NEURO 841: Neurovascular (Stroke) Outpatient

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Does this rotation accept visiting students? ☒ YES ☐ NO

COURSE DESCRIPTION:
This outpatient clinical stroke rotation is designed to give 4th-year medical students an opportunity to interact with the Department of Neurology stroke faculty in a clinical setting. They will have the opportunity to learn stroke etiologies, diagnosis, treatment and management, secondary stroke prevention and stroke recovery, and management of post-stroke complications.

LEARNING GOALS & OBJECTIVES: At the completion of this clinical rotation students should be able to do the following:
1. Discuss stroke diagnosis, secondary stroke prevention and management of post-stroke complications. (MK3, PC5, CS1, PL3, SL1)
2. Recognize common stroke syndromes and correlate with the neuro-anatomy involved. (MK4, CS1, PC3, PL5)
3. Conduct a complete history and neurological examination in stroke patients. (PC1, CS4, PR1)
4. Discuss tele-stroke consultations learned through observation or faculty demonstration. 9PC1, PC3, CS4, PR1, PL2, PL4, SL1, SL2)

INSTRUCTIONAL METHODOLOGIES AND ROTATION ACTIVITIES: Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:
1. Patient contact under attending supervision in stroke outpatient clinic and post-stroke spasticity management clinic.
2. Attend daily neurology/stroke conferences which may involve directed reading/literature reviews.
3. One-on-one or group discussions.
4. Read review papers assigned for the rotation on important stroke topics.
5. Oral, written, or small group presentation on stroke topics as assigned.

PATIENT ENCOUNTERS: Students will be expected to work-up patients with these specified conditions:
1. New stroke consults – patients referred to the stroke clinic by MUSC and non-MUSC physicians.
2. Post-stroke hospitalization follow-ups
3. Post-stroke limb spasticity clinic

EVALUATION / FEEDBACK METHODS: Students will be evaluated using the following methods:
1. E*Value Clinical Performance Evaluation.
2. Verbal feedback from the course director or the stroke faculty.
3. Midpoint feedback from the course director or the assigned faculty.

Will students be expected to participate in call? ☐ YES ☒ NO

NEURO 845: Neuro-Ophthalmology

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Does this rotation accept visiting students? ☒ YES ☐ NO

COURSE DESCRIPTION:
Students will learn and apply neurology knowledge to the ophthalmic system. He or she will be able to reasonably identify and appropriately determine objectives indicated for the visual concerns of the patient. Reading materials are *Neuro-Ophthalmology: Clinical Signs and Symptoms* (Thomas J. Walsh) and *Neuroradiology* (D. Yousem and R. Grossman).

LEARNING GOALS & OBJECTIVES: At the completion of this clinical rotation students should be able to do the following:
1. Perform the key features of the Neuro-Ophthalmic Examination. (PC1, PC2)
2. Identify misalignment/muscle imbalance of the eyes. (MK1, MK3)
3. Identify papilledema and discuss its differential diagnosis in neuro-ophthalmologic diseases. (PL2, MK5)
4. Discuss neurologic disease as it relates to the visual system. (MK1, MK3)
5. Discuss the use of treatment options as they pertain to neuro-ophthalmologic diseases. (CS1, CS2, CS3, SL4)

INSTRUCTIONAL METHODOLOGIES AND ROTATION ACTIVITIES: Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:
1. Attendance at neurosciences and selected neuro-ophthalmology conferences.
2. Patient contact with patients primarily in outpatient clinics.
3. Student will develop an Independent Patient Case Presentation in the area of neuro-ophthalmologic, Demyelinating Diseases, or headache disorders, to be presented during the course.

PATIENT ENCOUNTERS: Students will be expected to work-up patients with these specified conditions:
1. Migraine and related visual issues
2. Papilledema and headache complaints
3. Diplopia
4. Complicated visual issues, Multiple Sclerosis, Idiopathic Intracranial Hypertension (Pseudotumor Cerebri) and or migraine
5. Spinal taps - when available

EVALUATION / FEEDBACK METHODS: Students will be evaluated using the following methods:
1. E*Value Clinical Performance Evaluation.
2. Daily verbal feedback from the course director or the assigned faculty co-director.
3. Midpoint feedback from the course director or the assigned faculty co-director.

