**Course Objective**

The students will be involved in direct patient care within a primarily ambulatory setting. The students will be invited to attend our neurology conferences including the residents didactic lecture series, our weekly adult grand rounds presentation as well as pediatric grand rounds. In addition, the patients will receive informal didactics while working with the attendings in the clinic. The students will accompany the movement disorder group to deep brain stimulation (DBS) implantations where microelectrode recording is performed. The students will be exposed to the detailed preoperative selection of DBS candidates. In addition, the students will be involved with the preoperative selection of appropriate intrathecal baclofen pump patients and will accompany the movement disorders group to perform baclofen trials. Towards the end of their rotation, students will prepare and present a 30-45 minute presentation on a movement disorders related topic of their choice to the UTMove faculty, fellows, residents, and students.

**Performance Goals and/or Objectives**

1.) To be able to perform a competent neurological examination
2.) To be able to interpret and recognize common neurological signs
3.) To be able to evaluate and treat patients with common neurological disorders.

To be familiar with the utilization, advantages, and limitation of common neurological investigative methods.

1) History and physical Examination
   a. Required Skill/Task
      i. Comprehensive history
      ii. Complete physical examination
      iii. Complete neurological examination
      iv. The Montreal Cognitive Assessment (MoCA)

2) Procedures
   a. Universal precautions
   b. Lumbar puncture (observed or preformed)
   c. Botulinum toxin injections for focal dystonia/abnormal tone
   d. Deep Brain Stimulation Programming
   e. Intrathecal Baclofen pump refills

**Material Covered:** The students will be exposed to a multitude of movement disorders and neurodegenerative diseases such as Parkinson’s disease, Huntington’s disease, Essential tremor, Spino-cerebellar ataxia, Progressive Supranuclear Palsy, Multiple System Atrophy, Wilson’s disease, dystonia (focal and generalized), Alzheimer’s disease, Frontotemporal dementia, Lewy body dementia, and multi-infarct dementia to name a few. The students will be able to observe deep brain stimulation programming, intrathecal baclofen pump refills and botulinum toxin injections.

**Skills Acquired:** The student should master the following: a thorough and focused neurologic exam and history, a broad differential diagnosis for the neurological cases encountered, and a familiarity with the medications prescribed.

**Activities of Elective**

- The elective involves significant teaching by faculty.
- At least five (5) hours per week are aimed at the MS IV level.
- The students are evaluated based on the demonstration of their accomplishment of the objectives.

**Number of New Patients/Student/Week:** 6-10

**Responsibilities of Student for Assigned Patients:** The student should present the neurological history and physical exam findings succinctly to the attending physician. The student should select 1-2 interesting patients/diagnoses/week and give a short oral presentation on the topic to the faculty involved in the clinic. The student will write up a minimum of four full notes during the rotation.
### Procedures

<table>
<thead>
<tr>
<th>Procedures</th>
<th>Observe</th>
<th>Perform</th>
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<tbody>
<tr>
<td>Neurological exam</td>
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<td>Lumbar puncture</td>
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<td>Botulinum toxin injections</td>
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### Scheduled Duties of Student:

| Frequency of rounds on patients         | Yes     |
| Presents patients to preceptor or attending physician | Yes |
| Weekly schedule of required teaching sessions | Daily resident lectures, daily informal “bedside” teaching, weekly grand rounds, formal didactics, in addition students will be involved with journal club and patient conference/presentations. |

### Describe Optional Rounds And Activities, If Any:

### Other Required Activities:

| Reading/review of current literature    | Yes     |
| Writing or presenting a paper          | Yes – 30-45 minute presentation |

### How Is Student Evaluated:

- Students are observed closely enough by faculty to evaluate their performance meaningfully.
- Mid-rotation feedback is encouraged for all students, but feedback in writing is required for any students identified as having deficiencies, as soon as the deficiency is identified.
- Verbally and electronically (on ONE45).

### Who Evaluates Students:

Student is evaluated by clinic attendings.

### Unique Features Of This Elective:

The Movement Disorders elective has a sub-specialty focus. It is a unique clinic in that the student gets to participate in the initial evaluation and approach to a patient with a movement disorder. This provides an opportunity that really defines the essence of our profession, which requires the integration of signs and symptoms that are learned from doing a good neurological examination with the history, then formulating a differential diagnosis by relating information to medical knowledge. Finally, the student learns the rationale behind using certain diagnostic tests in order to obtain or secure an accurate diagnosis. Additionally, the continuity of care that we provide in our clinic provides invaluable lessons in learning the medical management and/or surgical management of patients with chronically progressive neurodegenerative diseases.