Neurology Residency Handbook
2015-2016

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Foreword

This handbook encompasses the basic information for our neurology residency program and is updated annually. The handbook is in two parts, the first is Policies and Procedures (How we do things) and the second is rotation specific information and other items. The Goals & Objectives are presented as a separate appendix document while basic information on the rotations is in this handbook in a friendlier format.

This handbook is in harmony with the GME Policy and Procedure Manual (gme.kumc.edu/school-of-medicine/gme/policies-and-procedures.html). Where there is a discrepancy, this manual takes precedence. For example, while moonlighting is possible within certain GME imposed restrictions it is not allowed for neurology residents.

Richard M. Dubinsky, MD, MPH
Professor and Program Director
Department of Neurology
Part 1 Mission Statement, Department Goals And Objectives

Mission Statement

The mission of the Department of Neurology is to provide the best possible clinical care for patients and the best possible education for medical students, residents, and fellows while engaged in world-class research in the neurosciences. These goals are accomplished through the high caliber faculty, house officers, and support staff employed by the department and with the support of the University of Kansas Medical Center, the Kansas City Veterans Affairs Medical Center, the Leavenworth Veterans Affairs Medical Center, and Children’s Mercy Hospital.

Departmental Goals and Objectives

• To provide general and subspecialty neurology clinical services to patients from the greater Kansas City metropolitan area and the surrounding region.
• To provide the training needed for our house officers to excel in clinical care and in research.
• To provide instruction in the basic and clinical neurosciences to medical students, allied health students, and to house officers in other disciplines.
• To promote and support basic science and clinical research in the neurosciences.
• To achieve national recognition of our clinical and research endeavors.

Educational Mission Statement

The educational mission of the Department of Neurology is to provide an optimal educational environment to prepare the neurology resident for the independent practice of clinical neurology. An experienced faculty with board certification by the American Board of Psychiatry and Neurology, with subspecialty expertise in all major disciplines of neurology, assures, through close supervision, that neurology residents receive extensive exposure to the basic neurosciences and clinical skills. The program director and neurology faculty ensure that patient care responsibilities are balanced with teaching to enhance the educational experience of the neurology resident. Our residents are trained to communicate effectively with their patients and families in a caring and respectful manner. Residents are trained to apply knowledge of study designs and statistical methods to the appraisal of clinical studies, assessing diagnostic and therapeutic effectiveness. They learn how to practice cost-effective health care and allocate resources without compromising care quality.

Educational Goals

The educational goals of the Neurology residency program are to:

• Train clinicians for independent practice of Neurology,
• Provide the educational background for life long learning in Neurology,
• Encourage participation in clinical research during training, and throughout the careers of our graduates, and
• Train our residents to provide compassionate care for their patients, and the families of their patients.

Educational Objectives:

The Neurology resident will:

• Through supervised clinical work, become proficient in the care of the neurological patient
• Assume increasing responsibility for the evaluation and management of neurology patients in the hospital and in the clinic
• Through lectures, and independent study, develop a foundation of knowledge in the basic neurosciences
Part 1 Expectations of Learners

These are both the explicit and implicit (hidden curriculum) for Neurology residency. The competencies for each expectation are in the parentheses:

1. Show up on time. (Prof.)
   a. To not is unprofessional and expresses your disdain and disregard for others. This is for all lectures, conferences, team huddle and rounds.
2. Be prepared (Patient Care, Prof.)
   a. Do the background reading
   b. Review patient charts before clinic
   c. See patients before rounds, pre-rounding electronically is not enough.
   d. Know what is going on by the 9:30 am Huddle
3. Arrive ready and willing to learn (Medical Knowledge)
   a. Learning is an active process
   b. Your study time is when you learn the facts
   c. Rounds and lectures places to learn concepts and how to put things together
   d. You are expected to spend at least one hour a day on your own on didactics.
   e. Minimum score on RITE is 40th percentile for rank.
4. Be engaged (Prof.)
   a. Your activities are directed to the task at hand
   b. Accessing information before a presentation or even during is good
   c. Using a digital device to do something else is not
   d. Make eye contact with the teacher, ask and answer questions, participate
5. Don’t lie (Prof. Interpersonal Communication Skills)
   a. For factual data (e.g. a laboratory result) admit it if you don’t know the answer.
      i. Make sure you know the answer the next time, and every time after that
   b. Guessing is encouraged, just be honest. If you don’t know the mechanism of a disease or a treatment, speculate. “Fortune favors the prepared mind.” Louis Pasteur
6. Completion of notes (Pt. Care, Prof, ICS, Systems Based Practice)
   a. Inpatient notes are to be completed by end of that business day.
   b. Clinic notes are completed within three days (KUPI rule)
   c. Consult notes are started before the patient is seen by the attending physician and completed by the end of the business day that the patients is seen by staff.
   d. ED consultations are completed before you leave the ED. A brief note within 30 minutes of staffing the patient, a complete note within five hours.
   e. Notes from stroke activation calls are completed by the end of the activation.
   f. Do not copy and paste your notes or plagiarize the notes of others. You may copy appropriate history forward. Any examination that you document must be the examination that you did that day.
7. Administrative tasks (Prof.)
   a. Duty hours are always up to date
   b. Evaluations are completed within two days of assignment.
   c. Vacation and elective requests are completed at least 60 days in advance
   d. Administrative tasks are completed promptly
      i. Pages are answered

What is an honors level resident?
1. All of the above plus:
2. Be prepared (Patient Care, Med. Know., Prof.)
   a. Seeks out additional background reading. For example, in Journal club they read not only the article, but seek out the background articles on the outcome assessment tool (e.g. UPDRS)
3. Proof of learning (Medical Knowledge)
   a. RITE score above 80th percentile for rank.
4. Be engaged (Prof. ICS, SBP)
   a. Actively involved in participation in rounds
   b. Teaches other learners (residents and students) in an exemplary fashion.
   c. Knows when to be quiet.
5. Notes (Pt. Care, Prof, ICS, Systems Based Practice)
   a. Notes are complete are not only concise, accurate and prepared ahead of time,
   b. Notes contain concise, pertinent, differential diagnosis showing their thought processes and a discussion of therapeutic options
   c. Discharge summaries are concise and have clear instructions for what needs to done (test results, scheduled therapies, follow-up appointments)
6. Administrative tasks (Prof.)
   a. Never needs reminders to perform administrative tasks.
   b. Keeps tracks of, and renews licenses and DEA permit.
The Next Accreditation System (NAS) and Grades

The 29 milestones in Neurology, are mapped onto the six competencies. The levels of the milestones are based on Dreyfus model of learning. (Dreyfus 1980) These stages are analogous to Levels 1-5 in the milestones, but are not equivalent to post graduate year (or level) of training (PGY). Each level requires mastery of the one below.

A novice learner knows the rules, applies them without explicit responsibility and has to do everything by rote. They require constant supervision

A proficient learner knows, the rules, accepts limited responsibility yet needs close supervision or oversight. They can filter out unnecessary elements in their presentations, but still need to do most everything in their evaluations

A competent learner is able to filter out the unnecessary elements quickly in their clinical encounters and presentations. They not only grasp the nuances of common presentations of common disease, but also the common presentation of uncommon disease. They prioritize their evaluation based on the likelihood of the disorders in their differential and re-evaluate frequently

An expert learner quickly grasps the nuances of the situation. They develop a hypothesis, test it on the fly with questions, examination and tests and constantly re-evaluate and adjust accordingly.

A master learner likes surprises. They seek out the exceptions to the rules and thus expand our overall knowledge of a subject. They challenge assumptions and in doing so advance the field. They are actively engaged in research in their discipline.

For example, if a resident can correctly identify a patient as having progressive supranuclear palsy (level 3 or 4), yet state that deep brain stimulation is the preferred treatment for a patient with the recent onset of Parkinson’s disease (failed level 3), they are performing at level 2, as long as they can tell the difference between hyper and hypokinetic disorders (level 2).
Strongly Suggested Textbooks:

**PGY2**
- *Introduction to Neuropsychopharmacology*, Iversen, Iverson Bloom and Roth, 2008 $42.09

Total: $307.99 –plus tax, shipping and handling. Prices from Amazon.com subject to change.

**PGY3 and PGY4**
- *Osborn’s Brain: Imaging, Pathology, and Anatomy*, Anne Osborn, 2012, $331.55

Worth buying if you can find it:
- *Core Text of Neuroanatomy*, Malcom Carpenter, 1991 $57.04
Part 2 ACGME Milestones and Neurology Core Competencies

Over 10 years ago the American Council on Graduate Medical Education (ACGME) announced the six core competencies as part of an overhaul of post-graduate training for residents. In 2012 the next step, aptly termed the Next Accreditation System (NAS) went into effect for many disciplines. The competencies were the lofty goals to be achieved through training; the NAS incorporates milestones that must be achieved during the residency program. The milestones, while specialty specific are based on the Dreyfus Model of Skill Acquisition (Dreyfus SA, Dreyfus HI. A Five Stage Model of the Mental Activities involved in Direct Skill Acquisition. UC, Berkeley).

The Novice is taught a set of rules before they acquire experience. This is the medical student and intern. Competent: the learner applies the rules to the situation. This is the beginning neurology resident. Proficient: this learner can handle more than one situation at a time, and is able to appropriately and independently exclude irrelevant details. This is the advanced resident. Expert: learner is able to intuitively grasp the situation and to do the appropriate steps or actions. This is the resident who is about to complete their training. Master: in this stage the performer (or physician, or athlete…) no longer has to self monitor their activities and they can transcend their performance at the expert level by using freed resources from self-monitoring into the task at hand. The master seeks out unusual and difficult situations and welcomes surprises. This is the experienced clinician who has developed style. The labels have been changed over time and in the current ACGME learner model, master is level four and expert is level five. The take home messages are that the levels are not equivalent to PGY and that a learner can perform at different levels for different milestones in their training.

The first proposed milestone is:

<table>
<thead>
<tr>
<th>History– Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>Obtains a neurological history</td>
</tr>
</tbody>
</table>

As of July 1, 2014 the milestones are used as the basis for evaluations. When you review the milestones you will note that they are divided into the six competencies.

**ACGME Core Competencies:**

**Patient Care:** Residents must be able to provide patient care that is both appropriate and compassionate and that is effective for the promotion of health and the treatment of health problems and disease. Residents must:

- Use all sources to gather essential and accurate information about their patients, including medical interviews, medical examinations, and medical records.
- Make informed recommendations to patients and their families regarding treatment plans and recommended diagnostic and therapeutic interventions that are based upon patient preference, scientific evidence, and clinical judgment.
- Develop and carry out patient management plans, counsel and educate patients and their families, and collaborate with other health care professionals (including those from different disciplines) to provide patient-focused care.
- Competently perform all essential medical and invasive procedures.

