must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

**Objectives:**

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.
- Understand how to use community resources in the care of patients and their families.

**Evaluations:** Residents will be evaluated by the fulltime faculty attending working with the resident with additional assessment by the clinic and nursing staff, patients and students. Residents will take a written examination the second Friday or as arranged with the ENT rotation director.

### **ADDITIONAL INFORMATION:**

### **OPHTHALMOLOGY / OTOLARYNGOLOGY ROTATION**

#### ***CURRICULUM***

The rotation consists of the resident rotating the first two weeks of the ophthalmology / otolaryngology rotation. Patients will be seen in the University Eye Clinic (1<sup>st</sup> floor McMillan), Pediatric Ophthalmology Clinic (2S89, Children's Hospital), and the Barnes-Jewish Hospital emergency room / hospital floor (7500).

## Goals and Objectives for Neuro-otology/Neuro-ophthalmology Elective

The first day of the rotation, the resident should arrive at the University Eye Clinic at 8:30 a.m.

### **Schedule**

Monday	7:30-8:00 am Morning Report, 7 <sup>th</sup> Floor Ophthalmology Conference Room University Eye Service Clinic (am/pm)
Tuesday	Cornea Clinic / Consults (pm)
Wednesday	University Eye Service Clinic (am), Retina Clinic / Consults (pm) 5:00 – 8:00 pm Grand Rounds/Wednesday Night Seminar Series (begins in September)
Thursday	7:00 – 8:00 am Cornea Conference University Eye Service Clinic (am), Glaucoma Clinic / Consults (pm)
Friday	Surgery (am), Pediatric Ophthalmology Clinic (pm)

### **OBJECTIVES**

Learn the clinical approach to and differential diagnosis of: An acute decrease in visual acuity (painful/painless), pupillary abnormalities, the painful eye, the red eye, the traumatized eye, visual field defects and proptosis.

### **SPECIFIC**

Learn the pathophysiology, diagnostic approach, management and complications of:  
conditions of the eye, including the lids (blepharitis, hordeolum, chalazion)  
external eye (conjunctivitis, pterygium, foreign bodies, corneal abrasions and burns),  
lacrimal glands and ducts,  
the anterior pole (glaucoma, hyphema and iritis),  
the posterior pole (optic neuritis, papilledema, retinal detachment vitreous hemorrhage  
and vascular occlusion)  
the orbit (periorbital and orbital cellulites).

Recognizing penetrating and/or blunt trauma to the eye or injuries around the eye including:  
Orbital blow out fractures, globe rupture, retinal detachment, and optic nerve  
involvement, eyelid lacerations and lacrimal duct injuries.

Recognize need for immediate therapy for acid/alkali burns.

Understand when consultation is required and to learn to converse with consultants.

Learn indications and appropriate choices of diagnostic imaging techniques to rule out foreign  
body penetration.

### **CLINICAL TRAINING**

Comprehensive eye exam and use of ophthalmologic pharmacologic agents

### **PROCEDURE SKILLS**

Eye patching, foreign body removal, lid eversion (double), slit lamp exam, tonometry, lid  
laceration repair

### **SURGERY REQUIREMENT**

Each resident will be required to observe ophthalmology surgery during their rotation.

## Goals and Objectives for Neuro-otology/Neuro-ophthalmology Elective

### **CURRICULUM EXAMINATION**

Written examination the second Friday or as arranged with the Residency Training Director, Russell N. Van Gelder, M.D., Ph.D. (beeper: 879-0135, phone: 747-4251, email: vangelderr@am.seer.wustl.edu)

### **EVALUATION**

During the Ophthalmology/Otolaryngology rotation each resident will be evaluated using the following grading system: Outstanding, good, satisfactory, deficient, insufficient contact, able to perform alone, able to perform observed, able to perform with direct supervision, and not evaluated. Evaluations will be forwarded to the Neurology Residency Director.

