Adult EMG Elective
Competency Based Goals and Objectives

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:
• Review history and current presentation of patients referred for electromyography (EMG) and nerve conduction studies (NCS).
• Understand the appropriate clinical indications for EMG-NCS
• Understand the limitations of EMG-NCS in the evaluation of neurological conditions
• Observe and interpret EMG-NCS in the adult population
• Maintain a log of all cases examined and presentations during rotation

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 the anatomy of the peripheral nervous system
• Understand the physiology of the nerve and compound motor action potential
• Understand the basics of NCS including sensory NCS, motor NCS, late responses (F wave, H wave, A wave, blink reflex), and repetitive nerve stimulation (Slow rate and fast rate)
• Understand the basics of EMG including needle safety and universal precautions, fibrillation potentials, positive sharp wave potential, fasciculation, normal motor unit potential morphology and needle placement/technique
• Accurately identify EMG and NCS patterns in common neurologic disease including myopathies, neuromuscle junction disorders, peripheral neuropathies, plexopathies, radiculopathies, and anterior horn cell diseases.
• Interpret reports and understand clinical significance of findings

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 and neurophysiological data
• Interact in a collegial way with ancillary staff including nurses and EMG technologists
• Effectively communicate anticipated EMG-NCS procedure and applicable findings to patients and families
Professionalism. Demonstrate a commitment to carry out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

Objectives:
- Be present and ready to observe and/or participate in the performance of EMG-NCS
- 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
- Display openness to supervision and accept constructive feedback

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:
- Access and critically appraise scientific literature relevant to the care of patients with peripheral nervous system disorders
- Access learning sources (textbooks, medical literature, online resources) to fill gaps in knowledge that are identified during case discussions
- Identify strengths, deficiencies, and limits to knowledge and expertise
- Participate in the education of students, residents, and other health care professionals

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 role of the physicians order, appropriate history and the electronic medical record as they pertain to proper EMG-NCS interpretation
- Learn the relative cost to the patient and society of neurophysiological evaluations
- Provide timely delivery of EMG-NCS results to inpatient care providers