

Sub-Internship Description

Campus: All (Southeast)

Sub-Internship Title: Neurology Sub-Internship

Location of Sub-Internship: Sanford – Fargo, ND

Department: Neurology

Course Number: NEUR 9501

Preceptor(s): Suhas Bajgur, MD; Scott Belliston, DO; Dane Breker, MD; Rebecca Caillier, MD; Amanda Diamond, MD; Rajesh Gupta, MD; Tanya Harlow, MD; Sarah Kendroud, MD; Brett Lee, MD; Jau-Shin Lou, MD; Michael Manchak, MD; Leighton Mohl, DO; Eugeniu Muntean, MD; Ravinda Samaraweera, MD; Susan Scarberry, MD; Anita Venkataramana, MD

Period(s) offered: All

Phase Available: ONLY Phase 3

Number of students per period: 2

Purpose: To provide an sub-internship experience for students interested in pursuing a career in neurology or wishing to expand their clinical skills in the evaluation and management of neurologic disease.

Objectives: After completing the sub-internship, the student will be able to

1. Obtain a history and perform a physical exam.
EPA #1; Competency 3.1
2. Present the history and physical in a concise, well-organized format.
EPA #6; Competency 3.7
3. Form and prioritize a differential diagnosis. Select a working diagnosis.
EPA #2; Competency 3.3
4. Discuss orders and prescriptions and construct evidence-based management plans.
EPA #4; Competency 3.4, 3.8
5. Select screening and diagnostic studies and labs and interpret the results of these tests.
EPA #3; Competency 3.2, 3.3
6. Recognize patients who are critically ill or require emergent care and initiate the appropriate initial steps in that care. Reassess patients on an ongoing basis and adjust plan of care as appropriate.
EPA #10; Competency 3.5
7. Document the clinical encounter in a timely fashion.
EPA #5; Competency 3.7, 5.7
8. Communicate effectively with patients and their families regarding diagnoses and plans of care with respect for cultural and socioeconomic backgrounds.
Competency 3.9, 4.1
9. Work effectively as a member of the interprofessional healthcare team including giving and accepting patient handoffs at transitions of care.
EPA #8, #9; Competency 3.5, 7.5
10. Research a clinical question relating to patient care with appropriate evaluation of resources and use of evidence-based information.
EPA #7; Competency 1.6, 1.10, 2.7
11. Formulate or update an accurate problem list for patients under his or her care.
EPA # 5; Competency 3.3, 3.7

Specialty Specific Objectives: (These should be linked to EPAs and Year 4 Competencies which can be found at <https://med.und.edu/education-resources/phase3.html#Yr4O> under “Overview & Objectives”)

Please include any procedures the student will be expected to perform:

12. Localize lesions (Brain, brainstem, cerebellum, spinal cord, roots, plexus, nerves, neuromuscular junctions, and muscles) correctly based on history and neurological examination.
EPA #1 and EPA #2 – Year 4 LO #3
13. Choose and interpret results of standard neurodiagnostic tests (electroencephalography, nerve conduction studies, electromyography, and CT and MRI imaging) in the evaluation of patients with common neurologic complaints and utilize the results of these tests to localize neurologic lesions.
EPA #3 – Year 4 LO #4
14. Learn how to obtain a consent from a patient with supervision when participating in a procedure such as lumbar puncture, skin biopsy, or muscle biopsy.

Instructional Activities: During this elective, the student will be involved in/experience:

1. The student will assume primary responsibility of his or her assigned patients under the supervision of a upper-level resident or attending.
2. Taking stroke call and responding to acute stroke emergencies with the attending neurologist
3. Two-weeks of inpatient service including neurology consultations, presentation of patients, and follow up of neurology inpatients.
4. Two-weeks of outpatient neurology clinic including new patient evaluations through independently obtaining histories and performing physical exams and presenting to the attending physician.
5. When procedures are available, assisting with neurologic procedures such as lumbar punctures, nerve blocks, EMG, skin biopsy, muscle biopsy, or botulinum toxin injections.
6. Interpretation of neurodiagnostic studies including labs, EMG, EEG, CT, and MRI.
7. In the 4th week of the AI, the student will present a 40-45 minute educational case presentation to the neurology faculty. This should include the case in detail including interesting exam findings, differential diagnosis, pathophysiology, treatment, and literature review.
8. Student will prepare four written H&Ps for review with their primary preceptor

Evaluation Methods: The preceptor will:

1. By direct observation, evaluate the student’s ability to perform a complete history and physical pertinent to the Sub-I specialty and present his or her findings. (Objective #1, #2)
2. By direct observation or review of written work, evaluate the student’s ability to form a complete differential diagnosis and select a working diagnosis of neurologic conditions. (Objective #3)
3. By direct observation or verbal discussion, evaluate the student’s formulation of patient management plans including those for patients requiring emergent management. (Objective #4, #6)

