Neurology Core Clerkship

IDPT 7041

Syllabus

Pearce Korb, MD – Course Director
Dan Pastula, MD – Associate Course Director
Holly Ables, B.A. – Course Coordinator

Departmental Disclaimer:
This handbook/syllabus does not constitute a contract, either expressed or implied, with the University of Colorado School of Medicine and the University reserves the right at any time to change, delete or add to any of the provisions at its sole discretion. Furthermore, the provisions of this document are designed by the University to serve as guidelines rather than absolute rules, and exceptions may be made on the basis of particular circumstances.

Edited March 31, 2016 HA
**Welcome to Neurology!** This clinical course will help you learn about the function of the human nervous system, disorders to which it is susceptible, diagnostic tests, treatments, and prognosis.

Please remember to read all email correspondence from your Program Coordinator and Director. Updates, changes and instructions are sent throughout the block. In addition, we are using CANVAS. Please check the site for announcements, course information and all assignments.

**If you're interested in joining the Student Interest Group in Neurology (SIGN), email CUSOMSIGN@gmail.com or visit Facebook group: Student Interest Group in Neurology (CU SOM).**

---

### Rotation Contact Information

<table>
<thead>
<tr>
<th>Name</th>
<th>Contact #</th>
<th>Email address</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Director</strong></td>
<td>Dr. Pearce Korb</td>
<td>303-266-0593 (pager)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:pearce.korb@ucdenver.edu">pearce.korb@ucdenver.edu</a></td>
</tr>
<tr>
<td><strong>Associate Program Director</strong></td>
<td>Dr. Dan Pastula</td>
<td>303-266-4828 (pager)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:Daniel.pastula@ucdenver.edu">Daniel.pastula@ucdenver.edu</a></td>
</tr>
<tr>
<td><strong>Program Coordinator</strong></td>
<td>Holly Ables</td>
<td>303-724-5899 (office)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:holly.ables@ucdenver.edu">holly.ables@ucdenver.edu</a></td>
</tr>
<tr>
<td><strong>Children’s Program Coordinator</strong></td>
<td>Priscilla Harlan</td>
<td>720-777-0911 (office)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:Priscilla.harlan@childrenscolorado.org">Priscilla.harlan@childrenscolorado.org</a></td>
</tr>
</tbody>
</table>
**First Day Instructions by Site**

Following your morning clerkship orientation from 8:00AM – 10:00AM, please report to your clinical sites as instructed below:

<table>
<thead>
<tr>
<th>Site</th>
<th>Time</th>
<th>Instructions</th>
<th>Pager/Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>DH</td>
<td>10:30AM</td>
<td>Go to the Resident Lounge on the first floor and page the resident on call.</td>
<td>303.266.3210</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Code to lounge door: 5210#</strong></td>
<td></td>
</tr>
<tr>
<td>VA</td>
<td>10:30AM</td>
<td>Go to Neurology clinic, RM 6A108, and page the VA Resident on call.</td>
<td>303.266.3228</td>
</tr>
<tr>
<td>UCH</td>
<td>A – Stroke 10:30AM</td>
<td>Go to Anschutz Inpatient Pavilion (AIP 1), 7th floor West Nursing Station to meet the Stroke Resident on call.</td>
<td>303.266.2231</td>
</tr>
<tr>
<td></td>
<td>B/E – General 10:30AM</td>
<td>Go to Anschutz Inpatient Pavilion (AIP 1), 7th floor West Nursing Station to meet the General Resident on call.</td>
<td>303.266.2444</td>
</tr>
<tr>
<td></td>
<td>C – EMU 10:30AM</td>
<td>Go to Anschutz Inpatient Pavilion (AIP 1), 7th floor West Nursing Station to get directions to the EMU reading room and meet the EMU Resident on call.</td>
<td>303.266.2444</td>
</tr>
<tr>
<td></td>
<td>D – Clinic 10:30AM</td>
<td>Go to Anschutz Outpatient Pavilion (AOP) 4th or 5th Floors to select a clinic to attend</td>
<td></td>
</tr>
<tr>
<td>CHC*</td>
<td>10:30AM</td>
<td>Meet with Children’s Coordinator at CHC, in front of the glass elevators in the 1st floor lobby of Children’s Hospital.</td>
<td>720.777.0911</td>
</tr>
</tbody>
</table>

*Regardless of which week you are assigned to CHC, please attend the CHC Orientation on the first day of the Clerkship and then join your clinical team at your other hospital assignment afterwards.*
Clerkship Education and Administrative Programs

These are the sessions that are common for all sites; all students are expected to attend. Some of the days and times may change according to the School of Medicine Holiday calendar. For these exceptions, please look for announcements via e-mail prior to or during the Block.

