

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.
- Learn how to interpret CNS/EMG in common neuromuscular disorders such as peripheral neuropathy and myopathy.
- 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
- 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
 - Neuromuscular junction disorders
 - Neurogenic disorders

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 electrodiagnostic 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 7:30 am
 - Morbidity & Mortality conference, Tuesdays 7:30
 - Pathology Conference; biopsy room Wednesday 3 pm
 - Neuromuscular didactic lectures, Wednesday 4 pm
 - Journal Club Friday 12:15 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 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.

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

ADDITIONAL INFORMATION:

Activities

- Monday 7:30 am EMG conference
- Tuesday 7:30 am Morning report/MM conference
- Wednesday 3.0 pm Pathology Conference; biopsy room
- Wednesday 4.0 pm Neuromuscular didactic lectures
- Friday 12:15 pm Neuromuscular Journal Club

Requirements

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

For any questions, contact:

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