Neonatal Neurology Rotation
Competency Based Goals and Objectives

The neonatal neurology rotation will consist of a combination of inpatient and outpatient experiences designed to provide resident physicians with comprehensive exposure to the field. Through the rotation, residents will actively participate in all aspects of patient care, acquire the knowledge and skill necessary to effectively manage neonates and infants with neurological disorders. Clinical activities will be tailored to fit the interests and goals of the individual resident. Residents will also attend educational conferences specific to the field during the rotation. The goals and objectives for the rotation are as follows:

**Patient Care.** Provide family centered patient care that is developmentally and age appropriate, compassionate, and effective for the treatment of health problems and the promotion of health.

**Objectives:**
- Perform an accurate and specific history and physical examination on NICU patients for recognition of neurologic disorders
- Integrate history and physical examination with medical knowledge for neonatal neurologic disorders to generate a differential diagnosis and plan
- Use evidence-based treatment guidelines to inform treatment decisions
- Provide timely, compassionate service and seek appropriate consultation and support in the evaluation and treatment of psychiatric disorders

**Medical Knowledge.** Understand the scope of established and evolving biomedical, clinical, epidemiological, and social-behavioral knowledge needed by a pediatric neurologist; demonstrate the ability to acquire, critically interpret, and apply this knowledge in patient care.

**Objectives:**
- Understand current concepts of therapy including pharmacologic (mechanism of action, drug-interaction, side effects) and non-pharmacologic interventions for the management of the neonate or infant with neurologic disease
- Develop appropriate diagnostic and management strategies for common neurologic diagnoses in the NICU, including arterial cerebral infarction, venous cerebral infarction, venous sinus thrombosis, seizures, meningitis, encephalopathy, intraventricular hemorrhage with/without hydrocephalus, hypotonia and congenital cerebral malformations
- Understand indications for initiation of neuroprotective therapies for neurologic conditions in the NICU
- Develop basic interpretation of neuroimaging studies commonly obtained in the neonatal patient, including brain MRI and head ultrasound
- Understand the basic principles of neonatal EEG and aEEG interpretation
- Gain familiarity with the most current pathophysiological understanding of common neonatal neurologic disorders
- Demonstrate an ability to explain and examine the interaction of neurologic disease with other organ systems.
Interpersonal and Professional Communication. Demonstrate interpersonal and communication skills that result in information exchange and partnering with patients, their families, and professional associates.

Objectives:
- Provide clinical assessment of cases to faculty, using correct terminology and with explanation of rationale based on appraisal of available clinical, laboratory, neuroimaging data
- Interact in a collegial way with staff, including nurses, nurse practitioners, lab technicians, radiology technologists, therapists, and social workers, with goal of providing optimal patient care
- Communicate effectively with patients and their families to obtain clinically relevant information and deliver diagnosis and treatment plan in an easily understood and culturally sensitive manner
- Maintain comprehensive, timely, and legible medical records
- Communicate effectively with consulting colleagues and health care professionals

Professionalism. Demonstrate a commitment to carry out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

Objectives:
- Be present and ready for rounds at the agreed time
- Admit errors or omissions and takes steps to correct them
- Protect patient privacy
- Demonstrate sensitivity to race, gender, ethnic background, religion, sexual orientation, and other social factors in dealing with patient care and interactions with other providers and other learners
- Treat colleagues at all levels with respect

Practice-based Learning and Improvement. Demonstrate knowledge, skills, and attitudes needed for continuous self-assessment, using scientific methods and evidence to investigate, evaluate, and improve one’s patient care practice.

Objectives:
- Attend and participate in daily work rounds and family meetings in the NICU
- Attend and participate in weekly Neonatal Neurology follow-up clinics
- Perform examinations and develop diagnostic and therapeutic plans under the supervision of a neonatal neurology fellow and attending physician
- Prioritize clinical responsibilities, provide timely service, and seek appropriate consultation and support when necessary
- Integrate feedback from preliminary diagnostic errors to improve diagnostic accuracy
- Identify strengths, deficiencies, and limits to knowledge and expertise
- Access learning sources (textbooks, medical literature, online resources) to fill gaps in knowledge that are identified during case discussions
- Participate in the education of students, residents, and other health care professionals
- Attend neuroimaging interpretation sessions in coordination with the neuroradiology service

**Systems Based Practice.** Understand how to practice quality health care and advocate for patients within the context of the health care system.

**Objectives:**
- Understand the concepts of cost containment and cost effectiveness that may be employed on the NICU for the management of patients with neurological disorders
- Describe methods for ensuring the physician and Neonatal Neurology Service use scarce resources in a sound, thoughtful, and cost-effective manner