#### ***General Evaluation of Residents***

Motivation/Interest	Physical Exam	Interpersonal Skills
History Taking	Professional Behavior	Documentation
Dependability	Case Presentation	Patient Management

#### ***Fund of Knowledge***

Pathophysiology of eye/head/neck	Epistaxis – etiology	Facial pain and paralysis
Head / neck cellulitis / abscess	Acute hearing loss	Head and face trauma
Approach to foreign bodies	Acute vision disturbances	Eye / orbit inflammation and infection
Acute dental conditions		
Eye and orbit trauma	Head and neck radiographs	
HA / dizziness and vertigo		

#### ***Skills***

Eye exam (slit lamp / tone)	Laryngoscopy (direct/indir)
Head and neck exam	Epistaxis control
Foreign body removal	Tracheostomy care
Airways management	Cricothyroidotomy
Eye patching / protection	

Dr. Douglas Char (beeper: 559-2970, phone: 24346, Box 8072, FAX: 20478).

At the end of the rotation, an evaluation is sent by the Neurology Residency Coordinator to the attending(s) who worked with the resident(s).

### **Goals and Objectives for the Neuro-Otology Rotation**

Contact Person: Maria Harrington  
Phone #: 747-0553  
Location: CAM building, 11<sup>th</sup> floor (Ear, Nose & Throat Clinic)  
Time: Thursdays, 8:30am – 4:00pm

## Goals and Objectives for Neuro-otology/Neuro-ophthalmology Elective

### Goals:

1. Review the anatomy and physiology of the peripheral and central vestibular system.
2. Learn a concise practical neurotologic exam.
3. Appreciate the appropriate use of vestibular function tests.
4. Understand the available medical, surgical and rehabilitative therapies for vestibular disorders.

### Objectives:

1. Perform a concise history and physical exam on the dizzy patient.
2. Interpret vestibular function tests, including video-oculography, rotational chair testing and posturography.
3. Utilize a rational therapeutic approach to the management of Meniere's disease, vestibular neuritis, BPV and vestibular migraine.

### **Goals & Objectives for Neuropathology Elective Rotation (PGY2, PGY3 and PGY4)**

The neuropathology rotation should be viewed as an opportunity to review (learn) the basics of neuropathology in a highly interactive environment. In return for this learning opportunity we ask several things on their part. Most important is their adherence to our daily schedule of events (see Neuropath Weekly Schedule). If they cannot attend a particular session, they should phone in advance so that we do not needlessly prepare teaching sessions for ourselves. In return, they will be notified in advance if other commitments/duties prevent a scheduled event from being held.

Junior residents (PGY2) will be expected to master the basic aspects of these objectives, More advanced residents (PGY3 and PGY4) will be expected to develop a more nuanced and complete understanding and engage in more independent patient care and evaluation and more teaching.

#### **Patient Care**

**Goal:** The neurology rotator has an important role in neurosurgical and neuroautopsy diagnosis which is a function of his/her accurate discovery of historical data in patients records. An accurate history and interpretation of laboratory results by the neurologic rotator is important in arriving at an accurate differential diagnosis and may suggest ancillary tests or special stains which contribute to the proper neuropathologic diagnosis. This contributes directly to therapy of living patients and may identify disease entities important for family members. Residents are expected to:

#### **Objectives:**

- Prepare neurologically oriented case histories on all “neuro” autopsies and determine either the neurologic symptoms at the time of death or determine any past history of neurologic abnormality.
  - Residents should obtain the patient’s chart and summarize the patient’s neurologic history in not more than two pages. This history is for pathologists and excess clinical information only confuses. This history will become part of the final neuropathologic report.
- Be prepared to present the clinical history at the time the case is presented at brain cutting.

#### **Medical Knowledge**

**Goal:** The resident rotating on Neuropathology must demonstrate knowledge in the preparation of neurologically oriented case histories on all “neuro” autopsies. This rotation should also be viewed as an opportunity to review (or learn for the first time) the basics of neuropathology in a highly interactive environment. Residents are expected to:

#### **Objectives:**

- Research and write up the clinical histories on patients by reviewing the patient’s chart or reviewing records on Clinical Desktop.
- Present the clinical history in a complete but succinct form and be prepared to discuss the gross and microscopic neuropathology expected.