1. Clerkship Orientation

   The first day (Monday) of the block at 8:00AM

   This is to introduce you to the Neurology Core Clerkship including expectations of conduct, performance, learning objectives, grading and key information.

2. Problem-Based Learning Sessions (PBL Sessions)

   Every Monday from 2:00 - 4:00PM in RC2 5105 (excluding CAPE day)

   Every Wednesday from 1:00 – 3:00PM in RC2 4105

   You will be divided into groups for PBL. Check Canvas for assignment details.

   As the "Science of Medicine" is getting advanced day-by-day, need for better pedagogies & learning techniques are imperative. Problem Based Learning (PBL) is an effective way of delivering medical education in a coherent, integrated & focused manner. It has several advantages over conventional and age-old teaching methods of routine. It is based on principles of adult learning theory, including student's motivation, encouragement to set goals, and ability to think critically about decision making in day-to-day operations. Above all these, it stimulates challenge acceptance and learning curiosity among students and creates pragmatic educational program.

3. CAPE Clinical Assessment

   The 3rd Monday of the block from 12:30-3:30PM

   This is designed to give you the opportunity to demonstrate your neurological screening examination skills. Location: Ed 1, 4th Floor Conference Room. You will receive your exact schedule from your Coordinator via email a week or so in advance. (This is not graded, but participation is mandatory.)

4. Grand Rounds

   Wednesdays from 12:00-1:00PM (Location: H.G. Phelps Auditorium at in Research 2 Building).

   These are optional for students but are highly recommended as they often feature great faculty from here and beyond.

5. Office Hours

   The Clerkship Directors have an open door policy. Email pearce.korb@ucdenver.edu or daniel.pastula@ucdenver.edu and they will do their best to promptly respond to any questions.
Assignments (all found on CANVAS for download & upload for submission)

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Observation Forms (3 total)</td>
<td>1st and 3rd Friday; 4th Thursday of Rotation</td>
</tr>
<tr>
<td>1 Neurological Exam, 1 History, 1 Note</td>
<td></td>
</tr>
<tr>
<td>Midpoint Feedback Form</td>
<td>2nd Friday of Rotation</td>
</tr>
<tr>
<td>NIHSS Certification</td>
<td>3rd Monday of Rotation</td>
</tr>
<tr>
<td>Logger of Competencies</td>
<td>Last Thursday of Rotation at 8:00AM</td>
</tr>
<tr>
<td>CAPE (Standardized Patient Assessment)</td>
<td>3rd Monday of Rotation</td>
</tr>
<tr>
<td>Final Exam (SHELF)</td>
<td>Last Friday of Rotation 12:45PM – 4:00PM</td>
</tr>
</tbody>
</table>

**Patient Logger Policy**

**Students will:**
- Update their Logger at least once weekly, including duty hours for the week.
- Only be required to log a required clinical condition once during the block in which it is required.
- Log honestly including truthfully reporting duty hours and patients seen.
- Provide their logger to the clerkship director or their designee at the midpoint and end of a block, or at the end of the block for blocks less than 4 weeks in length.

**Clerkship Directors or their Designee will:**
- Review student logger data at the midpoint and end of a block, or end of the block for blocks less than 4 weeks in length, to ensure students are on track to see all required clinical conditions.
- Review aggregate data twice yearly to ensure that all required clinical conditions are seen by all students and to ensure that alternate methods are used minimally to achieve this.

**Students not completing their requirements will face the following consequences:**
- Dishonest Logging of Patient Encounters or Duty Hours will be deemed a violation of the Student Honor Code and be referred to the Student Honor Council for further discussion.
- Students will not receive a grade until a completed logger has been turned in at the end of the block.
Please refer to the video presentation from ICC 7001 for instructions on how to successfully use the logger if you run into technical issues.