Will students be expected to participate in call? ☐ YES ☒ NO

NEURO 851: General Pediatric Neurology

Course Director: Thomas Koch, MD
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Does this rotation accept visiting students? ☒ YES ☐ NO

COURSE DESCRIPTION:
This elective exposes students to the spectrum of neurologic disease in infants, children, and adolescents through a mixture of inpatient and outpatient experiences. The emphasis is on mastering the fundamentals of taking a neurologic history and performing a neurologic examination, localizing lesions within the neuraxis, selecting diagnostic tests, and managing common neurologic disorders.

LEARNING GOALS & OBJECTIVES: At the completion of this clinical rotation students should be able to do the following:
1. Elicit accurate neurologic histories and perform comprehensive neurologic exams on patients of varying ages. (PC1, MK1)
2. Demonstrate increasing sophistication in interpretation/synthesis of clinical findings into rational differential diagnoses. (MK3, PC2)
3. Select appropriate laboratory studies to establish specific diagnoses. (MK5, PC3)
4. Demonstrate an increased understanding of management principles including appropriate choice of therapeutic modalities and the inherent risks of each. (MK6, PC6)
5. Exhibit effective communication skills with pediatric patients and their parents. (CS1, CS3, PC5)

INSTRUCTIONAL METHODOLOGIES AND ROTATION ACTIVITIES: Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:
1. Patient contact
2. One-on-one and/or group discussions
3. Attendance at neuroscience conferences including the Pediatric Neurology Thursday A.M. Conference
4. Independent study and directed readings
5. Participation in outreach opportunities when available

PATIENT ENCOUNTERS: Students will be expected to work-up patients with some of these specified conditions:
1. Seizures (febrile, new-onset, status epilepticus)
2. Headache
3. Cerebral palsy and developmental delay
4. Movement disorders (includes tics and Tourette syndrome)
5. Concussion and traumatic brain injury
6. Other conditions as available including brain tumors, neuromuscular disorders, neurocutaneous syndromes, inborn errors of metabolism/mitochondrial disorders, and demyelinating disorders.

EVALUATION / FEEDBACK METHODS: Students will be evaluated using the following methods:
1. E*Value Clinical Performance Evaluation.
2. Daily verbal feedback from the course director or the assigned faculty co-director.
3. Midpoint feedback from the course director or the assigned faculty co-director.

Will students be expected to participate in call? ☐ YES ☒ NO

NEURO 854: Vascular Neurology (Stroke)

Course Director: Christine Holmstedt, DO
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Does this rotation accept visiting students? ☒ YES ☐ NO

COURSE DESCRIPTION:
Students will be exposed to clinical neurovascular (stroke) patients to acquire a basic knowledge of the clinical examination and patient interviewing, vascular risk factors for stroke and neuro-imaging (CT, MRI, TCD, etc.). Academic opportunities will be presented by participating in Stroke Ward rounds, Stroke Clinic, research and clinical meetings/conferences with Neurology residents, Neurovascular fellows, and Neurovascular attending neurologists. Additional academic Neurovascular activities will include at least two (but more if possible) Acute Stroke brain attack experiences including acute Stroke Telemedicine consultations and Neuroendovascular surgical procedures. Student will learn about evidence-based clinical study design and journal article review through Stroke Journal Club and Neurovascular attending interactions.