## Goals and Objectives for Neuropathology Elective

- Attend and contribute to daily neuropathology conferences which are both practical and didactic.

### **Practice-based Learning and Improvement**

**Goal:** The resident rotating on Neuropathology will demonstrate practice-based learning and improvement in the recognition and interpretation of neuropathologic characteristics of many clinical entities and understanding the requirements for making and defending neuropathologic diagnoses. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- During the rotation process the resident should demonstrate increasing capability in recognition of case material presented as unknown specimens and questions posed during conferences about the pathologic differential diagnosis and role of immunohistochemical techniques in arriving at a definitive diagnosis.
- Attend neuropathology conferences, including:
  - Brain cutting
  - ADRC conference (optional)
  - Neuropathology teaching conference
  - Neurosurgery conference
  - Neuropathology Microscopic Rounds
  - Peripheral Nerve and Muscle Conference
  - Neuro Autopsy Microscopic Review
  - Neurology Grand Rounds
  - Neuropathology Teaching Conferenc
  - Non-neuro Autopsy Brain cutting

### **Interpersonal and Communication Skills**

**Goal:** The resident rotating on Neuropathology must effectively communicate clinical information and a clinical differential diagnosis to neuropathology fellows and attending pathologists as well as other rotators and health professionals. Residents are expected to:

#### **Objectives:**

- Research and write up the clinical histories on patients by reviewing the patient's chart or reviewing records on Clinical Desktop.
- Present the clinical history in a complete but succinct form. The focus of the presentation should be on the neurological aspects of the case.

### **Professionalism**

**Goal:** The resident rotating on Neuropathology must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Residents are expected to demonstrate:

#### **Objectives:**

- Mandatory attendance of the daily neuropathology conferences that do not conflict with clinical commitments.
- Have a commitment to carrying out professional responsibilities.

## Goals and Objectives for Neuropathology Elective

- Adhere to ethical principles.
- Function well as a team member.

### **Systems-based Practice**

**Goal:** The resident rotating on Neuropathology must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

#### **Objectives:**

- Understand the role of the neuropathologist, appropriate history and the electronic medical record as they pertain to neurological abnormalities or neurologic symptoms in patients.

**Evaluations:** At the end of the rotation, an evaluation is sent by the Neurology Residency Coordinator to the attending(s) who worked with the resident(s).

### **Contact Information:**

Contact Persons:

Neuropath Fellow 2-7427

Jordana Stewart, Neuropath Secretary 2-7426

Where to report: (3<sup>rd</sup>. Floor West Bldg., Rm. 3720)

Start time: 9:15 a.m.

## Neuropath Weekly Schedule

### **Monday**

\*\* 9:15 am Neuro Autopsy Brain Cutting\* (1<sup>st</sup>. Fl. West Bldg., Autopsy Suite)

### **Tuesday**

8:00 am ADRC Conference (Optional), (Rm. 3722, 3<sup>rd</sup>. Fl. West Bldg.)

\*\* 9:15 am Neuropathology Teaching Conference (Fellow) (twice a month—1<sup>st</sup> and 3<sup>rd</sup>. Tues.) (Rm. 3722, 3<sup>rd</sup>. Fl. West Bldg.)

**ALL RESIDENTS ROTATING ON AUTOPSY AND  
NEUROPATHOLOGY ROTATORS MUST ATTEND!**

### **Wednesday**

7:15 am Neurosurgery Conference (Neuropathology Discussion held once a month;

## Goals and Objectives for Neuropathology Elective

optional) (5<sup>th</sup> Fl. McMillan)

\*\* 9:15 am Neuropathology Microscopic Rounds (entire division), (Rm. 3722, 3<sup>rd</sup>. Fl. West Bldg.)

3:00 pm Peripheral Nerve and Muscle Conference (held the first Wednesday of every month; optional) (Rm. 3722, 3<sup>rd</sup>. Fl. West Bldg.)