**Medical Knowledge:** Residents must demonstrate knowledge about current and established clinical, biomedical, epidemiological, and social-behavioral sciences and will apply this knowledge to patient care. Residents must:

- Learn the clinical aspects of adult and pediatric neurological disorders and the basis for working up these conditions.
• Utilize readings to learn the causes of neurological conditions and apply this knowledge in a clinical setting.
• Learn the appropriate use of diagnostic procedures used to detect common and uncommon neurological disorders.

**Practice-Based Learning and Improvement:** Residents must be able to use information technology, scientific methods, and scientific evidence to evaluate, investigate, and improve patient care. Residents must:
- Use information technology, scientific methods, and scientific evidence to evaluate, investigate, and improve patient care.
- Identify areas for self-improvement and facilitate learning among students and other health care professionals.
- Implement strategies to enhance patient care.
- Analyze practice experience and perform practice-based improvement activities using a systematic methodology.
- Find and evaluate evidence from scientific studies related to patient health problems and incorporate findings into patient care.
- Obtain and utilize information about their population of patients as well as the larger population from which their patients are drawn.

**Interpersonal and Communication Skills:** Residents must demonstrate interpersonal and communication skills resulting in effective communication with patients, families and other medical professionals. Residents must:
- Create and sustain a therapeutic and ethically sound relationship with patients
- Use listening, nonverbal, explanatory, questioning and writing skills to effectively provide information to and elicit information from patients, families and other medical professionals.
- Work effectively with health care teams and other colleagues as a member or as a leader.

**Professionalism:** Residents have an obligation to professionalism and sensitivity and must adhere to ethical principles within a diverse patient population. Residents must:
- Demonstrate accountability, respect, integrity, and empathy toward patients and their families and to society.
- Demonstrate openness and sensitivity to the culture, age, gender, disabilities, socioeconomic status, beliefs and behaviors of patients, patients’ families, and professional colleagues.
- Adhere to ethical principles concerning the withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Be able to communicate with patients, families, members of the health care team, and colleagues in clear, English, using and understanding North American and Midwestern idiomatic English.
- At all times residents must interact with patients, their families, and the staff with a pleasant demeanor, in a calm fashion, and with respect. Inappropriate behavior is not tolerated.
- Residents must work with each other to provide cross coverage for hospital and clinic patients and for education activities.

**Systems-Based Practice:** Residents must be responsive and aware of the larger health care system and framework and will effectively utilize system resources to provide superior patient care. Residents are expected to:
- Practice cost-effective health care and resource allocation that does not compromise the patient’s quality of care or the health care system.
- Assist patients and their families who are navigating complex health care systems.
- Know the different types of health care systems and be able to work with other medical professionals to improve system performance.
• Understand how their patient care affects the patient and the patients’ families, society, the health care system and other medical professionals. Realize how the system components affect their practice.

The master spreadsheet of competencies along with the goals and objectives for each rotation are in the Appendix. The residents and supervising faculty are sent the goals and objectives along with the evaluation tool just before the beginning of each rotation. It is their joint responsibility to review these at the beginning of the month and to go over the evaluation of the resident by the faculty member at the end of each rotation.
Part 3 Work Environment
From the GME Housestaff manual section 5.8.3

The University of Kansas Medical Center will:

- Use its best efforts, within the limits of available resources, to provide an educational training program that meets the ACGME's accreditation standards
- Use its best efforts, within the limits of available resources, to provide the resident with adequate and appropriate support staff and facilities in accordance with federal, state, local, and ACGME requirements to orient the resident to the facilities, philosophies, rules, regulations, procedures and policies of the Medical Center, School, Department and Program and to the ACGME, and RRC, Institutional and Program Requirements
- Provide the resident with appropriate and adequate faculty and Medical Staff supervision and guidance for all educational and clinical activities commensurate with an individual resident’s level of advancement and responsibility
- Allow the resident to participate fully in the educational and scholarly activities of the Program and Medical Center and in any appropriate institutional medical staff activities, councils and committees, particularly those that affect Graduate Medical Education and the role of the resident staff in patient care subject to these policies and procedures
- Through the officers of the program and the attending medical staff, clearly communicate to the resident any expectations, instructions and directions regarding patient management and the resident participation therein.
- Maintain an environment conducive to the health and well being of the resident
- Within limits of available resources, provide:
  - Adequate and appropriate food service and sleeping quarters to the resident while on call or otherwise engaged in clinical activities requiring the resident to remain in the Medical Center overnight,
  - Personal protective equipment including gloves, face/mouth/eye protection in the form of masks and eye shields, and gowns. The Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control (CDC) assume that all direct contacts with a patient’s blood or other body substances are infectious. Therefore, the use of protective equipment to prevent parenteral, mucous membrane and non-intact skin exposures to a healthcare provider is recommended,
  - Patient and information support services,
  - Security, and
  - Uniform items, limited to scrub suits and white clinical jacket.
- Through the Program Director and Program faculty, evaluate the educational and professional progress and achievement of the resident on a regular and periodic basis. The Program Director shall present to and discuss with the resident a written summary of the evaluations at least semiannually.
- Provide a fair and consistent method for review of the resident's concerns and/or grievances, without the fear of reprisal.
- Provide residents with an educational and work environment in which residents may raise and resolve issues without fear of intimidation or retaliation including the following mechanisms:
  - The GME office ensures that all programs provide their residents with regular, protected opportunities to communicate and exchange information on their educational and work environment, their programs, and other resident issues, with/without the involvement of faculty or attending. Such opportunities include, but are not limited to, confidential discussion with the chief residents, program director, program chair, core program director, and/or core program chair. Other intradepartmental avenues to confidentially discuss any resident concern or issue occur during the Annual Program Evaluations completed by each resident and/or through
discussion with the resident representative during the required Annual Program Review (Annual
  o The internal review process, during which residents in each program are afforded the opportunity
to discuss their concerns about their programs with a resident from another program and have
them presented confidentially to the GMEC,
  o An ombudsman, the Assistant Dean for GME Administration, or any other member of the GME
staff, including the Executive Vice Chancellor, Senior Associate Dean and the Associate Dean,
who are available for the residents to bring any issues raised in these protected resident meetings,
or any other issues a resident may need to address,
  o Peer leadership and membership of the University of Kansas School of Medicine Resident
Council, who are available to confidentially receive any resident concern and present their
concerns to the Graduate Medical Education Committee and GME Staff
  o MedHub ‘On The Fly,’ praise and concern comments can be sent through MedHub directly and
confidentially to the program director. In addition, ‘On The Fly,’ comments can be
/confidentially sent to the DIO. This can be accessed through any resident’s MedHub user menu.
  o ACGME Resident Survey, administered directly to all residents in ACGME accredited Programs
with four (4) or more residents. This survey provides summary and anonymous feedback to
Program and GME Leadership. For programs with less than four residents the GME Resident
Survey, which is a confidential, anonymous survey organized by the GME office, is administered
annually.
  o A grievance process, as outlined in section 13 of this Manual, which provides the resident with a
formal mechanism for addressing serious concerns within their programs.
  o ACGME Department of Resident Services at residentservices@acgme.org or by phone (312)
7557498 is available

Part 4 – Didactics

Neurology Conference Schedule

Residents are expected to attend at least 70% of the lectures during their residency. The 70% benchmark
takes into account vacation and sick leave, NICU where the resident is excused from their regular lectures to
attend lectures in the NICU and Pediatric Neurology where residents are excused from Dr. McVey’s reading
conference March through December. Residents are expected to arrive on time for all lectures and conferences.
Residents are free to leave lectures at 8:30 am Monday through Thursday and Friday at 9:00 to attend their
assigned rotations, even if the lecture or conference is running over allotted time.

Podcasts

Certain didactic sessions are recorded for later podcast for residents who were not able to attend or to
review the subject matter

Lecture and Conference Schedule:

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>7:30–8:00 am</td>
<td>Morning report with Dr. Barohn</td>
</tr>
<tr>
<td></td>
<td>8:00–8:30 am</td>
<td>Lecture</td>
</tr>
<tr>
<td></td>
<td>5:30 pm</td>
<td>Neuro-Oncology tumor board</td>
</tr>
<tr>
<td>Tuesday</td>
<td>7:30–8:00 am</td>
<td>Lecture</td>
</tr>
<tr>
<td></td>
<td>8:00–8:30 am</td>
<td>Lecture or</td>
</tr>
<tr>
<td></td>
<td>6:30–7:30 am</td>
<td>Second Tuesday, monthly core competency lecture at</td>
</tr>
</tbody>
</table>
Wednesday 7:30–8:30 am Dr. McVey’s reading conference, followed by didactives or Monthly Neuro-Ophthalmology lecture

Thursday 7:30–8:00 am Morning report with Dr. Dubinsky
8:00–8:30 am Lecture or monthly Journal Club
Or
7:30–8:30 am First Thursday Pediatric Neurology conference for adult Neurology residents

Friday 7:00–8:00 am Neurology and Neurosurgery Case Conference
8:00–9:00 am Neurology and Neurosurgery Grand Rounds
9:00-10:00am Neurodegenerative case review with Dr. Newell, held every other month on the second Friday in the Surgical Pathology
10:00–11:00 Sleep Disorders lecture with Dr. S. Stevens, Fairway Building (elective residents)
12:00–1:00 pm Neuropathology Review with Dr. Newell, second Friday of each month, Kepes conference room, 5th floor Delp
Exceptions:
- Resident assigned to NICU attend the NICU lectures and conferences for that month
- Residents assigned to Pediatric Neurology attend their Grand Rounds every Wednesday from 8-9 am and the monthly Tuesday case conference.

Remote Viewing of Lectures:
The Emergency Neurology lectures in July and June will be recorded during AY 2015-16 for remote viewing and these will be used as incoming lectures in June 2016 for the Class of 2019.

Core Competency Lectures
Monthly core competency lectures are provided monthly through the Graduate Medical Education Committee. Attendance is required, either at the time of the lecture or viewing the podcast remotely through CHALK. Residents are required to attend or to view ALL OF THESE LECTURES during their training.

Conferences:
Academic productivity is one of the metrics that are used to measure both residents and faculty. Towards that end, we have developed a weekly series of conferences and lectures. Residents take more responsibility for formal teaching as they progress through their training.

Morning Report
On Monday and Thursday mornings morning report is held at 7:30 am in room 200, Landon Center on Aging. The residents on call over the weekend, or on Wednesday night are to be present to present their cases. The faculty lead the discussion about the cases. On holidays the Monday morning report is delayed until the next regular business day.