**Grading & Testing**

There are 3 major components to the final clerkship grade:
1. Clinical Evaluations
2. Shelf Examination
3. Participation

Final clerkship grades are normative.
- Students must achieve a clinical grade of Honors to qualify for a final grade of Honors.
- Students must achieve a clinical grade of High Pass to qualify for a final grade of High Pass.
- The clinical grade is combined with shelf examination, problem-based learning, and participation grades.
- Up to 20% of the students will receive a final grade of Honors and up to 20% will receive a final grade of High Pass.

At the end of the academic year, all grades will be reviewed and some students may be increased to Honor or High Pass to a maximum of 30% in each category, but the total combined assignment of Honors and High Passes cannot exceed 50%.

1. **Clinical evaluations (75%)**: We use the standardized Medical Student Assessment form that is used by all clinical blocks. The clerkship director and clerkship coordinator review all medical student evaluation forms for inconsistencies and appropriateness of ratings. The number of clinical evaluations obtained may vary by site. Evaluations that appear to be incongruent with the student’s expected level of performance are discussed with the evaluator and changes in the evaluation are made as indicated. You will be evaluated on your ward and clinic performance by faculty and residents. This evaluation will consider:

   a. **Medical Knowledge** (Understanding of pathophysiology and differential diagnosis, use of best evidence)
   b. **Clinical Care** (History-taking, physical examination skills, formulation of clinical impression and plan)
   c. **Communication** (Rapport with patients and family, oral presentations, written notes, compassion)
   d. **Professionalism** (Cooperation with colleagues, respect for diversity, responsiveness to feedback)
   e. **Systems-Based Practice** (Appropriate use of consultants and community resources)
   f. **Problem-Based Learning and Improvement** (Independent reading, attendance at conferences)

2. **Shelf exam (20%)**: We use the NBME Clinical Neurology Examination for the final exam. You are compared on percentiles to your peers across the county who are also taking this standardized test. A recent national mean was 77. The exam is computer-based and administered from 12:45-4:00PM on the last Friday of the rotation.

   a. **A score of 58 is required to pass the clerkship.**
   b. There is a minimum score based on the national mean to achieve honors and/or high pass.

   In the event that you fail the shelf exam, a grade of I (Incomplete) will be given at the time the grade sheet is due. The maximum final grade you can receive after re-taking the exam is Pass. **Important**: you must request your retake of the shelf exam within 4 weeks of the next scheduled
Exam Make-Up Policy:
When there are requests to delay block/clerkship examinations, a delay should be granted when it is consistent with the absence policy. In the event of an examination failure or when a delay is granted, students may take exams on the following Mondays: fall break, winter break, and Monday immediately after the last Phase III ICC. Exams may also be taken when they are administered at Denver Health during the LIC. Fees may apply.

3. Participation (5%) is defined as meeting all of the following:
   a. Participation in PBL discussions and assigned learning objectives.
   b. Completion of 3 Direct Observation Forms (1 neurological examination, 1 history, and 1 note).
   c. Completion of the NIH Stroke Scale Certification (NIHSS) (the link to this is on Canvas under “Assignments”).
   d. Completion of the Mid-point feedback form (signed by an attending) using Week 1 and Week 2 Direct Observation Forms as additional input.
   e. Completion of the Patient Logger Competencies.
   f. Completion of a Standardized Patient CAPE examination. Participation is included in your final grade, but your performance is not graded.

Final course grade breakdown:
Clinical work on the wards and in the clinics = 75%
Shelf exam = 20%
Participation (PBL, Observation forms, NIHSS certification, CAPE, etc.) = 5%

Final grade rubric:
• Your grade is interpreted within the context of the performance of your peers, meaning as per the School of Medicine requirements, no more than 20% of the grades will be Honors and no more than 20% of the grades will be High Pass.
• Scoring a certain grade on any individual component does not guarantee the same final grade due to the policy below.
• All components, including your clinical evaluations are assigned a number and then weighted. 0.75 * Clinical Score + 0.2 (Shelf Score) + 0.05(Participation Score) = Total Numeric Score (unit less).
• You are then ranked amongst your block.