### **Thursday**

\*\* 9:15 am Neuro Autopsy Microscopic Review (Neuropathology autopsy attending), (Rm. 3722, 3<sup>rd</sup>. Fl. West Bldg.)

### **Friday**

8:00 a.m. Neurology Grand Rounds (optional for Pathology residents) (Schwarz Auditorium)

\*\* 9:15 am Neuropathology Teaching Conference (Dr. Schmidt, Dr. Perry), (Library, 3<sup>rd</sup>. Fl. West Bldg.)

\*\*11:00 am Non-neuro Autopsy Brain cutting (1<sup>st</sup>. Fl. West Bldg., Autopsy Suite)

### **Saturday**

9:45 am Sign-Out Conference w/ Dr. Pestronk (3<sup>rd</sup>. Fl. Irene Walt Johnson Bldg.)

\*Autopsy neuropathology rotator – See explanation of ‘other duties’.

\*\*Attendance is mandatory for autopsy rotators.

## Goals and Objectives for Neuropathology Elective

### Explanation of Daily Duties/Schedule

#### **Monday:**

##### Neuro Autopsy Brain cutting

The first year autopsy neuropathology rotators are responsible for washing the neuro brain cases prior to conference, photographing the uncut brain, assisting the neuropathology fellow in cutting the brain, photographing pathologic slices, and submitting sections.

If the autopsy resident whose case is being cut cannot attend the conference for any reason, the first year autopsy neuropathology rotator should be prepared to provide the clinical and autopsy findings for the case.

#### **Tuesday:**

##### Teaching Conference

The first and third Tuesday of each month the fellow will review/teach various aspects of neuropathology to **ALL RESIDENTS ROTATING ON AUTOPSY AND NEUROPATHOLOGY ROTATORS**. These sessions are done at the microscope and cover such topics as CNS neoplasms, the neuropathology of AIDS, and frozen section interpretation or the fellow will hold a neuropathology microscopic unknown conference. From five to ten cases will be placed in the residents room with a brief clinical history of the Friday prior to conference. These slides are to be reviewed by **ALL RESIDENTS ROTATING ON AUTOPSY AND NEUROPATHOLOGY ROTATORS** who should be prepared to discuss them on Tuesday.

#### **Wednesday:**

##### Neuromicroscopic Rounds

This conference is attended by the entire neuropathology division and is held at the multi-headed scope. All neuropathology rotators and residents rotating on autopsy are expected to attend.

Each conference begins with two or three neuropathologic “classics” presented by one of the attendings. The remainder of the conference consists of the fellow presenting recent interesting and/or difficult cases from the surgical and autopsy services

#### **Thursday:**

##### Neuro Autopsy Microscopic Review

This conference is attended by all neuropathology rotators and residents rotating on autopsy as well as the Neuropathology fellow and Neuropathology faculty attending on the autopsy service. Other Neuropathology faculty frequently attend the conference too.

## Goals and Objectives for Neuropathology Elective

The fellow presents the microscopic findings of brains cut at recent braincutting conferences.

### **Friday:**

#### Teaching Conference

On alternate weeks Dr. Schmidt or Dr. Perry will cover a selected topic in neuropathology. The format for each conference will vary from microscopic sessions, to gross review, to kodachrome slide presentations. Topics covered will include demyelinating diseases, infectious diseases, basic neuropathologic processes, brain neoplasms, and pediatric neuropathology. All neuropathology rotators and autopsy residents are expected to attend.

#### Non-neuro Autopsy Brain cutting

Each first year autopsy resident is responsible for preparing the brains from their non-neuro autopsies (including photography of uncut brain, rinsing, and cutting) for presentation to the neuropathology fellow during the non-neuro braincutting session.

### **Contact Information:**

Contact Persons:

Neuropath Fellow 2-7427

Jordana Stewart, Neuropath Secretary 2-7426

Where to report: (3<sup>rd</sup>. Floor West Bldg., Rm. 3720)

Start time: 9:15 a.m.