Curriculum Lectures
These lectures are on a two-year cycle covering most of adult neurology. Each topic incorporates the basic science, anatomy, neurophysiology, genetics, neuropharmacology and clinical aspects of a sub-discipline of neurology. Lectures are 30 minutes long and are given the faculty and by the residents. Topics include: neuro-degenerative disorders, multiple sclerosis and similar disorders, epilepsy, neuromuscular disorders, movement disorders, neuropsychological assessment, Evidence Based Medicine (utilizing the American Academy of Neurology EBM Toolkit©) and other topics.

Emergency Neurology Lectures
These lectures are designed to get the PGY2 resident up to speed and are held in July and August of each Academic Year. Unlike the more in-depth two-year curriculum lectures, these are geared towards the urgent evaluation and management of common neurological disorders and emergencies. Both faculty and senior residents give thirty-minute long lectures. These will be saved and viewable as podcasts.

Reading Conference
Each Wednesday morning Dr. McVey holds her reading conference. A textbook is assigned and chapters are read in advance of the lectures. There is a quiz to start the session and then discussion about the quiz and the subject matter. The materials are provided for the residents. In February Dr. McVey replaces these lectures with preparation for the Resident In Training Examination.

Monthly Lectures
On the second Tuesday of each month there is a mandatory core competency lecture provided by the University’s Graduate Medical Education Committee. These are from 6:30 am until 7:30 and breakfast is provided. Each month the Wednesday morning lecture is devoted to neuro-ophthalmology presentations by Dr. Whittaker at the KUMC Eye Clinic, 73rd and State Line.

**Journal Club**

Each month a resident presents an article of their choice for Journal Club. Either Dr. Gronseth or Dr. Dubinsky mentors them. The most important aspect of Journal club is for residents to develop the skills needed to quickly assess the medical literature to answer focused clinical, patient based questions. The question is oftentimes stated in the PICO format: Patient, Intervention, Comparison, and Outcome. One example would be in patients with suspected carpal tunnel syndrome are nerve conduction studies superior to peripheral nerve ultrasound for diagnostic accuracy. Journal clubs utilize the precepts of evidence-based medicine, which are continually taught to the residents throughout their training.

**Case Conferences:**

Each Friday from 7:00 am until 8:00 am there is a combined Neurosurgery and Neurology case conference. Usually the first case is presented by Neurosurgery, followed by any cases from community Neurosurgeons followed by a Neurology Case conference. These are assigned in advance and the resident is expected to prepare a 20-25 minute presentation. The format is usually a brief history of the case, a discussion led by a faculty member on the localization and differential diagnosis, followed by the rest of the talk. Residents are encouraged to seek out a faculty member to assist them in the presentation and discussion and to review Dr. Dubinsky’s brief lecture on how to give a talk. The slides sets are posted on our Department’s web site after any identifying information is removed.

**Grand Rounds**

Each Friday from 8:00 until 9:00 am there is combined Neurosurgery and Neurology Grand Rounds. Lectures are given by faculty members in both departments, other faculty on this campus and visiting professors and faculty candidates; highlighting their research and clinical focus. Towards the end of their senior year, residents present a Grand Rounds lecture.
Part 5 Training Overview

PGY 1

The first year of training is spent with Internal Medicine learning the basics of caring for patients. In AY 2015-16 five months are spent at the University of Kansas Hospital (KUH and seven months at the Kansas City Veteran’s Affairs Medical Center (VAMC).

PGY1 Learning Objectives

- Gather accurate, essential information from all sources, including medical interviews, physical examinations, medical records, and diagnostic/therapeutic procedures.
- Make informed recommendations about preventive, diagnostic, and therapeutic options and interventions that are based on clinical judgment, scientific evidence, and patient preference.
- Develop, negotiate, and implement effective patient management plans and integration of patient care.
- Perform competently the diagnostic and therapeutic procedures considered essential to the practice of internal medicine.
- Access and critically evaluate current medical information and scientific evidence.
- Develop clinically applicable knowledge of the basic and clinical sciences that underlie the practice of internal medicine and apply this knowledge to clinical problem solving, clinical decision-making, and critical thinking.
- Identify areas for improvement and implement strategies to enhance knowledge, skills, attitudes, and processes of care.
- Apply evidence-based, cost-conscious strategies to prevention, diagnosis, and disease management.
- Collaborate with other members of the health care team to assist patients in dealing effectively with complex systems and to improve systematic processes of care.

PGY 2

During the first formal year of neurology training the resident divides their time between the ward and consult services at KUH, the clinic and consult services at the Leavenworth and KC VAMC, Neurology Clinics at the Landon Center on Aging and Truman Medical Center. Call is taken at their assigned institutions for all except Leavenworth VAMC.

The first year of Neurology is weighted toward teaching the resident patient care responsibilities. The resident learns how to perfect their neurological exam. Three to four inpatient months are spent on the ward service, and one to two months spent on the consult service at KUH. Three to five months are spent at the Kansas City Veterans Administration Medical Center (KC-VAMC) with primary clinic responsibilities and some consult responsibilities. One or two months are spent doing clinics at the Landon Center on Aging. Here the residents receive a broad exposure to the full time faculty at both institutions and start to become proficient at the evaluation and management of the clinic patient. One month is spent at the Leavenworth VAMC. This unique experience involves the resident in the evaluation and management of inpatients, domiciliary patients, outpatients, consultations, and the performance of electrodiagnostic tests. Here they learn how the neurologist functions within the complex system of health care provided by the Leavenworth VAMC. Two months are spent on Night Floats/Clinics. Here the resident covers the inpatient services from 7 pm to 7 am, six days a week for two weeks, then rotates through the clinics at the Landon Center on Aging and our Fairway location for the other two weeks.

New in AY 2015-16 is a one month rotation with the Neurology Service at Truman Medical Center, in Kansas City, Missouri.
**PGY2 Learning Objectives:**

- To develop proficiency in the neurological interview and examination.
- To use these findings to generate a broad differential diagnosis starting with the most likely diagnosis.
- To understand the appropriate use of clinical and laboratory testing; and their indications, cost, specificity, and sensitivity. They also learn how to prioritize the tests based upon the ordering of their differential diagnosis, the prevalence of disease states and the likelihood ratio of the tests.
- To triage, stabilize and manage patients presenting to the ER with acute neurological disease.
- To learn how to coordinate and supervise a clinical team as well as partner with allied health team members to optimize patient care.
- To conduct appropriate literature searches and understand electronic patient information systems.
- To explain to the patient and family in a clear and respectful manner, information about the patient’s disease and prognosis.
- To present a case presentation with review of the literature at the Annual Resident Research Day.
- To demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, patient confidentiality, and informed consent.
- To take the USMLE 3 or COMLEX 3 examination.

**Description PGY3:**

The second year of neurology training continues to refine the resident’s abilities in patient care and also educates the resident about the specialized skills required of a neurologist. Residents spend time on the consultation services at KU and KC-VAMC. One month at Leavenworth-VAMC, a month at Truman Medical Center, one month is spent in the Neuro-Sciences Intensive Care Unit (NSICU), one month supervising the KUH ward service, and three months of elective. We are transitioning Pediatric Neurology to PGY-3, when that happens some of the one-month rotations will transition to PGY-4. One month is spent on Night Float/Consults

**PGY3 Learning Objectives:**

- To further refine the neurological interview and examination and to demonstrate a problem focused approach.
- To demonstrate a broadening fund of knowledge in neurological disease.
- To acquire proficiency in reading CT, MRI, and plain film studies.
- To understand gross and microscopic pathology and correlate it with clinical and neuroimaging information.
- To teach and manage a clinical team with medical students and residents from other programs rotating on service.
- To demonstrate knowledge of the principles of evidence-based medicine.
- To learn the basic principles of research under the guidance of a faculty mentor.
• To make informed decisions about diagnostic and therapeutic interventions based on patient preferences, current scientific evidence and clinical judgment.
• To competently perform lumbar punctures and basic electrodiagnostic studies.
• To work effectively as a neurologic consultant and be responsive to the patient’s referring physician(s).
• To develop and to sustain a therapeutic and ethically sound relationship with patients.
• To have taken and passed USMLE 3 or COMLEX 3

Description PGY4:
The final year of training is weighted towards rounding out the resident’s education with a three month rotation on pediatric neurology (if not done in PGY 3), psychiatry, one to two months of additional consult duty at KUH and KC-VAMC, one month in NSICU, one month supervising the ward service at KUH, one month of Night Float/Clinics and four months of elective time. Elective time is individualized based on the resident’s career plans.

PGY4 Learning Objectives:
• To demonstrate an increasing ability to function independently as a neurologist.
• To demonstrate an extensive fund of knowledge of common neurological disorders, some familiarity with rare disorders, and the ability to research the differential of a rare disorder based upon his or her own clinical evaluation.
• To provide advanced teaching of neurological disorders and exam techniques and to mentor junior neurology residents.
• To demonstrate sensitivity to pediatric patients and their families, and understand the different needs of the pediatric patient and their parents.
• To understand the utility of EEGs, Evoked Potentials and EMG/NCS.
• To recognize unusual patterns of disease and to learn when to request neurology subspecialty consultations
• To complete a research project with faculty guidance and present it in a scholarly fashion.
• To apply the methods of evidence-based medicine to the analysis of medical literature.
• To learn and make best use of different services provided by ancillary members of the pediatric health care team, including developmental specialists, geneticists, and behavioral psychologists.
• To develop his or her career path through seeking and evaluating job opportunities in fellowships and in practice.

Pediatric Neurology Fellow
The pediatric neurology fellow, or fellows, rotate at KUH functioning as a PGY2 resident in Neurology. The differences are that they do not rotate at the VAMCs, they will spend six month on inpatient services, three months in outpatient clinics and three months of adult neurology electives.
Scope of Practice:

The role of a resident is rigidly defined, as are the roles of nurses, therapists, attending physicians and all members of the health care team. Neurology residents are not to go beyond their scope of practice. For example, neurology residents are not to adjust ventilators or IV pumps.
Part 6 How we Do Things

Case Presentation

The neurology game consists of what is wrong, where is the lesion, and what to do about it. Otherwise know as the ‘Hunh,’ ‘Where,’ and ‘What.’ Thus the presentation of a case, whether on the wards, clinic, over the phone when on call, or at morning report, is vital to exchange the proper information in a formal fashion. The order of presentation is:

• History of current neurological problem
• Relevant past medical history
• Current medications
• Neurological examination:
  o Vital signs
  o Mental status examination
  o Cranial Nerve examination (in order please)
  o Motor examination: includes muscle bulk, tone, strength and subtle signs of weakness (e.g. pronator drift)
  o Sensory examination including the peripheral modalities (light touch, pin prick, pressure, temperature, vibration, proprioception) and when appropriate central modalities (finger identification, stereognosis, graphesthesia, etc.)
  o Coordination: this includes hand movements, trunk and leg movements, stance, gait and postural stability
  o Muscle stretch reflexes: biceps, triceps, knees, ankles, and pathological reflexes (present or absent)
  o Abnormal movements: tremor, etc.