Appeals policy: We make every effort to ensure that grades are fair and accurate. Students who believe there is an error in their grade calculation or comments may submit a written appeal via email to the Clerkship Director within one month of receiving their grade. In this email, they should briefly describe the error and request reconsideration. These grade appeals will be reviewed on a case-by-case basis. If it is determined that grade changes are indicated, they will be made by the end of the year.
**Neurologic Care Objectives**

1. Students will learn to elicit a detailed neurologic history.

2. Students will learn to perform a complete screening neurologic examination.

3. Students will learn to administer a cognitive scaled test such as the Mini-Mental State Examination (MMSE) or Montreal Cognitive Assessment (MOCA).

4. Students will be familiar with basic findings of the fundoscopic examination.

5. Students will differentiate the key findings of encephalopathy (e.g., confusion, delirium, amnesia, concussion, stupor, coma, minimally conscious state, and vegetative state), and develop an appropriate evaluation and management plan.

6. Students will learn to localize neurological deficits based on their knowledge of neuroanatomy, develop reasonable differential diagnoses and recommend appropriate evaluative and management plans for the following diseases and/or common neurological presentations:

   **Common Symptoms**
   a. Weakness and/or numbness
   b. Confusion and decreased responsiveness
   c. Memory loss
   d. Headache
   e. Back pain
   f. Visual complaints (i.e. double vision, decreased vision)
   g. Spells
   h. Dizziness and Vertigo
   i. Abnormal movements (tremor, slowing) and tics

   **Diseases/Disorders**
   j. Cerebrovascular disease/Stroke
   k. Dementias
   l. Multiple Sclerosis
   m. Neuropathies, myopathies and radiculopathies
   n. Myasthenia gravis and other disorders of the neuromuscular junction
   o. Epilepsy and provoked seizures
   p. Migraines and other headache syndromes
   q. Parkinson’s Disease and other movement disorders
   r. CNS neoplasms
   s. CNS infections
   t. Medical diseases and metabolic states with neurological complications
   u. Common pediatric neurological diseases

7. Students will apply the appropriate basic science concepts that include the neuroanatomy and neuropathology of the eye and visual system to the care of patients with visual dysfunction.

8. Students will understand the medical, legal, and ethical implications of brain death, the vegetative state, and the minimally conscious state.
9. Students will understand the indications for and limitations of computed tomography (CT), magnetic resonance imaging (MRI), electroencephalography (EEG), and nerve conduction studies and electromyography (NCS/EMG).

10. Students will have performed or observed a lumbar puncture (LP), and will understand the indications for LP and the interpretation of basic cerebrospinal fluid findings.

11. Students will demonstrate effective communication of medical information with patients.

12. Students will demonstrate effective communication with colleagues, consultants, and other professionals.

13. Students will demonstrate effective patient advocacy.

14. Students will demonstrate good communication and listening skills with patients and families.

15. Students will demonstrate patient-centered communication and collaborative decision making.

16. Students will demonstrate the ability to communicate with technology.

17. Students will elicit values, ideas, and feelings influencing the patient/physician relationship and treatment decisions.

18. Students will be proficient at preparing initial history and neurologic examination write-ups and SOAP notes for patients.

19. Students will be comfortable with the oral presentation of a history and neurologic examination to colleagues and attendings.
Every student will be required to document that they have seen patients who satisfy some or all 14 of the competencies listed below in the Competency Logger. Many symptoms, signs, and syndromes will satisfy a given competency, and you may, if necessary, use patients you have discussed in detail with an attending or resident, or heard about in a seminar or conference.

1. **Neurologic Examination**
2. **Mini-Mental State Examination or Montreal Cognitive Assessment**
3. **Eye Examination**
4. **Fundoscopic Examination**
5. **Confusion**: e.g. delirium, acute confusional state, toxic-metabolic encephalopathy, coma, stupor
6. **Amnesia**: e.g. memory loss, forgetfulness, anoxia, concussion, traumatic brain injury
7. **Cerebrovascular Disease**: e.g. ischemic, hemorrhagic, or lacunar infarct; intracerebral hemorrhage
8. **Dementia**: e.g. Alzheimer's Disease, vascular dementia, subdural hematoma, brain tumor
9. **Dizziness**: e.g. vertigo, benign positional vertigo, orthostatic hypotension
10. **Migraine**: e.g. headache, common migraine, classic migraine, combined migraine-tension headache
11. **Multiple Sclerosis**: e.g. MS, demyelinating disease, optic neuritis, neuromyelitis optica, ADEM
12. **Epilepsy**: e.g. partial seizures, generalized seizures, status epilepticus, psychogenic seizures
13. **Numbness**: e.g. neuropathy, peripheral neuropathy, mononeuropathy, root compression syndrome
14. **Weakness**: e.g. hemiparesis, monoparesis, paraparesis, motor neuron disease, myopathy