At the end of the rotation, an evaluation is sent by the Neurology Residency Coordinator to the attending(s) who worked with the resident(s).

## NEUROSURGERY ELECTIVE ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for the Neurosurgery Elective Rotation for Neurology Residents (PGY2, PGY3 3 and PGY4 residents)**

Neurology residents may take one or more months of neurosurgery as an elective in order to better understand the diagnosis and management of neurosurgical diseases, including cervical and lumbar disc disease, spinal tumors, malignant & benign brain tumors, subarachnoid hemorrhage, and stroke. The resident will become familiar with the neurosurgical approach to diagnosis and management and will be better able to utilize neurosurgical consultants and to provide better care to neurosurgical patients who require neurological consultation.

Junior residents (PGY2) will be expected to master the basic aspects of these objectives, More advanced residents (PGY3 and PGY4) will be expected to develop a more nuanced and complete understanding.

#### **Patient Care**

**Goal:** The resident rotating on the Neurosurgery Service must be able to provide initial evaluation of patients admitted to the neurosurgery service and assist in pre and peri-operative management of neurosurgical patients. The resident may care for ICU patients and scrub in the Operating Room on various neurosurgical cases and may observe functional neurosurgery and aneurysm clipping. The neurology resident will work under the supervision of senior neurosurgery residents and the neurosurgery attending staff.

Residents are expected to:

#### **Objectives:**

- Be able to describe the relevant findings, symptoms, family and social histories for patients with neurosurgical disease.
- Be able to describe and document the elements of a complete neurosurgical history and review of systems, including
  - Chief Complaint
  - Current illness history
  - Allergies
  - Current medications
  - Previous operations and associated medical problems
  - Social history
  - Family history
- Be able to review systems and document the findings, emphasizing systemic conditions that may affect the brain and spinal cord
- Be able to perform and evaluate a neurologic examination on head-injured and spine-injured patients
- Be able to recognize the motor and sensory deficits of various incomplete spine injuries
- Be able to perform the following procedures:
  - Ventriculostomy
  - Insertion of intracranial pressure monitoring device
- Be able to assist with the following procedures:

## NEUROSURGERY ELECTIVE ROTATION GOALS AND OBJECTIVES

- Craniotomy
- Laminectomy
- Be able to clinically evaluate cervical and lumbar radiculopathy, spinal stenosis, spinal tumors, subarachnoid hemorrhage, ischemic and hemorrhagic stroke, and brain tumor.
- Be able to interpret findings on various neuroimaging studies, including:
  - Plain x-rays
  - CT
  - MR
  - MRA
- Be able to preoperatively manage patients undergoing neurosurgery.

### **Medical Knowledge**

**Goal:** The PGY2 resident on the Neurosurgery Service will develop knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with neurological disease. Residents are expected to:

#### **Objectives:**

- Learn the acute management of neurosurgical trauma and the management of critically ill patients.
- Learn the pathophysiology, natural history, spectrum of treatment and diagnosis of common neurosurgical disease processes, including cervical and lumbar disc disease, spinal tumors, malignant & benign brain tumors, subarachnoid hemorrhage, and stroke.
- Learn the indications, contraindications and risks of diagnostic and neurosurgical procedures for patients undergoing cranial and spinal neurosurgery.
- Be able to discuss the overall method, expected abnormal findings and risks of common neurosurgical diagnostic tests and procedures
- Be able to discuss the indications for CT, MR, and MRA as they apply to the diagnosis and management of neurosurgical diseases
- Be able to discuss and explain the indications, contraindications and risks of diagnostic and neurosurgical procedures for patients undergoing cranial or spinal neurosurgery.
- Learn the anatomy of the brain and spine.
- Be able to discuss the blood supply, spatial relationships and landmarks for specific regions of the brain and spine.
- Be able to discuss the anatomy of specific disease processes relevant to the brain and spine.