Then you should have a three-sentence summary of the case:
This is a seventy-four year old, right-handed male, who is a retired minister with a history of essential tremor and Parkinson's disease. His current problems are end of dose dyskinesias, daytime hallucinations that are very bothersome to him and to his family. He is currently taking carbidopa/levodopa, ropinirole and quetiapine.

Inpatient Rotations

At the University of Kansas Hospital our department has a primary ward service, a stroke service (beginning in October 2013), a consult service, an Epilepsy Monitoring Unit (EMU) and the Neurological, Neurosurgical Intensive Care Unit (NICU). On the ward team two PGY2 residents, a pediatric neurology fellow, and rotating residents from Neurosurgery and Psychiatry care for the neurology inpatients. They are supervised by a senior (PGY3 or PGY4) neurology resident and one of several neuro-hospitalists, who cover the service for a week at a time. Morning rounds are held daily. On the weekends and holidays, residents are assigned to short and to long call to provide for continuity of care.

The stroke service is staffed by a PGY2 resident, a nurse practitioner, at times the vascular neurology fellow and is led by a vascular neurologist. The stroke service cares for patients admitted for cerebrovascular disease and they response to all stroke calls.

The consult service, consisting of one or more neurology residents, and rotating residents from Internal Medicine respond to all consults from the hospital and the Emergency Department (ED). Daily sit down rounds are held by the neurology attending physician prior seeing the consult patients.

Residents assigned to the KU ward, stroke, and consult services take in house weekend and holiday call at the University of Kansas Hospital in rotation along with the resident assigned at the Leavenworth VAMC. This is separate from the Night Float/Clinic rotation.
Combined Clinic and Consult Services

At the Kansas City VAMC the three residents staff the clinic and perform consults. To learn about and to perform clinical neurophysiological tests. The clinic patients include consults from other services and physicians and patients with neurological disorders whose care is provided by the Neurology clinic. At the Leavenworth VAMC residents see both clinic and consult patients are involved in performing and interpreting EEGs and EMGs. At both sites residents are responsible for the evaluation and treatment of patients in the Emergency Department.

The residents at the KC-VAMC divide the call, which is taken from home. The resident at Leavenworth VAMC takes call in rotation at KUH.

Night Float / Clinic Rotation

Beginning in AY 2014-15 the PGY2 and PGY3 residents took part in combined Night Float / Clinic months. Two weeks are spent on night float and two weeks in the clinic. From August through January the resident is assigned to he different general and subspecialty clinics by the program director. From January through June the resident may select specific clinics and that rotation must be approved by the program director.

TMC Neurology

KU Neurology residents who rotate through the neurology service at Truman Medical Center will participate in the care of adult neurology patients, splitting time roughly equally between the inpatient and outpatient settings. Under the supervision of attending neurologists, the neurology resident will assist in the evaluation and management of adults with neurological disorders in the clinic and on an inpatient consult service. The resident will cover neurology call from home on select weekends. The resident will also play a role in the education of rotating medical students, and will present cases as indicated at the weekly neuroradiology conference and clinical case conference.

Longitudinal Clinics

All residents in PGY2–4 have a weekly ½ day clinic at the Landon Center on Aging. These occur on Thursday and Friday morning and afternoons. The clinics are composed of residents from all three levels and are staffed by neurology faculty. The typical workload for a PGY2 resident is one new and two return patients and two to three new patients and two to three follow-up patients for more senior residents.

Patients are seen in follow-up from the Emergency Department, Neurology ward and consult services. Patients are also referred to our clinics by other departments and by community physicians. The resident is responsible for caring for their patients throughout the course of their illness.

Other Mandatory Rotations

Neuropathology / Neuroradiology

During PGY3 or PGY4 our residents spends one month working with both neuro-radiology and neuropathology. This is typically spent as a half day with each discipline.

NICU

Residents in PGY3 and 4 spend one month in the Neurological and Neurosurgical Intensive Care Unit (NICU). On the rotation residents provide care for patients with severe and life threatening neurological problems. Intensive care physicians from the Departments of Anesthesia and Neurology staff the NICU. These attending physicians rotate every week and should be contacted for any questions regarding patient care.
Residents are on call every fourth night in rotation with anesthesia and neurosurgery residents. Advanced Registered Nurse Practitioners are also used to provide continuity of care during the evenings. Residents are encouraged to take their Emergency / Critical Care Neurology NEX during this rotation. According to the ABPN rules, and our policies, this must be signed off by an ABPN board certified neurologist and not a by an anesthesiologist.

**Pediatric Neurology**

During PGY3 or PGY4 the adult neurology residents spend three consecutive months in pediatric neurology at Children’s Mercy Hospital. This is about 10 minutes away on the Hospital Hill campus of the University of Missouri-Kansas City. Under the supervision of faculty pediatric neurologists, and working with the pediatric neurology fellows, the adult neurology resident takes care of the evaluation and management of children with neurological disorders in the clinic and on a consult service. Our residents are not responsible for the overall care of pediatric patients.

Residents on this rotation are on rotating call from home under the supervision of the faculty pediatric neurologists.

**Supervising resident KUH wards**

During PGY3 and PGY4 neurology residents spend one month each year supervising the KUH ward service. They are responsible for the day-to-day management of the service, care of the neurology patients, and teaching of the residents and medical students on the service. They take over the patient management for residents who have gone home after call or who are in their longitudinal clinic. They pitch in to help cover when a resident is post call or in their longitudinal clinic.

Residents on this rotation take part in the call rotation at KUH.

**Psychiatry**

Our residents take a mandatory, one-month rotation in Psychiatry during PGY 4. This month is spent on the psychiatry in-patient consult service at KUH under the supervision of KU faculty psychiatrists.

In addition to the Neurology didactic lectures, the neurology resident also attend the Psychiatry didactic lectures Tuesday from 9:00–noon and Psychiatry Grand Rounds on Friday from 11:00–noon.

**Elective Guidelines**

**Clinical Electives:**

Residents are encouraged to develop month long clinical rotations covering many subspecialty neurology clinics, or focusing on a major area. Dr. Dubinsky must approve each elective. It is the responsibility of the resident to have the faculty that they will work with sign off on the clinical responsibilities for each half day during the week. Some possibilities are:

**EEG**

During PGY3 or 4 each resident may choose to complete a one-month rotation that concentrates on the technical aspects of EEG and the management of patients with epilepsy or suspected epilepsy. They read EEGs daily, admit, evaluate, manage and discharge the Epilepsy Monitoring Unit (EMU) patients, with the faculty epileptologist for that week.

**EMG**

During PGY3 or 4 each resident may choose to complete a one-month rotation that concentrates on the technical aspects of nerve conduction studies and electromyography (NCS and EMG) and in the evaluation and management of clinic and hospital consult patients with neuromuscular, or suspected neuromuscular disorders.
Neurobehavior
Residents work with the faculty clinicians, ARNPs, and researchers in the clinical evaluation and management of patients with cognitive impairment and behavioral problems

Headache Elective
Residents can structure an elective to spend time in adult headache clinics and in the pediatric Headache Clinic with Jennifer Bickel, MD. During this month they can arrange for training with Dr. Dubinsky the injection of Botox® (onabotulinum toxin) for the treatment of chronic daily headache (also known as chronic migraine headache).

Neuro-ophthalmology Elective
The resident works directly with Thomas Whittaker, MD, JD in the evaluation and management of patients with neuro-ophthalmological disorders.

Sleep Medicine Elective
The resident works with M. Suzanne Stevens, MD, and our sleep disorders fellow in the evaluation and treatment of patients with sleep disorders. This includes both clinic and the interpretation and scoring of polysomnographic sleep studies.

Movement Disorders Elective
The resident works with Drs. Pahwa and Dubinsky seeing patients with a wide variety of hypokinetic and hyperkinetic movements disorders. They also participate in chemodenervation clinic.

Research Elective
Residents may develop an elective for one month, or longer, in either clinical or basic science research. Dr. Dubinsky must sign off on the elective before it starts. The resident is required to have a research mentor, a project, and a product at the end of the rotation.

Design your own elective
In conjunction with a faculty member and the program director a resident may design their own one-month elective in an area not covered above. One such custom elective is an Evidence Based Medicine resource elective, where the resident on elective searches the literature to determine research answers to clinical questions from the Hospital Services.

Away Electives
At the moment, on a case-by-case basis, electives are possible at institutions outside of our core hospitals. Making arrangements for an away rotation is an arduous task that must begin many, many months prior to the planned rotation. It is uncertain that funding for away rotations will be available in the future. The resident must be involved in hands-on patient care during an Away Elective. Not being involved in active patient care or research is an observership and is vacation, not an elective.

Hand-Offs
Transitions in care are difficult. Every effort must be made by our residents for smooth transitions in care. The key elements in care transitions are:

- The patient knows who is providing care for them at the resident and at the faculty levels.
  - The resident introduces themself to the patients when they first meet, and when another resident takes over.
  - The faculty introduce themselves to the patient when they first meet.
• Service hand-off is handled in person at the start of each call day and at the end of the day the residents check out to the on-call resident. Hand-off is supervised by the attending for that service. After it has been determined that the residents are capable, unsupervised hand-off can occur in the mornings. Starting in 2015 we use POC surveys to be completed by faculty witnessing hand-off to document resident proficiency.
• Faculty are present for the morning and the afternoon huddle, and service handoff to the night resident occurs during the afternoon huddle, which takes place in person.
• A service census is available through the KUH electronic health record (O2, for Optimal Outcomes). Using the O2 hand-off tool a resident generates the checkout sheet. This has the pertinent demographic information, urgent test results to be followed up and current treatment. It is preferred that this be kept electronically and then wiped from memory. If a paper copy is used it must be placed in a shred box when done.

Night Float and The Special
Beginning in August 2014 we have instituted a Night Float System. Two residents each month are assigned to Night Float/Clinic Rotation. For the first half of the month one resident is on night float and the other is assigned to the clinic, and then they switch. Night float coverage is 7 pm to 7 am Monday evening through Sunday morning. A senior resident is on 24-hour call Sunday 7 am until Monday 7 am and on holidays The inpatient and consult teams must be physically present and get check out from the night resident before 7:00 am.