**Recommended Study Materials**

1. **Syllabus for Nervous System Course (IDPT 6001)**: This is the excellent material provided for the second year Nervous System course; it is equally relevant for this rotation. Find your handouts from last year and study them carefully - if you do not have them, you can find them by logging onto CANVAS and accessing the course. There are many lectures on basic neuroscience you can review in the context of clinical neurology, but the clinically relevant lecture notes comprise the single most important source of information you will need for this rotation.


7. **Harrison's Principles of Internal Medicine**: This classic textbook is now in its 17th Edition, 2008. Many very good chapters on neurology can be found. Use your own copy, or the book can be found in the Health Sciences Library.

8. **DVDs**: These can be found at the front desk of Health Sciences Library: *The Neurological Examination, Cerebrovascular Disease, Closed Head Injury, Depression of Consciousness and Herniation, Disorders of Motility, Common Movement Disorders, How to Recognize and Classify Seizures, Headache and Dizziness, Neck and Back Pain.*

9. **Web-Based Teaching Cases**: There are two patient cases available for review in DxR Clinician: 1 for *Memory Loss* and 1 for *Stroke*. These are excellent learning tools, and particularly recommended for students at CHC who may need more exposure to such cases.
To access DxR visit [http://colo.dxrclinician.com/](http://colo.dxrclinician.com/)

Once there, select the clerkship (Neurologic Care) and then the case (*Memory Loss* or *Stroke*). You will then log in using the following format for your usernames and passwords: your username is the first initial of your first name + your last name (example – Johnny Depp would be jdepp) in lowercase; your password is the last four digits of your student ID number. There is a link to a student user manual at the bottom of the DxR homepage for those who would like instruction on how to use DxR Clinician.

### Online and other Electronic Resources

<table>
<thead>
<tr>
<th>General</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroexam.com</td>
<td><a href="http://www.neuroexam.com">www.neuroexam.com</a></td>
</tr>
<tr>
<td>Lesion! The Video Game</td>
<td><a href="http://www.lesiongame.com">www.lesiongame.com</a></td>
</tr>
<tr>
<td>Neurolocalizer HD</td>
<td>IPad/IPhone app</td>
</tr>
<tr>
<td>Nerve Whiz</td>
<td>IPad/IPhone app</td>
</tr>
<tr>
<td>Radiopaedia</td>
<td><a href="http://radiopaedia.org">http://radiopaedia.org</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disease Specific</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Internet Stroke Center</td>
<td><a href="http://www.strokecenter.org">www.strokecenter.org</a></td>
</tr>
<tr>
<td>National MS Society</td>
<td><a href="http://www.nationalmssociety.org">www.nationalmssociety.org</a></td>
</tr>
<tr>
<td>Parkinson's Disease Foundation</td>
<td><a href="http://www.pdf.org">www.pdf.org</a></td>
</tr>
<tr>
<td>Canadian Neuro-ophthalmology</td>
<td><a href="http://www.neuroophthalmology.ca/">http://www.neuroophthalmology.ca/</a></td>
</tr>
</tbody>
</table>
**Hospital Responsibilities**

Students will be assigned to a ward, consult services, and clinic. Further details can be found when you arrive at your hospital. When you get to your hospital on the first day, find your senior resident and become oriented to the service. You will need to learn the hospital’s system for writing notes, ordering tests, and getting results. Your residents can help with all aspects of the service and your educational experience.

**Established Patients**: Divide up established patients and be acquainted with them by the next day. Familiarize yourself with their active problems, neurological findings and plan. See the patient yourself, re-establish the interval history, and perform your own neurologic examination: simply reading the progress notes is not adequate. Write a succinct Student Note to help organize your thoughts. Daily progress notes are expected on each patient. Use the standard SOAP format for these notes; they will be reviewed by someone in the care team.