### **Practice-based Learning and Improvement**

**Goal:** The resident rotating on the Neurosurgery Service must develop the ability to care for neurosurgical patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

## NEUROSURGERY ELECTIVE ROTATION GOALS AND OBJECTIVES

- Use hand-held computers, desktop PC's and Internet electronic references to support patient care and self-education.
- Assist medical students in their own acquisition of knowledge through technology.
- Demonstrate improvement in clinical management of patients by continually improving knowledge and skills during the rotation.
- Learn how to effectively utilize hospital and University educational resources and begin to apply literature based and evidence based concepts as well as experimental evidence to the daily practice of surgery.
- Develop and maintain a willingness to learn from failures and use failures to improve both personal performance and the overall process of patient care.

### **Interpersonal and Communication Skills**

**Goals:** The resident rotating on the Neurosurgery Service must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Perform legible and accurate hospital admission notes which will be reviewed by supervising residents and faculty.
- Write appropriate preoperative orders for patients undergoing neurosurgical procedures.
- Write legible, relevant and accurate postoperative and daily notes for neurosurgery patients.
- Establish rapport with patients and their families.
- Perform a patient-centered medical interview.
- Engage patients in shared decision-making, and participate in family discussions.
- Effectively and considerately communicate with team staff in a manner that promotes care coordination.
- Discuss patient's fears regarding outcome of surgery.

### **Professionalism**

**Goals:** The resident rotating on the Neurosurgery Service must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

#### **Objectives:**

- Respect each patient's right to privacy.
- Demonstrate sensitivity to the sexual, moral, ethical or religious characteristics of the patient and family.
- Provide supportive and compassionate care to patients and their families in the course of terminal disease.
- Comply with the ethical and legal standards of neurosurgery.
- Exhibit dependability and reliability in carrying out responsibilities
- Maintain the highest standards in cleanliness, neatness, personal grooming and dress.

## NEUROSURGERY ELECTIVE ROTATION GOALS AND OBJECTIVES

- Exhibit a courteous, conscientious, and generally businesslike manner in patient areas

### **Systems-based Practice**

**Goals:** must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

#### **Objectives:**

- Utilize diagnostic tests, studies, procedures and consultations in a cost effective way.
- Effectively coordinate care with other health care professionals as required for patient needs.
- Demonstrate understanding of medical delivery systems as they relate to both inpatient and outpatient resources.
- Effectively access/utilize outside resources
- Effectively use systematic approaches to reduce errors and improve patient care
- Enthusiastically assist in developing systems' improvement

**Evaluation:** The resident is evaluated by the fulltime neurosurgery faculty attendings and senior neurosurgery residents working with the resident with additional input from the junior residents, nursing staff, patients and students.

## NEUROSURGERY ELECTIVE ROTATION GOALS AND OBJECTIVES

**Goals and objectives are similar for PGY3 and PGY4 residents.**

### **Patient Care**

**Goal:** The resident rotating on the Neurology Consultation Service must be able to provide neurological consultation services on inpatients on all services at Barnes Jewish Hospital. The resident will gain experience in the evaluation of neurologic complaints complicating medical and surgical in-patient illnesses. The resident will extend their knowledge of proper evaluation of acute, severe, or debilitating neurologic problems requiring hospitalization. Residents are expected to:

#### **Objectives:**

- Evaluate neurological complaints by obtaining a complete history, performing examination, and formulating treatment plans in the setting of a consultative practice for the Barnes-Jewish Hospital complex.
- Learn to prioritize and organize tasks so as to provide time sensitive appropriate response to subjects with a variety of problems throughout the medical center and to assure that urgent problems are immediately evaluated and treated.
- Provide leadership and direct junior residents, rotating residents from other services and students on the consult team.
- Conduct daily attending rounds with the faculty attending as required to respond to the problems encountered.

### **Medical Knowledge**

**Goal:** The PGY3-4 resident on the Neurology Consultation Service must demonstrate increasing knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to care of patients with neurological disease. PGY3-4 residents play a key role in teaching junior residents and students. Residents are expected to:

#### **Objectives:**

- Teach physicians throughout the hospital appropriate responses and treatments for neurologic complications
- Provide direct teaching to junior residents and students on the consult service.
- Demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- Be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for neurological disorders.
- Further refine their localization and neurological examination skills.
- Gain additional experience and teach junior residents and students regarding the diagnosis and management of neurological emergencies including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.