The Special gets hand-off from the three teams at 4:30 pm, takes care of consults (ED and inpatient) until 7:00 pm when they hand off to the night float resident.

Transitions in Care
Important transition in care occurs at transfer between services and at discharge form the hospital. Transfers to and from the NICU are handled by hand-off between attending physicians and hand-off between the residents.

Planning for discharge transition starts at the time of admission. Planning is reviewed and acted upon daily during the morning and afternoon huddles. The morning huddle is intra-disciplinary.

Transitions in care also occur at the end of residency training. Patients are assigned to the supervising attending or residency program director, until that patient is seen in the resident clinic. The attending will be assigned any pending laboratory or clinical studies.

Notes
Adequate chart documentation is important for patient care and patient safety. It allows others to look at the medical record, determine what has happened, what is currently happening and what the plans are for the immediate future. Do not cut and paste notes. This is unprofessional behavior and hinders rather than helps communication. Copying someone else’s note, be it a resident or an attending is plagiarism, which will lead to disciplinary proceedings and possible dismissal from the program. Templates are perfectly acceptable and some examples are in the Appendices.

Residents may not enter anything into someone else’s note. If the plan changes during rounds, a member of the resident team should document this in a separate note rather than changing the note of a resident who is not available.

Do not fight in the medical record. This is also unprofessional behavior. If a member of a health care teams has documented multiple attempts to contact you, start your note as ‘I received a page at 7:10 pm to perform a neurology consult for a question of…..’
Part 7 Evaluations

The Next Accreditation System (NAS) and Grades

The 29 milestones in Neurology, are mapped onto the six competencies. The levels of the milestones are based on Dreyfus model of learning. (Dreyfus 1980) These stages are analogous to Levels 1-5 in the milestones, but are not equivalent to post graduate year (or level) of training (PGY). Each level requires mastery of the one below.

A novice learner knows the rules, applies them without explicit responsibility and has to do everything by rote. They require constant supervision

A proficient learner knows, the rules, accepts limited responsibility yet needs close supervision or oversight. They can filter out unnecessary elements in their presentations, but still need to do most everything in their evaluations

A competent learner is able to filter out the unnecessary elements quickly in their clinical encounters and presentations. They not only grasp the nuances of common presentations of common disease, but also the common presentation of uncommon disease. They prioritize their evaluation based on the likelihood of the disorders in their differential and re-evaluate frequently

An expert learner quickly grasps the nuances of the situation. They develop a hypothesis, test it on the fly with questions, examination and tests and constantly re-evaluate and adjust accordingly.

A master learner likes surprises. They seek out the exceptions to the rules and thus expand our overall knowledge of a subject. They challenge assumptions and in doing so advance the field. They are actively engaged in research in their discipline.

For example, if a resident can correctly identify a patient as having progressive supranuclear palsy (level 3 or 4), yet state that deep brain stimulation is the preferred treatment for a patient with the recent onset of Parkinson’s disease (failed level 3), they are performing at level 2, as long as they can tell the difference between hyper and hypokinetic disorders (level 2).

The complete Neurology Milestone Matrix is in the Appendix.

Program Evaluation

Our program is continually evaluated through the monthly meetings of the Program Education Committee (PEC), monthly faculty meetings, formal evaluations through MedHub and informal evaluations and discussions. A formal report is filed through WebAds (ACGME) and for the institution and NAS through REDCAP.

Program Education Committee:

Background: The PEC is required by the Common Program Requirements in 2013.

Charge: The PEC is charged with annually reviewing the entirety of the Neurology residency program at the University of Kansas Medical Center. This includes the curriculum, rotations, goals and objectives, handbooks (program and GME house staff), evaluations of the program by residents and faculty, academic productivity of the program, residents and faculty, RITE scores and ABPN pass rate.

Membership: One member from each level is appointed by their peers to the PEC, Chief Resident, Program Director and Associate Program Directors.

Meetings: The PEC meets quarterly and conducts the annual review in August following the close of each academic year.
Report: At the completion of each Annual Review the PEC issues a report and action plan that become part of the self study for the NAS.

Resident Evaluation Tools
The forms used for resident evaluations are based in the NAS milestone and are in Appendix 1. Please see Appendix 2 for rotation Goals & Objectives.

Residency In-service Training Examination
The American Academy of Neurology Resident In-Service Training Exam (RITE) is administered in late February or early March each year. The performance of each resident is reviewed by the program director to target educational areas that need to be strengthened in the curricula. Residents who perform in an unsatisfactory fashion on their clinical rotations or on this test are assigned a faculty mentor for remedial one on one tutoring.

A score of 65% correct is strongly predictive of passing the American Board of Psychiatry and Neurology (ABPN) written neurology examination on the first try.

ABPN Clinical Skills Evaluation of Residents
To graduate and to take the ABPN examination each resident must pass the five Neurological Evaluation Examinations (NEX). These are patient encounters that are witnessed by a board certified neurologist, or neurologists and last 45 minutes. During this time the resident is to take the history, perform an appropriate examination and then to discuss their assessment and plan with the patient, even though they are not assuming care of the patient. The neurologists grade the resident’s performance using the NEX forms (see Appendix 2). Five examinations must be passed to graduate. They are: neuromuscular, neurodegenerative, ambulatory, pediatric neurology, and critical care / emergency neurology. It is the duty of the resident to arrange for these examinations during the appropriate rotations. The examinations must be given and signed by a board certified adult neurologist or pediatric neurologist.

Three of these witnessed examinations are given during Mock Orals, which are usually held the first Saturday in May. In front of a faculty and community neurologist, each resident examines a patient over 45 minutes. Afterwards their performance is discussed with the senior neurologists. The residents are evaluated over several domains and assigned a numeric score. The most important is the overall score, which involves these questions: Did the resident pass at their current level of training? And, did they pass at a graduate level? It is possible, though rare, for a resident to pass at a graduate level while a PGY2.

The NEX may be taken as often as needed for the resident to pass, but they must pass by the end of their residency, otherwise they can’t sit for the ABPN examination. While according to the ABPN rules the NEX may be taken after graduation, our program is under no obligation to provide these for you after graduation. Thus far we have charged former graduates $750 per exam to complete these post residency. You have seven years from the date of your last NEX to pass the ABPN written examination, if not you start over again.

_These are set pieces, like a recital, to prove that you can do the necessary parts of an examination. Thus they are a minimal standards test and the majority of the documentation provided by the examiners is on what the resident failed to do, rather than what they did well._

Assessment by Medical Students
Starting in AY 2013-14 medical students evaluate resident through the E-Value system. They students self select residents to evaluate based upon their contact with the residents.
Chart Review

In addition to the NAS Milestones from the Neurology Residency Review Committee (RRC) are Entrustable Professional Activities (EPAs). These are elements of the practice of medicine and neurology that once mastered a resident should be able to always execute properly. One of these is chart documentation. Periodically throughout residency the trainee will be asked to select several charts for review by the program director or associate program director to determine their ability to document clinical encounters.

Resident Case Log

The Neurology RRC does not require case logs. However almost all hospital credentialing committees do require case logs and procedure logs. It is your responsibility to keep track of these or to try to obtain them through the Electronic Health Record (EHR).

360° Evaluation

Each year the residents evaluate each other; and patients, nursing personnel and administrative personnel, evaluate them.

Resident Portfolio

We will help you to develop your portfolio. This contains all of you presentations (case conference, grand rounds, research day presentation, etc.), papers, practice based learning, quality improvement and quality measurement project. Also included are you evaluations, RITE scores, NEX results, letters of recommendation and biannual evaluations.

Clinical Competency Committee

As part of the Next Accreditation System (NAS) we have formed a Clinical Competency Committee for residents in PGY2–4. The Clinical Competency Committee of the Department of Medicine, at KUMC, evaluates PGY I residents. The Neurology CCC is chaired by D., Mamatha Pasnoor, the associate program director and includes:

• At least two hospitalists, Dr. Sachen who is in charge of the Resident Longitudinal Clinic
• JoAnne Locke, RN, the clinic nurse in support of the residents
• Nursing staff from the Neurology and NICU floors, and
• Sonja Fbricius, education coordinator, as staff support.

This committee meets each Academic Year (AY) in December and in June. Resident evaluation scores are shared along with the aggregate scores on all 29 milestones. A consensus is reached on the level for each of the 29 milestones. The results are shared with the resident at their biannual evaluation with the program director.

This committee advises the program director as to the competency of each resident. The program director has the ultimate decision and reports progress of the milestones to the ACGME through WebAds.

Residency Steering Committee

This committee meets quaterly to cover the day-to-day management of the residency program. It is composed of: Dr. Dubinsky, program director, as chair, associate program director Dr. Pasnoor, the chief resident, and a resident elected by their peers from each level of training, and the education coordinator.
Biannual Evaluation

In early January and late June of each academic year the all residents meet with the program director to review their progress. At that time these items are reviewed:

- Evaluations from each rotation
- Clinical Competency Committee review
- Case presentations
- RITE scores (June of each year)
- NEX performance and mock orals (June of each year)
- 360° evaluations
- Chart review
- Conference attendance
- Medical student evaluations
- Resident portfolio
- Research day presentation
- Career plans

Criteria for Advancement:

The Clinical Competency Committee and the program director look at all aspects of the resident to determine if they will advance to the next level of training. Overall, we are looking for maturation of the resident, increase in their medical knowledge, increasing responsibility in patient care, and increasing ability to deal with uncertainty.

USMLE 3 or COMLEX 3

All residents must take USMLE 3 or COMLEX 3 to matriculate into PGY3. They must pass USMLE 3 or COMLEX 3 to matriculate into PHY4. Their certificate of training is held if they do not pass by their completion date and we can’t verify training until these examinations are passed.

ABPN Certification

All residents are expected to pass the ABPN certification examination in adult neurology on their first try. The best time to take this examination is just after graduation. The resident must apply in the winter of their senior year. We will complete the Pre-Certification to verify training for the resident with the ABPN. A permanent state license is required by early September of the year that the resident sits for the examination. Otherwise, their examination fee may be forfeit.
Part 8 – Research Initiatives

Resident Research Experience

Each year we present a series of basic lectures on the principles of clinical research. Residents are encouraged to participate in clinical or basic science research with a faculty mentor. Elective months may be spent in research. To do so, a resident must make arrangements ahead of time for a faculty mentor, research project, and a research product (e.g. paper, poster, abstract, planned publication).

Resident and Fellow Research Symposium

On the second or third Friday of June all residents (PGY2–4) and fellows participate in Resident Research Day. Everyone presents a 10-12 minute platform with 3-5 minutes available for questions and discussion. PGY2 residents generally present a case report or case series and the more advanced residents present research testing a hypothesis. This can be a large case series, systematic literature review, basic science or clinical research, etc. Residents are encouraged to work with a faculty mentor. Dr. Pasnoor is in charge of Research day and will post deadlines for title, abstract, and slides.

