



IMED 608 Neurology

Elective Description

This elective will familiarize the student with the clinical presentations of common neurological disorders, develop appropriate differential diagnoses of common disorders, interpret laboratory results and propose treatment and management plans for patients. Among the disorders, students may experience are acute mental status changes, stroke, seizure disorders, headache, multiple sclerosis, movement disorders, diseases of muscles and nerves, and dementia.

Credit: 2-4 semester credits

Prerequisite: IMED 500

Entrustable Professional Activities

As a fourth-year student, the focus of skills development are those tasks important for entering residency training:

- Gather a history and perform a physical exam
- Prioritize a differential diagnosis following a clinical encounter
- Recommend and interpret common diagnostic and screening tests
- Enter and discuss orders and prescriptions
- Document a clinical encounter in the patient record
- Provide an oral presentation of a clinical encounter
- Form clinical questions and retrieve evidence to advance patient care
- Give or receive a patient handover to transition care responsibility
- Collaborate as a member of an inter-professional team
- Recognize a patient requiring urgent or emergent care and initiate evaluation and management
- Obtain informed consent for tests and/or procedures
- Perform general procedures of a physician
- Identify systems failures and contribute to a culture of safety and improvement

General Clerkship Objectives

Medical Knowledge

- Become familiar with the pathophysiology and treatment of headaches, seizures, stroke, dementia, mental status change, neurodegenerative diseases.
- Know the implications of the following presenting symptoms
 - Dizziness
 - Headache
 - Numbness/tingling
 - Memory/concentration loss
 - Blackouts/seizures
 - Muscle weakness/pain
 - Unsteadiness

- Tremors/twitches
- Head injury
- Sleep problems
- Sudden vision change
- Slurred speech

Patient Care

- Know how to take a good neurologic history, i.e., what are the symptoms and mode of onset, is there a history of trauma or toxin exposure, what are risk factors for cerebral vascular disease.
- Know how to do a neurologic exam, i.e., complete cranial nerve evaluation, reflexes, gait, mental status, and strength.
- Be familiar with the diagnostic modalities (the interpretation and limitations of results) available, i.e., CT, MRI imaging, EEG, lumbar puncture, EMG, Doppler.

Patient Care

- Be able to discuss and interpret echocardiograms including its limitations.
- Learn how to take a good history, ie, dyspnea, orthopenia, chest pain claudication, and to do a focused physical examination, ie, heart sounds, gallops, edema, crackles.
- Understand pathophysiology and principles of treatment for heart failure, cardiogenic shock, arrhythmias, angina, infarction, valvular heart disease, hypertension, cardiomyopathies, and pulmonary embolus. Develop sound fundamentals of care in the ICU, learning to monitor arrhythmias and hemodynamics of critically ill patients.
- Be familiar with management of dyslipidemias and hypercholesterolemia.
- Be familiar with life style changes and preventive care, including weight reduction, low fat diet, smoking cessation, exercise, and prescription drugs.

Interpersonal and Communication Skills

- Demonstrate caring and respectful behaviors when interacting with patients.
- Demonstrate cultural sensitivity
- Communicate clearly with patients, caregivers, nursing staff, and others with early implementation of discharge planning

Professionalism

- Communicate respectfully with patients who do not fully adhere to their treatment plan.
- Apply ethical principles including patient autonomy, privacy, and confidentiality.
- Demonstrate self-knowledge, recognize limits of knowledge/experience and seek help appropriately.
- Demonstrate commitment to professional responsibilities and sensitivity to a diverse patient population

Practice-Based Learning

- Identify risks for specific illnesses that affect screening and treatment strategies.
- Encourage lifestyle changes to support wellness (weight loss, smoking cessation, safe sexual practices, exercise, activity, nutrition, diet).

Systems-based Practice

- Discuss the importance of a cost-effective approach to the diagnostic work-up.

General Information about Clerkship

To assist with developing differential diagnoses for patient presentations consider the location of the sign and symptoms and a symptom approach.

Localization of signs and symptoms

Consider neurological problems from an anatomical perspective. Ask “can the patient’s symptoms be produced by this part of the nervous system?”

<u>Anatomy</u>	<u>Function</u>
Brain	Motor and sensory Language Visual acuity Memory Behavior Consciousness Seizures Often unilateral
Brain stem	Motor and sensory Cranial nerves: diplopia, vertigo, hearing, tongue, swallow Consciousness Cerebellar Often unilateral
Spinal cord	Motor and sensory Bilateral symptoms common Bowel, bladder and erectile function
Motor neuron	Motor only Proximal and distal Slowly progressive Asymmetric bilateral Fasciculations
Peripheral nerve	Motor and/or sensory (predominates) Usually distal in stocking/glove distribution Neuromuscular junction Motor only Proximal and distal Fatigable weakness and eye involvement in MG
Muscle	Motor only Usually proximal and symmetric

Symptom approach

Patients present to clinic and emergency rooms with symptoms more often than with a disease. A differential diagnosis is based on symptoms and then paired down as testing makes things more or less likely.

- Weakness
- Numbness or paresthesias
- Gait disturbance
- Dizziness
- Vision loss, diplopia
- Involuntary movements
- Acute mental status change
- Dementia
- Aphasia
- Sleep disorder
- Episodic focal symptoms
- Urinary incontinence

- Headache
- Developmental disorders

REQUIRED TEXTBOOKS

Harrison's Textbook of Internal Medicine

Evaluation

The evaluation will include the entrustable professional activities. The clerkship preceptor will evaluate those relevant to this clerkship experience.

GRADES

This elective is graded Satisfactory/Unsatisfactory.

POLICIES

ACADEMIC DISHONESTY

The University holds its students to the highest standards of intellectual integrity. Therefore, the attempt of any student to pass any examination by improper means, present work which the student has not performed or aid and abet a student in any dishonest act may result in disciplinary action including immediate dismissal. Any student witnessing or observing a perceived violation of academic dishonesty is required to report it as outlined in the Guidelines. Students failing to report an observed violation may also receive disciplinary action.

ATTENDANCE POLICIES

Attendance of lectures and laboratories is based on the University's stated attendance policy. Refer to the Student handbook for more information.

CONDUCT

The University expects all students to be responsible individuals who possess the highest standards of integrity, honesty and personal conduct. These traits are prerequisites to independent learning, professional development, the successful performance of academic and clinical assignments, and the conduct of one's personal life. Accordingly, students are expected to adhere to a standard of behavior consistent with the University's high standards at all times off and on campus. Compliance with institutional rules and regulations, in addition to city, state and federal laws, is expected.

COPYRIGHT POLICY

Trinity Medical Sciences University must respect and observe the right and privileges of copyright holders, obey the United States Copyright Act and preserve the integrity of its internal network systems. All students must sign the technology and software use policy. A copy of this policy may be obtained from the Information and Technology Department.

DRESS CODE

All students are expected to maintain the highest standards of professional appearance at all times. During years one and two and while on campus. Medical students are required to wear scrubs or white coats with appropriate dress. Appropriate dress for clinical students includes business slacks with open-collar shirt for men, and business slacks or skirt with professional shirt or sweater for women.

Trinity School of Medicine Faculty Contact Information

Marc Zubrow, MD mzubrow@trinityschoolofmedicine.org