## NEUROSURGERY ELECTIVE ROTATION GOALS AND OBJECTIVES

- Teach junior residents and students neurological procedures such as lumbar puncture.

### **Practice-based Learning and Improvement**

The PGY3-4 resident rotating on The Neurology Consultation Service must demonstrate the ability to further refine their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Teach the utility and appropriate use of specialty procedures (MR, CT, EEG, evoked potentials, sleep studies, EMG/NCV and CSF evaluations).
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend Grand Rounds and other lectures and seminars.

### **Interpersonal and Communication Skills**

The resident rotating on The Neurology Consultation Service must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Develop leadership and teaching skills while supervising junior residents and students.
- Communicate effectively with other health care professionals.
- Communicate with patients and their families in easily understood and culture-sensitive language.
- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on The Neurology Consultation Service must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Learn effective communications skills with professionals from other areas of medical practice including internal medicine, general surgery, and surgical subspecialties.

## NEUROSURGERY ELECTIVE ROTATION GOALS AND OBJECTIVES

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on The Neurology Consultation Service must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.
- Understand the role of the physicians order, appropriate history and the electronic medical record as they pertain to inpatient neurological care.
- Understand how to utilize available resources in the hospital and via electronic media to improve patient care and outcomes.

**Evaluation:** The PGY3-4 resident is evaluated by the fulltime faculty attending working with the resident with additional input from the junior residents, nursing staff, patients and students.

## SLEEP ROTATION GOALS AND OBJECTIVES

### **Goals & Objectives for Neurology Sleep Rotation (PGY2,PGY3 and PGHY4 residents)**

Junior residents (PGY2) will be expected to master the basic aspects of these objectives, More advanced residents (PGY3 and PGY4) will be expected to develop a more nuanced and complete understanding and engage in more independent patient care and evaluation and more teaching.

#### **Patient Care**

**Goal:** The resident rotating on the Sleep rotation will learn to provide initial evaluation of patients presenting with sleep disorders to the Sleep Clinic. The resident will gain experience in the evaluation of sleep disorders and in the use of polysomnogram and multiple sleep latency testes. Residents are expected to:

#### **Objectives:**

- Learn to take an appropriate sleep history and perform a focused neurological examination.
- Learn to use diagnostic tools available in the sleep laboratory.
- Develop familiarity with scoring of sleep stages utilizing R and K criteria.
- Develop familiarity with technical performance and interpretation of ANPSG, CPAP and BIPAP titrations, MSLT, and MWT.
- Learn scoring criteria for respiratory events, periodic limb movements and arousals.
- Present cases for discussion with the attending physicians in the Sleep Clinic following evaluations.
- Complete a full sleep consultation chart note, including case history, documenting complete neurology exam, and documenting diagnostic considerations, evaluation plan, and differential diagnosis.

#### **Medical Knowledge**

**Goal:** The resident rotating on the Sleep rotation must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to urgent care of patients with sleep disorders. Residents are expected to:

#### **Objectives:**

- Develop familiarity with obstructive sleep apnea, Narcolepsy, Restless Legs Syndrome/Periodic Limb Movement Disorder, Insomnia.
- For each disorder, residents will learn the:
  - Definition
  - Clinical presentation
  - Diagnostic methods and criteria
  - Differential diagnosis
  - Health consequences
  - Treatment options

## SLEEP ROTATION GOALS AND OBJECTIVES

- Be able to explain and examine the interaction of sleep disorders with other neurological diseases and with disorders of other organ systems and with other medical illnesses.
- Have knowledge of the most current pathophysiological explanations for sleep disorders.