Residents are encourage to submit their Research Day abstract the next spring for the Resident and Post-Doctoral Fellowship Research Day, usually in May.
Part 9 – Policies

Policy on Selection of Residents

Residency candidates are invited to interview with our residency program based on these criteria:

• Performance in medical school, as shown on their official transcript and Dean’s letter
• Performance in the basic and clinical science years, as evidenced by the Medical Student Performance Evaluation (MSPE)
• Performance on the USMLE Step 1 and Step 2 or COMPLEX 1 and 2 examinations
• A letter of reference from the Chairman of Neurology at their medical school
• Two additional letters of reference, preferably from Neurologists

Level of Appointment Guideline

On occasion, a resident may change core programs. Please see section 29.7 PGY Level Appointment Guidelines in the GME manual:

- Residents that Change Core Programs will start the new program at the core program PGY 1 level or if applicable in an advanced program at the PGY 2 level. (updated 8/15/14)

Communication competency requirement

From the GME manual, section 4.1.3

Applicants are required to demonstrate spoken, auditory, reading, and writing proficiency in the English language. This is determined during the application review and in the interview process.

International Medical Graduates

International Medical Graduates applying for a Neurology residency at the University of Kansas Medical Center are selected on the basis of the same criteria as above. In addition, they must have the following:

• ECFMG certification at the time of application to the residency program
• Employment Authorization Documentation (EAD) or Green Card, or
• The applicant must have a J1 visa at the time of application. For holders of H1 visas, these must be converted to J1 by the start of training. We do not sponsor H1 visas.

In addition, a foreign graduates medical school must be included in the list of “approved” medical schools on the KSBHA’s website (http://ksbha.org/medicalschoolsapprovedunapproved.html) and the school must not appear on the list of “disapproved” schools

Candidates who are more than five years after graduation or who have failed USMLE of COMLEX multiple times are not considered as candidates for our residency program.

The Neurology Residency Selection Committee, consisting of the chair, residency program director, the associate director, faculty members and residents meet jointly to review all candidates and to determine our rank order list. In addition to the criteria above, we consider personal and professional traits, based on interviews with the Program Director and several other faculty and residents in the Department of Neurology at the University of Kansas Medical Center

We fully support the All In policy of the National Residency Match Program (NRMP) and will not make or consider any offers outside of the Match and the post match SOAP program.
Policy on Resident Supervision

Each resident is assigned a faculty supervisor for each rotation or clinical experience (inpatient or outpatient). The level and method of this supervision is consistent with the ACGME Special Requirements for Neurology.

Explicit and written descriptions of lines of responsibility for the care of patients are provided in the core curriculum descriptions for each required rotation.

Residents and faculty are provided with personal pagers for rapid, reliable systems of communication. This helps to insure appropriate involvement of supervisory physicians in a manner appropriate for quality patient care and educational programs. Phone and pager numbers of the staff and residents are provided in the appendix via electronic mail and laminated cards distributed at the beginning of each academic year.

Each faculty member with direct supervision of the resident provides a written summary of their assessment of the resident’s performance during the period that the resident was under their direct supervision.

The Program Director counsels and provides written evaluations of each resident at least twice during each year of training. The purpose of this counseling is to provide feedback to the resident on clinical performance and suggest ways for the resident to improve his or her knowledge and skills.

The Neurology Residency Committee meets monthly to address the performance and concerns of the educational activities of the residents. This information is also presented at the monthly Faculty meetings.

The Program Director advances residents to positions of higher responsibility on the basis of evaluation of their readiness for advancement. This advancement is dependent on the resident’s performance and maturation throughout their training. The Program Director and Sonja Fabricius, education coordinator maintain individual resident folders with monthly and semiannual evaluations. These folders also include results of the Neurology Residency In-Training Examination (RITE) and Mock Oral Boards. This file is available for residents to review upon request and most evaluations are available for review through MeHub.
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* F = faculty
R = senior resident
√√ Primary supervision
√ Secondary supervision
** Patient contact rare
Policy on Progressive Responsibility for Patient Management

As shown in the above policy of supervision, the resident is given more responsibility for patient management as they progress through their training. As the resident enters into PGY3 and PGY4 they are expected to be able to assume responsibility for all care for their patients, yet remain under the supervision as detailed above. This progressive responsibility also encompasses awareness of fatigue and fatigue mitigation.

Policy on Resident Work Hours

Each month the program director reviews the duty hour logs for potential violations and may request clarification from residents regarding their logged hours. To be compliant with the ACGME duty hour rules it is imperative that residents log their hours in a timely fashion.

Policy on Fatigue

Fatigue is insidious. People with impairment due to fatigue have a loss of insight into their level impairment. In numerous studies, including at least one with residents, impairment due to fatigue was directly compared to alcohol-induced impairment. After starting work at 7 am, residents were impaired from a motoric and a cognitive standpoint to an equivalent BAC of 0.08, or legally intoxicated. By daylight the next morning their impairment had improved to the equivalent of a BAC of 0.05, which is still impaired. More importantly all of the residents underestimated the degree of their impairment.

Therefore, it is imperative that residents learn to recognize impairment and situations that can lead to impairment.

To mitigate fatigue we have a call room in the southwest corner of the 8th floor of the hospital, the neurology floor. Residents have access to this room 24 hours a day. Thus after call a resident can nap in the call room and then return home. We also have cab vouchers available to transport a resident home after call and to return them back to work the next morning. These vouchers are kept in the resident’s workroom on the 8th floor. Please notify the Sonja Fabricius, Education Coordinator and Dr. Dubinsky when they are used so we can complete the necessary paperwork and to replace the used voucher.

Vacation Policy

From the ABPN requirements: Training programs may schedule individual leave or vacation time for residents in accordance with the overall institutional policy. Leave or vacation time may not be utilized to reduce the total amount of required residency training or to make up deficiencies in training

Residents are allowed three weeks of vacation per year and two weeks of sick time. Refer to GME policy 5.5.11 and 5.5.12

Vacations are scheduled in advance by the Chief Resident and are distributed throughout the academic year to provide adequate coverage for all services. Unused vacation time, like sick leave, can’t be carried over into the next academic year.

Vacations are not taken during NICU rotation months, nor are they allowed on the Saturday of The Examination Formerly Known as Mock Orals, Research Day, the first two weeks of July or the last two weeks of June. In general residents are not allowed to take more than one week off during any given month long rotation. The exception is that senior residents may take vacation during the last two weeks of their final month of training to move their household before starting their next job.

Vacation leave is used for interviews.

Residents are considered yearly employees and can’t carry over vacation or sick leave from one year to the next.

Academic Leave

On a case-by-case basis residents are granted up to five days of academic leave each year to present at national meetings. Academic leave is not used for interviews.
FMLA

GME Policy 5.5.13 addresses leave without pay for reasons that meet FMLA. Meet with HR to see if you qualify for FMLA and discuss payments for benefits, if paid time is exhausted. Oftentimes residents use FMLA for Maternity or Paternity leave.

A reading elective is not available to extend time away from training.

Disability

Disability insurance is provided by the University for all residents and was covered at orientation. Short-term disability is available at cost, and was covered at orientation. If you are interested in this please consult the GME handbook and Human Resources.

Policy on Evaluation and Promotion of Residents

Each resident is on a year-to-year contract. Failure to adequately advance across all the professional domains, unprofessional behavior, endangerment of patients, combined with failure to take corrective action as mandated by the program director, associate program director, or department chair results in non-renewal of the resident’s contract.

Residents must take the USMLE part 3 (or COMLEX part 3) before the end of their PGY2 year. They must pass the examination prior to entering PGY4. If this is not completed by the planned end of their training, the certificate is withheld until such time that they have passed the examination and their training is considered unfinished. That means that the resident’s training can’t be verified and they can’t obtain a permanent medical license.

The decision to promote a resident to the next level of training in made by the program director with the advice of the Clinical Competency Committee. Data used to make this decision include monthly evaluations, lecture attendance and participation, resident presentation, 360° evaluations, RITE scores and the report of the Clinical Competency Committee. Whenever possible 120 days notice will be given to a resident that they will not be promoted to the next level or that their contract will not be renewed.

Residents who are not progressing as expected in their training (e.g. a RITE score < 15 %tile for rank) may be placed on academic remediation. Remediation is a period of intense supervision and guidance to improve the resident’s knowledge of Neurology. It is not reported to any credentialing agencies, potential or future employers. It does not appear on the end of residency summative evaluation.

Policy on Evaluation of Faculty and of the Residency Program

For each rotation the residents are assigned reviews of the appropriate faculty members for their rotation. Sonja Fabricius, Education Coordinator, arranges this. These are confidential reviews. Among the faculty, only Dr. Dubinsky can view the individual level reviews, and he can’t view his, only Dr. Pasnoor may view his. These are summarized, comments edited as appropriate, and presented to the Chair each January as a Teaching Report Card for the faculty member’s annual evaluation.

Through the quarterly Education Committee meetings, yearly program review, and ad lib conversations, the program is reviewed each year and changes implemented.

Policy on Support for Resident Travel to Scientific Meetings

The Department of Neurology will send each resident to at least one national neurology meeting. From time to time scholarships are available from the AAN or other sources that are condition specific. Generally these scholarships are offered to senior residents. The department will reimburse a resident up to $1,500 to
attend a national meeting where they are presenting a poster or platform for work that was performed as part of their neurology residency at KU.

**Moonlighting Policies**

No, you may not moonlight. You are here to become a neurologist. All of your professional time for the four years of training should be directed towards this goal.

**Computer Security**

In addition to completing the on-line tutorials on computer security, residents may not share their passwords to the computer systems at the University of Kansas Medical Center or affiliated hospitals and clinical sites. They may not sign into these systems with another’s password. Doing so may terminate your employment as a resident.

**Social Media Policy**

Please see: [http://policy.ku.edu/KUMC/information-technology/social-media](http://policy.ku.edu/KUMC/information-technology/social-media) for the most recent version of the University’s social media policy.

**Ombudsman**

An ombudsman is available to assist residents. In the GME handbook please see section: 7.9 Ombudsman Guidelines for Residents

The Ombudsman is an academic faculty member in good standing without alignment or administrative connection to either program leadership or School of Medicine/GME Leadership. The Ombudsman will serve as a sounding board/resource to residents with questions or concerns about their program, faculty, or school of medicine.

