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

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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.

Objectives:
- Obtain history and perform the physical exam on patients admitted to the NNICU.
- Learn intensive care unit procedures for support of critically ill neurologically injured patients with special emphasis on ventilator management, blood pressure management, fluid and electrolyte management.
- Develop experience in management of neurological as well as preoperative and post-operative neurosurgical conditions including trauma, intracerebral hemorrhage, brain tumor, status epilepticus, and evaluation and management of patients in coma.
- 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.

Residents are expected to learn:

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.

Objectives:
- Demonstrate an understanding of the basic and neurological science background of neurological and critical care medicine and apply this knowledge to the clinical care of critically ill patients admitted to the NNICU.
- 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.
- Develop skills in neurological procedures such as lumbar puncture.

Practice-based Learning and Improvement
Goal: 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 **required** neurology conferences including (1) Grand Rounds; (2) Neurocritical Care Resident Didactic Series; (3) QI Lecture; and (4) Summerstock. Attendance is required unless the resident is needed for critical patient care duties. Attendings should support and encourage resident attendance at conferences.
- Regularly attend neurology conferences including (1) Journal Club; (2) Lunch & Learn; (3) Movement; (4) Neuromuscle; (5) Palliative Care; (6) Clinical Neuroscience Lecture Series; and (7) Meet the Mentors when clinical duties permit.

**Interpersonal and Communication Skills**

*Goal:* 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**

*Goal:* 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.
- Function well as a team member.

**Systems-based Practice**

*Goal:* 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 full-time faculty attending working with the resident with additional assessment by clinical fellows, the senior resident, nursing staff, patients and students.