LEARNING GOALS & OBJECTIVES: At the completion of this clinical rotation students should be able to do the following:
1. Review and discuss relevant, impactful journal articles pertaining to stroke prevention and treatment. (MK7, PC3, MK5)
2. Demonstrate enhanced clinical examination and interviewing skills as well as formulate an accurate and comprehensive differential diagnosis for patients presenting with acute neurologic deficits. (CS1, PC1, PC2, PC6)
3. Demonstrate knowledge and understanding of the vascular risk factors for stroke (both ischemic and hemorrhagic) and develop appropriate stroke prevention management plans for stroke patients (PC3, MK8, PC5, CS1)
4. Demonstrate familiarity and the ability to interpret and implement evidence-based guidelines relevant to Neurovascular disease including diagnosis, causation, utility of diagnostic modalities, and treatment approaches. (MK3, MK5, MK8)

INSTRUCTIONAL METHODOLOGIES AND ROTATION ACTIVITIES: Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:
1. Patient contact with Stroke patients on the Stroke Unit/Vascular Neurology Ward at MUH.
2. One-on-one and/or group/team discussions; one formal lecture per week on stroke topics.
3. Directed reading on general and selected topics in the neurosciences as well as handouts on cerebrovascular diseases.
4. Attendance at neurosciences conferences.
5. Written or oral presentation on selected stroke topic.
6. Independent study on a selected stroke topic.

PATIENT ENCOUNTERS: Students will be expected to work-up patients with these specified conditions:
1. Ischemic stroke - small vessel, large vessel, cardioembolic, other defined, cryptogenic
2. Hemorrhagic stroke
3. Transient ischemic attack
4. Encephalopathy
5. Seizures

EVALUATION / FEEDBACK METHODS: Students will be evaluated using the following methods.
1. E*Value Clinical Performance Evaluation.
2. Daily verbal feedback from the course director or the assigned faculty co-director.
3. Midpoint feedback from the course director or the assigned faculty co-director.

Will students be expected to participate in call? ☐ YES ☒ NO

NEURO 859: General Adult Neurology Externship

Course Director: Sujai Nath, MD
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Course Coordinator: Jerri O'Banner
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Does this rotation accept visiting students? ☒ YES ☐ NO

COURSE DESCRIPTION:
This course exposes students to intern-level responsibilities for patient care and allows the student to perform clinically while under close supervision. The experience occurs on a hospital inpatient service where students will be expected to work-up and evaluate patients with general neurologic diseases, present cases to attending physicians, and participate in all aspects of the patient's care. Teaching will emphasize clinical and anatomical correlations, as well as other aspects of professionalism in patient care.

LEARNING GOALS & OBJECTIVES: At the completion of this clinical rotation students should be able to do the following:
1. Demonstrate skills expected of interns including giving and receiving a handoff, writing inpatient orders for signature, preparing a discharge summary to share, calling a consult, and assisting in obtaining informed consent for a procedure or treatment. (PC4, PC5, PC7, CS1)
2. Demonstrate understanding of intern-level responsibilities for neurological patient care. (MK1, PC2, CS1, PL1, SL1)
3. Perform a history and general physical and neurological exam. (MK1, PC2, PR1, CS1, PL1)
4. Discuss the contribution of diagnostic testing to the evaluation of neurologic patients. (MK1, PC2, CS1)
5. Critically review and discuss medical neurological literature. (MK1, CS1, PL1)
6. Perform a lumbar puncture under supervision. (MK1, PC2)

INSTRUCTIONAL METHODOLOGIES AND ROTATION ACTIVITIES: Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:
1. Complete an Externship Log documenting level of participation in key entrustable professional activities.
2. Direct observation and patient contact in a clinical setting.
3. Attendance at neurosciences conferences and Grand Rounds as well as other assigned relevant conferences.
4. Oral, written, or small group presentations as assigned by course director or the assigned faculty co-director.
5. Review images at the daily neuro-radiology rounds.

PATIENT ENCOUNTERS: Students will be expected to work-up patients with these specified conditions:
1. Epilepsy
2. Myasthenia Gravis
3. Multiple Sclerosis
4. Neuromyelitis Optica
5. Myopathies
6. Encephalitis
7. Guillain-Barre Syndrome

EVALUATION / FEEDBACK METHODS: Students will be evaluated using the following methods:
1. E*Value Clinical Performance Evaluation.
2. Daily verbal feedback from the course director or the assigned faculty co-director.
3. Midpoint feedback from the course director or the assigned faculty co-director.

Will students be expected to participate in call? ☒ YES ☐ NO
One night of Neurology call per week is required.