Residents may access one of the three Ombudsmen by email ombudsmanbecker@kumc.edu, ombudsmanfink@kumc.edu or ombudsmanhoward@kumc.edu.
Part 10 Bibliography for Adult Neurology Residents

The Dykes Library collection of electronic journals is accessible through any computer on the KU campus. Through the secure server at my.kumc.edu all the same resources are available off campus. This includes 13,000+ journals, Access Medicine textbooks, and the Cochrane Library. While NEJM is not part of the Dykes E-Journal collection all NEJM articles funded by US Government grants are available for free.

Residents have access to all issues of Neurology, Clinical Neurology, Neurology Podcasts, Continuum and Audio-Continuum through their junior membership in the AAN, provided for all residents.

Strongly Suggested Textbooks:
P Gy2
- Manter and Gatz's Essentials of Clinical Neuroanatomy and Neurophysiology, 10th Edition (Gilman and Newmann), 2002 $40.40
- Introduction to Neuropsychopharmacology. Iversen, Iverson Bloom and Roth, 2008 $42.09
Total: $307.99 –plus tax, shipping and handling. Prices from Amazon.com subject to change.

PGY3 and PGY4
- Principles of Neural Science, Eric Kandel, 5th Edition, $98.87
- Osborn's Brain: Imaging, Pathology, and Anatomy, Anne Osborn, 2012, $331.55

Worth buying if you can find it:
- Core Text of Neuroanatomy, Malcom Carpenter, 1991 $57.04

General Neurology
AAN Practice Parameters cover a broad range of topics and are available at AAN.org.

Cochrane Collaboration is available through the Databases section at the Dykes Library web site.
Other texts suggested by the faculty:


DeAngelis CD, Fontanarosa PF. Conflicts over Conflicts of Interest. JAMA. 2009

Inzucchi SE. Diagnosis of Diabetes. NEJM. 2012;367:6


**Dementia:**

**Epilepsy**
Kwan and Brodie, NEJM, 342: 314-19
Wiebe and Jette, Nature Rev Neurol, 80: 669-677
Brodie and Sills Seizure, 20: 369-75
Wiebe et al., NEJM, 345: 311-18

**Movement Disorders:**


**Multiple Sclerosis**

**Neuromuscular Diseases:**
Continuum issue on Neuromuscular diseases and on ALS.

In neuromuscular, it is important for residents to learn about approach to peripheral neuropathy (being published in N Clinics of N Am by Barohn and Amato) and GBS (being published in N Clinics of N Am by Dimachkie and Barohn). There probably should be a third one on MG and MG crisis management


Intravenous immunoglobulin for *myasthenia gravis*.
Inclusion body myositis.

Idiopathic inflammatory myopathies.


Central Neurophysiology:

Stroke and Cerebrovascular disease:

Albers GW, Clark WM, Madden KP, Hamilton SA. ATLANTIS Trial Results for Patients Treated Within 3 Hours of Stroke Onset. Stroke. 2002;33:493.

Chimowitz MI, Lynn, MJ, Howlett-Smith H, et. al. for the Warfarin–Aspirin Symptomatic Intracranial Disease Trial Investigators. NEJM 2005;352:1305


Gurm HS, Yadav JS, Fayad P, et. al, for the SAPPHIRE Investigators. Long-Term Results of Carotid Stenting versus Endarterectomy in High-Risk Patients. NEJM 2008;358:1572


Kelly AG, Rothwell PM. Evaluating patients with TIA To hospitalize or not to hospitalize? Neurology 2011;77:2078


Nguyen-Huynh MN, MD; Johnston SC. Is hospitalization after TIA cost effective on the basis of treatment with tPA? Neurology 2005;65:1799.


**Patient Safety and Quality Measures:**


**Other:**
Dreyfus SA, Dreyfus HI. A Five Stage Model of the Mental Activities involved in Direct Skill Acquisition. UC, Berkeley.
Revision History

This section is not used for the initial version of each Academic Year
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</tr>
</thead>
<tbody>
<tr>
<td>July 18</td>
<td>Welcome Party</td>
</tr>
<tr>
<td>February 18-21</td>
<td>RITE</td>
</tr>
<tr>
<td>April 15-21</td>
<td>AAN</td>
</tr>
<tr>
<td>April 30</td>
<td>Witnessed Clinical Examinations</td>
</tr>
<tr>
<td>June 3</td>
<td>Ziegler Lecture</td>
</tr>
<tr>
<td>June 17</td>
<td>Research Day and Graduation</td>
</tr>
</tbody>
</table>
Appendices:

Neurology Milestones
NEX forms
Chart Documentation
<table>
<thead>
<tr>
<th><strong>History – Patient Care</strong></th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Obtains a neurologic history.</td>
<td>• Obtains a complete and relevant neurologic history.</td>
<td>• Obtains a complete, relevant, and organized neurologic history.</td>
<td>• Efficiently obtains a complete, relevant, and organized neurologic history.</td>
<td>• Efficiently obtains a complete, relevant, and organized neurologic history incorporating subtle verbal and nonverbal cues.</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

<table>
<thead>
<tr>
<th><strong>Neurological Exam – Patient Care</strong></th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Performs complete neurological exam.</td>
<td>• Performs complete neurological exam accurately.</td>
<td>• Performs a relevant neurological exam incorporating some additional appropriate maneuvers.</td>
<td>• Efficiently performs a relevant neurological exam accurately incorporating all additional appropriate maneuvers.</td>
<td>• Consistently demonstrates mastery in performing a complete, relevant, and organized neurological exam.</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
<table>
<thead>
<tr>
<th>Localization – Medical Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Attempts to localize lesions within the nervous system.</td>
</tr>
<tr>
<td>• Describes basic neuroanatomy.</td>
</tr>
<tr>
<td>• Localizes lesions to general regions of the nervous system.</td>
</tr>
<tr>
<td><strong>Comments:</strong></td>
</tr>
<tr>
<td>• Accurately localizes lesions to specific regions of the nervous system.</td>
</tr>
<tr>
<td>• Efficiently and accurately localizes lesions to specific regions of the nervous system.</td>
</tr>
<tr>
<td>• Describes advanced neuroanatomy.</td>
</tr>
<tr>
<td>• Consistently demonstrates sophisticated and detailed knowledge of neuroanatomy in localizing lesions.</td>
</tr>
</tbody>
</table>
### Formulation – Medical Knowledge

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Summarizes history and exam findings.</td>
<td>• Summarizes key elements of history and exam findings.</td>
<td>• Synthesizes information to focus and prioritize diagnostic possibilities.</td>
<td>• Efficiently synthesizes information to focus and prioritize diagnostic possibilities.</td>
<td>• Consistently demonstrates sophisticated and detailed knowledge of pathophysiology in diagnosis.</td>
</tr>
<tr>
<td>• Identifies relevant pathophysiologic categories to generate a broad differential diagnosis.</td>
<td></td>
<td>• Correlates the clinical presentation with basic anatomy of the disorder.</td>
<td>• Accurately correlates the clinical presentation with detailed anatomy of the disorder.</td>
<td>• Effectively educates others about diagnostic reasoning.</td>
</tr>
</tbody>
</table>

**Comments:**
## Diagnostic Investigation – Medical Knowledge

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Demonstrates general knowledge of diagnostic tests in neurology.</td>
<td>• Discusses general diagnostic approach appropriate to clinical presentation.</td>
<td>• Individualizes diagnostic approach to the specific patient.</td>
<td>• Explains diagnostic yield and cost effectiveness of testing.</td>
<td>• Demonstrates sophisticated knowledge of diagnostic testing and controversies.</td>
</tr>
<tr>
<td>• Lists risks and benefits of tests to patient.</td>
<td>• Accurately interprets results of common diagnostic tests.</td>
<td>• Accurately interprets results of less common diagnostic testing.</td>
<td>• Recognizes indications and implications of genetic testing.</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>• Recognizes indications of advanced imaging and other diagnostic studies.</td>
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<tr>
<td>Management/Treatment – Patient Care</td>
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<tr>
<td><strong>Level 1</strong></td>
<td><strong>Level 2</strong></td>
<td><strong>Level 3</strong></td>
<td><strong>Level 4</strong></td>
<td><strong>Level 5</strong></td>
</tr>
<tr>
<td>• Demonstrates basic knowledge of management of patients with neurologic disease.</td>
<td>• Discusses general approach to initial treatment of common neurologic disorders, including risks and benefits of treatment.</td>
<td>• Individualizes treatment for specific patients.</td>
<td>• Adapts treatment based on patient response.</td>
<td>• Demonstrates sophisticated knowledge of treatment subtleties and controversies.</td>
</tr>
<tr>
<td></td>
<td>• Identifies neurologic emergencies.</td>
<td>• Initiates management for neurologic emergencies and triage patient to appropriate level of care.</td>
<td>• Identifies and manages complications of therapy.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Appropriately requests consultations from non-neurologic care providers for additional evaluation and management.</td>
<td>• Independently directs management of patients with neurologic emergencies.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Appropriately requests consultations from a neurologic subspecialist for additional evaluation or management.</td>
<td></td>
</tr>
</tbody>
</table>

Comments:
<table>
<thead>
<tr>
<th>Movement Disorders – Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Recognizes when a patient may have a movement disorder.</td>
</tr>
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</tbody>
</table>

**Comments:**
<table>
<thead>
<tr>
<th>Neuromuscular Disorders – Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Recognizes when a patient may have a neuromuscular disorder.</td>
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</table>

Comments:
<table>
<thead>
<tr>
<th>Cerebrovascular Disorders– Patient Care</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recognizes when a patient may have a cerebrovascular disorder.</td>
<td></td>
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</tr>
<tr>
<td>• Describes stroke syndromes and etiologic subtypes.</td>
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</tr>
<tr>
<td>• Identifies cerebrovascular emergencies.</td>
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</tr>
<tr>
<td>• Lists indications and contraindications for intravenous thrombolytic therapy.</td>
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<tr>
<td>• Identifies specific mechanism of patient’s cerebrovascular disorder.</td>
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<tr>
<td>• Appropriately refers for interventional or surgical evaluation.</td>
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</tr>
<tr>
<td>• Manages common cerebrovascular disorders including appropriate use of thrombolytics.</td>
<td></td>
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<tr>
<td>• Diagnoses uncommon cerebrovascular disorders.</td>
<td></td>
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</tr>
<tr>
<td>• Manages uncommon cerebrovascular disorders.</td>
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</tr>
<tr>
<td>• Engages in scholarly activity in cerebrovascular disorders (e.g., teaching, research).</td>
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</tbody>
</table>

Comments:
<table>
<thead>
<tr>
<th>Cognitive/Behavioral Disorders– Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Recognizes when a patient may have a cognitive/behavioral disorder.</td>
</tr>
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</tbody>
</table>