4. By direct observation, verbal discussion or review of written work, evaluate the student's selection and interpretation of screening and diagnostic laboratory tests. (Objective #5)
5. By direct observation, evaluate the student's documentation of clinical encounters. (Objective #7, #11)
6. By direct observation and via feedback from the healthcare team, patients, and families, evaluate the student's communication skills including patient handoffs. (Objective #8, #9)
7. By review of written or verbal presentation made by the student, evaluate the student's use of evidence-based information to research a patient care question. (Objective #10)
8. By direct observation, evaluate the student's ability to localize neurologic lesions using the history and physical examination or the results of neurologic studies. (Objectives #11, #12)
9. By direct observation, assess the student's educational case presentation. (Objective #13)

Assessment:

Evaluation methods #1-8 will be assessed using the Entrustability scale.

Level	Descriptor	Example
1	"I had to do"	Requires complete hands on guidance, did not do, or was not given the opportunity to do
2	"I had to talk them through"	Able to perform tasks but requires constant direction
3	"I had to prompt them from time to time"	Demonstrates some independence, but requires intermittent direction
4	"I need to be there in the room just in case"	Independence but unaware of risks and still requires supervision for safe practice
5	"I would not have needed to be there other than to fulfill regulatory requirements"	Complete independence, understand risks and performs safely, practice ready

**This scale was adapted from the Ottawa surgical competency operating room evaluation (O-SCORE): A tool to assess surgical competence. Acad Med. 2012; 87:1401-407.*

Please indicate below the method of assessment for the specialty specific evaluation methods.

1. The case presentation (Evaluation #9) will be graded using the Sanford neurology sub-internship "Clinical Reasoning" Grading Criteria

Sanford MS4 Elective Case Presentation Grading Guideline

Organization	20	15	10	5
Organization of Presentation	Logical sequence	Logical sequence	Occasional illogical sequences	Illogical sequence
Slide Layout and Formatting	Generally well formatted and easy to follow	Occasional errors or too much text on slides, not distracting	Occasional errors or too much text on slides, distracting	Frequent errors or walls of text on a slide, very distracting or hard to follow

Case Details	20	15	10	5
Thoroughness of history/ Physical Exam and test results	Documents all pertinent history/ Physical Exam/results	Documents most pertinent history/ Physical Exam/results	Documents some pertinent history/ Physical Exam components, some unclear history/ Physical Exam/results	Fails to document most pertinent history/physical exam/results.
Differential diagnosis (DDx), and explanations of how tests are used to rule out or rule in diagnosis	Complete and focused DDx and appropriate testing	Incomplete DDx or some inappropriate testing (too many or too few)	Very minimal DDx. Only minimal explanation of which diagnosis is most likely.	Inadequate DDx with inadequate explanation which diagnosis is more likely
Discussion	20	15	10	5
Depth of case	Discussion covers recent advances on the case	Discussion covers well-known and established theories on the case	Discussion is very superficial	No meaningful discussion
Depth of research	Current (<2 y) studies in basic/translational research	Information in review articles	Information found in textbook of general neurology	Information easily recalled without reference
Speaking Skill	20	15	10	5
Speaking Style	Confident, calm, very engaging	Seemed well prepared and relaxed	Generally good rhythm with a few small errors, slightly nervous	Obviously nervous, very unprepared, uncomfortable to watch
Able to answer questions effectively	Well prepared, answered all questions	Answers most questions appropriately	Struggles to answer questions	Unable to answer questions

Score: _____/80

Comments:

2. Please indicate who will be completing the assessment. If more than one preceptor, how will scores be compiled?

The preceptor assessment will be completed by one primary preceptor for the inpatient period and one primary preceptor for the outpatient period. The case presentation evaluation will be completed by any faculty in attendance at the presentation. The Department Chair (or designee) will compile the evaluations from the preceptors and submit the final assessment.

Grading Criteria:

To receive honors, the student must: Receive a total score of 86% or more based on feedback from the attending preceptors (60% of final grade) and evaluation of the formal educational presentation (40% of final grade). Entrustability scores must be 4 or 5.

To pass the Sub-I, the student must: Receive at least a total score of 60%. Average Entrustability score must be >2.

If the student does not pass, remediation will consist of: If a student fails an Sub-I, the Sub-I director and campus dean will work with the student to form a written remediation plan (signed by all 3) that specifically addresses the competencies that the student did not meet during the rotation. A copy of this plan will be sent to the Office of Student Affairs. Remediation may include one additional week of inpatient or outpatient neurology. In order to pass the Sub-I, the student will be required to meet the original passing requirements. A student may not receive honors on an Sub-I that was initially failed.