**New Patients**: Ask your resident for patients you are to follow on the first day. As new patients are admitted, they will be taken by students in rotation. A full, written history and physical examination on every patient is expected within 24 hours.

**Note about Children’s Hospital of Colorado**

For the students assigned to CHC, ward and clinic responsibilities will be organized and supervised by Dr. Padmini Palat and Priscilla Schenk. It is imperative that all the teaching sessions at UCH be attended. All students need to acquire a satisfactory knowledge of adult neurology, so it is especially important for those at CHC to learn as much as possible from the UCH teaching opportunities. Extensive reading – of the IDPT 6001 syllabus, textbooks, journal articles, etc. – is critical for all students.

**Foundations of Doctoring**

Each student should work with his or her preceptor twice during this four-week rotation. This means you will each have 2 half-days away from the neurology service. You can decide what days being away will have the least impact on your neurology education. Let your residents know this experience is an expected part of the medical school curriculum and that you need to be excused from the service for this time.
**Presentation of the Neurological Patient**

**Introduction and Chief Complaint:** Begin with name, age, and handedness, who has referred the patient, and what clinical question is being asked. To get this information, you may need to ask family members or significant others, or search medical records from previous doctor visits and hospital admissions.

**History of the Neurologic Problem:** Focus on the symptoms that are truly important in understanding the neurologic problem. Develop the history chronologically so that the sequence of events is clear. You need to know how the problem started, how it progressed, what doctors were involved, what studies were done, what treatment was offered, and what was the outcome of treatment – all in an orderly progression from the onset to the present.

**Past Medical History, Family History, Social History, and Review of Systems:** For these sections of the history, elicit the most relevant points that assist in diagnosis and treatment; be selective but not cursory. It is always important to list all the patient’s medications, including alternative remedies, since these may indicate what disorders have been treated before, and may explain some (or even all) of the patient’s current symptoms and signs.

**General Physical Examination:** If relevant, provide a brief comment on the head, neck, spine, chest, heart, abdomen, extremities, and pulses. Detailed comments on the neurologic examination come next.

**Neurologic Examination:** Here you are searching for signs of nervous system dysfunction. Make specific comments on each of the following seven major areas. Pertinent negatives should be mentioned. Perform this examination in a consistent manner so that you can do it the same way every time without forgetting sections of it. A useful sequence of procedures is the following:

1. **Mental Status** - Survey the level of consciousness, attention, memory, language, visuospatial skills, executive function, and emotion and personality.
2. **Cranial Nerves** - Comment on specific cranial nerve abnormalities if they are present. Unless the history suggests olfactory dysfunction, examination of the first (olfactory) nerve can be omitted. It is also convenient to listen for carotid bruises during this part of the examination.
3. **Motor System** - Here you need to comment on upper and lower extremity evaluation in terms of strength, tone, and bulk. Also make note of tremor or other involuntary movement.
4. **Coordination** - Tests of coordination include rapid alternating movements of the hands, the finger-to-nose maneuver, and heel-to-shin testing in the legs.
5. **Gait** - Observe the patient during his or her ordinary gait, and during tandem (heel-to-toe) walking. This testing can be omitted only if a patient is in bed and/or too ill to stand.
6. **Reflexes** - Reflexes should be tested at both of the triceps, biceps, brachioradialis, patella, and Achilles tendons. Be sure to test the plantar responses (the Babinski sign is present if the great toe response is extensor).
7. **Sensation** - Make a specific comment about each modality: light touch, pinprick, position, and vibration. The Romberg sign is a test of proprioception that also fits here.

**Laboratory Results:** Report on any relevant tests or procedures that are available.

**Assessment:** Localize the lesion, state the most probable pathologic cause, and offer a brief differential diagnosis.

**Plan:** What tests would you order? What consults are necessary? What treatments do you recommend?

**Note:** These guidelines apply to any new neurology patient seen on the wards, in consultation, in the Emergency Room, or in clinic. When a patient is known to the service and is being seen in follow-up, the presentation can focus on the specific clinical problem(s), and the clinical encounter can be much shorter.