### **Practice-based Learning and Improvement**

The resident rotating on Neurology Emergency Department must demonstrate the ability to rapidly investigate and evaluate their care of neurological patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

#### **Objectives:**

- Teach the utility and appropriate use of specialty sleep diagnostic procedures
- To prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support.
- Develop the ability to use information technology to improve the practitioner's fund of knowledge and technical skills to provide better care to patients.
- Attend teaching rounds for case presentation and discussion with attending physicians.
- Participate in teaching and supervising the medical students and rotators on the rotation and sharing in their evaluation.
- Run a polysomnogram and be a subject for polysomnogram if staffing allows
- Score teaching records
- Complete required reading:
  - Principles and Practice chapters:
    - Normal Human Sleep
    - Narcolepsy
    - Restless Legs
    - Insomnia
  - R and K scoring manual
  - ICSD Classification booklet
- Regularly attend morning reviews, Friday evening CME and Tuesday clinic/research conference as well as other Neurology conferences when clinical duties permit.

### **Interpersonal and Communication Skills**

The resident rotating on Sleep must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents are expected to:

#### **Objectives:**

- Learn communication techniques for patients and families with sleep disorders.
- Develop communication skills with a full spectrum of medical staff including physicians and nursing staff.
- Communicate effectively with other health care professionals

## SLEEP ROTATION GOALS AND OBJECTIVES

- Work effectively as both a member of a professional group and as a group leader.
- Demonstrate the ability to serve as a consultant to colleagues and health care professionals.
- Maintain comprehensive, timely and legible medical records.

### **Professionalism**

The resident rotating on Neurology Emergency Department must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

- Understand good and bad communication behavior and leadership characteristics. Demonstrate appropriate nonverbal behavior.
- Have a commitment to carrying out professional responsibilities.
- Adhere to ethical principles.
- Develop sensitivity to a diverse patient population, with respect for colleagues and other health professionals.
- Function well as a team member.

### **Systems-based Practice**

The resident rotating on Neurology Emergency Department must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

- Describe the responsibility of the individual physician to the patient, the practice and the overall health care system.
- Describe the concepts of cost containment and cost-effectiveness and learn the relative cost to the patient and society of studies and treatments requested.
- Describe methods for ensuring that the practitioner and the practice group use scarce resources in a sound, thoughtful and cost-effective manner.
- Develop necessary skills required for the independent practice of neurological care.

**EVALUATION:** Residents will be evaluated by the fulltime faculty attending working with the resident.

### ADDITIONAL INFORMATION:

Contact: Sharon Klein  
Phone #: 747-3809  
Where: Chase, 2<sup>nd</sup> floor  
When: 8:00am

### **Schedule:**

## SLEEP ROTATION GOALS AND OBJECTIVES

Morning review 8-10:00, three days a week  
Clinic - 5 segments (half days) a week  
Friday evening CME  
Tuesday clinic/research conference  
Attend evening hookup session at least once during rotation

### Encouraged:

Be subject for polysomnogram if staffing allows  
Run polysomnogram  
Score teaching records

### Required reading:

Principles and Practice chapters:  
Normal Human Sleep  
Narcolepsy  
Restless Legs  
Insomnia  
R and K scoring manual  
ICSD Classification booklet

### Expected knowledge:

Familiarity with scoring of sleep stages utilizing R and K criteria  
Familiarity with technical performance and interpretation of ANPSG, CPAP and BIPAP  
Titrations, MSLT, and MWT  
Scoring criteria for respiratory events, periodic limb movements and arousals  
Familiarity with obstructive sleep apnea, Narcolepsy, Restless Legs  
Syndrome/Periodic Limb Movement Disorder, Insomnia  
Definition  
Clinical presentation  
Diagnostic methods and criteria  
Differential diagnosis  
Health consequences  
Treatment options

At the end of the rotation, an evaluation is sent by the Neurology Residency Coordinator to the attending(s) who worked with the resident(s).

## SLEEP ROTATION GOALS AND OBJECTIVES

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Scoring criteria for respiratory events, periodic limb movements and arousals  
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Syndrome/Periodic Limb Movement Disorder, Insomnia  
Definition  
Clinical presentation  
Diagnostic methods and criteria  
Differential diagnosis  
Health consequences  
Treatment options

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