**Comments:**
### Demyelinating Disorders – Patient Care

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
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<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recognizes when a patient may have a demyelinating disorder.</td>
<td>• Diagnoses and manages common demyelinating disorders.</td>
<td>• Recognizes uncommon demyelinating disorders. • Manages acute presentations of demyelinating disorders.</td>
<td>• Diagnoses uncommon demyelinating disorders.</td>
<td>• Manages uncommon demyelinating disorders • Engages in scholarly activity in demyelinating disorders (e.g., teaching, research).</td>
</tr>
</tbody>
</table>

**Comments:**
<table>
<thead>
<tr>
<th>Epilepsy – Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Recognizes when a patient may have had a seizure.</td>
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Comments:
### Headache Syndromes – Patient Care

<table>
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<tr>
<th>Level 1</th>
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<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recognizes common headache syndromes.</td>
<td>• Diagnoses and manages common headache syndromes.</td>
<td>• Recognizes uncommon headache syndromes.</td>
<td>• Diagnoses and manages uncommon headache syndromes.</td>
<td>• Engages in scholarly activity in headache syndromes (e.g., teaching, research).</td>
</tr>
<tr>
<td>• Identifies headache emergencies.</td>
<td>• Diagnoses and manages headache emergencies.</td>
<td>• Diagnoses and manages headache emergencies.</td>
<td></td>
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</tr>
</tbody>
</table>

**Comments:**

### Neurologic Manifestations of Systemic Disease – Patient Care

<table>
<thead>
<tr>
<th>Level 1</th>
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<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recognizes when a patient's neurologic symptoms may be due to systemic illness.</td>
<td>• Diagnoses and manages common neurologic manifestations of systemic diseases.</td>
<td>• Recognizes uncommon neurologic manifestations of systemic disease.</td>
<td>• Diagnoses and manages uncommon neurologic manifestations of systemic disease.</td>
<td>• Engages in scholarly activity in neurologic manifestations of systemic disease (e.g., teaching, research).</td>
</tr>
<tr>
<td>• Identifies neurologic emergencies due to systemic disease.</td>
<td>• Diagnoses and manages neurologic emergencies due to systemic disease.</td>
<td>• Diagnoses and manages neurologic emergencies due to systemic disease.</td>
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</tr>
</tbody>
</table>

**Comments:**
### Child Neurology for the Adult Neurologist – Patient Care

<table>
<thead>
<tr>
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<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Obtains basic neurologic history of infants and children.</td>
<td>• Lists the elements of a neurological examination of infants and children.</td>
<td>• Obtains a complete and age-appropriate neurologic history of infants and children.</td>
<td>• Initiates management of common childhood neurologic disorders.</td>
<td>• Diagnoses uncommon childhood neurologic disorders.</td>
</tr>
<tr>
<td>• Recognizes broad patterns of neurologic disease in infants and children.</td>
<td>• Lists normal developmental milestones.</td>
<td>• Performs a complete and age-appropriate neurological examination of infants and children.</td>
<td>• Initiates management of common neurologic emergencies in infants and children.</td>
<td></td>
</tr>
<tr>
<td>• Lists normal developmental milestones.</td>
<td></td>
<td>• Diagnoses common child neurologic disorders.</td>
<td></td>
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</tr>
</tbody>
</table>

**Comments:**
<table>
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<tr>
<th>Level 1</th>
<th>Level 2</th>
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<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
</table>
| • Recognizes common clinical presentations of a brain or spine mass. | • Identifies neuro-oncological emergencies and initiates management. | • Provides differential diagnosis of brain or spine mass.  
• Identifies neurologic complications due to cancer or the treatment of cancer. | • Appropriately refers for advanced testing, including biopsy.  
• Manages neurologic complications due to cancer or the treatment of cancer. | • Engages in scholarly activity in neuro-oncology (e.g., teaching, research). |

**Comments:**
<table>
<thead>
<tr>
<th>Psychiatry for the Adult Neurologist – Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
</tr>
<tr>
<td>• Recognizes when a patient may have a psychiatric disorder.</td>
</tr>
<tr>
<td>• Obtains an appropriate psychiatric history.</td>
</tr>
</tbody>
</table>

Comments:
<table>
<thead>
<tr>
<th>Neuroimaging– Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Identifies basic neuroanatomy on brain MR and CT.</td>
</tr>
<tr>
<td>• Identifies basic neuroanatomy on spine MR and CT.</td>
</tr>
</tbody>
</table>

**Comments:**
### Electroencephalogram (EEG) – Patient Care

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
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<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
</table>
| • Explains an EEG procedure in nontechnical terms. | • Uses appropriate terminology related to EEG (e.g., montage, amplitude, frequency). | • Describes normal EEG features of wake and sleep states.  
• Recognizes EEG patterns of status epilepticus.  
• Recognizes common EEG artifacts. | • Interprets common EEG abnormalities and creates a report.  
• Recognizes normal EEG variants. | • Interprets uncommon EEG abnormalities.  
• Describes normal and some abnormal EEG features of wake and sleep states in children. |

**Comments:**
<table>
<thead>
<tr>
<th><strong>Nerve Conduction Studies (NCS)/Electromyography (EMG)– Patient Care</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Explains an NCS/EMG procedure in nontechnical terms.</td>
</tr>
<tr>
<td><strong>Comments:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Lumbar Puncture– Patient Care</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Lists the indications and contraindications for lumbar puncture.</td>
</tr>
<tr>
<td><strong>Comments:</strong></td>
</tr>
<tr>
<td>Compassion, integrity, accountability, and respect for self and others - Professionalism</td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Demonstrates compassion, sensitivity, and responsiveness to patients and families.</td>
</tr>
<tr>
<td>• Demonstrates non-discriminatory behavior in all interactions, including diverse and vulnerable populations.</td>
</tr>
<tr>
<td>• Describes effects of sleep deprivation and substance abuse on performance.</td>
</tr>
</tbody>
</table>

**Comments:**
Knowledge about, respect for, and adherence to the ethical principles relevant to the practice of medicine; remembering in particular that responsiveness to patients that supersedes self-interest is an essential aspect of medical practice - Professionalism

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>• Describes basic ethical principles.</td>
<td>• Determines presence of ethical issues in practice.</td>
<td>• Analyzes and manages ethical issues in straightforward clinical situations.</td>
<td>• Analyzes and manages ethical issues in complex clinical situations.</td>
<td>• Demonstrates leadership and mentorship on applying ethical principles.</td>
<td></td>
</tr>
</tbody>
</table>

Comments:

Relationship development, teamwork and managing conflict - Interpersonal and Communication Skills

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<tr>
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<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Develops a positive relationship with patients in uncomplicated situations. • Actively participates in team-based care.</td>
<td>• Manages simple patient/family-related conflicts. • Engages patients in shared decision-making.</td>
<td>• Manages conflict in complex situations. • Uses easy-to-understand language in all phases of communication.</td>
<td>• Manages conflict across specialties and systems of care. • Leads team-based patient care activities.</td>
<td>• Engages in scholarly activity regarding teamwork and conflict management.</td>
<td></td>
</tr>
</tbody>
</table>

Comments:
### Information Sharing, Gathering and Technology - Interpersonal and Communication Skills

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<tr>
<th>Level 1</th>
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</thead>
<tbody>
<tr>
<td>• Effectively communicates during patient hand overs using a structured communication tool.</td>
<td>• Effectively communicates during team meetings, discharge planning and other transitions of care.</td>
<td>• Effectively communicates the results of a neurologic consultation in a timely manner.</td>
<td>• Effectively leads family meetings.</td>
<td>• Develops patient education materials.</td>
</tr>
<tr>
<td>• Completes documentation in a timely fashion.</td>
<td>• Educates patients about their disease and management, including risks and benefits of treatment options.</td>
<td>• Effectively gathers information from collateral sources when necessary.</td>
<td>• Effectively and ethically uses all forms of communication</td>
<td>• Engages in scholarly activity regarding interpersonal communication.</td>
</tr>
<tr>
<td>• Accurately documents transitions of care.</td>
<td>• Completes all documentation accurately, including use of EHR, to promote patient safety.</td>
<td>• Demonstrates synthesis, formulation and thought process in documentation.</td>
<td>• Mentors colleagues in timely, accurate, and efficient documentation.</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
### Self-Directed Learning – Practice Based Learning and Improvement

- Identify strengths, deficiencies, and limits in one’s knowledge and expertise.
- Set learning and improvement goals.
- Identify and perform appropriate learning activities.
- Use information technology to optimize learning.

<table>
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<tr>
<th>Level 1</th>
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<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Acknowledges gaps in knowledge and expertise.</td>
<td>• Incorporates feedback.</td>
<td>• Develops an appropriate learning plan based upon clinical experience.</td>
<td>• Completes an appropriate learning plan based upon clinical experience.</td>
<td>• Engages in scholarly activity regarding practice-based learning and improvement.</td>
</tr>
</tbody>
</table>

**Comments:**

### Locate, appraise and assimilate evidence from scientific studies related to their patient’s health problems - Practice Based Learning and Improvement

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<tr>
<th>Level 1</th>
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<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Uses information technology to search and access relevant medical information.</td>
<td>• Uses scholarly articles and guidelines to answer patient care issues.</td>
<td>• Critically evaluates scientific literature.</td>
<td>• Incorporates appropriate evidence-based information into patient care.</td>
<td>• Engages in scholarly activity regarding evidence based medicine.</td>
</tr>
</tbody>
</table>

**Comments:**
### Systems thinking including cost and risk effective practice - Systems-Based Practice

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<tr>
<th>Level 1</th>
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<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Describes basic cost and risk implications of care.</td>
<td>• Describes cost and risk benefit ratios in patient care.</td>
<td>• Makes clinical decisions that balance cost and risk benefit ratios.</td>
<td>• Incorporates available quality measures in patient care.</td>
<td>• Engages in scholarly activity regarding cost and risk effective practice.</td>
</tr>
</tbody>
</table>

**Comments:**

### Residents will work in inter-professional teams to enhance patient safety - Systems-Based Practice

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<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Describes team members’ roles in maintaining patient safety.</td>
<td>• Identifies and reports errors and near-misses.</td>
<td>• Describes potential sources of system failure in clinical care such as minor, major, and sentinel events.</td>
<td>• Participates in a team based approach to medical error analysis.</td>
<td>• Engages in scholarly activity regarding error analysis and patient safety.</td>
</tr>
</tbody>
</table>

**Comments:**
### NEUROLOGY CLINICAL EVALUATION EXERCISE (NEX v.1)

#### Case Scenario (please check one):
- Critical Care
- Ambulatory (headache, seizures, etc.)
- Neuromuscular
- Neurodegenerative
- Child Neurology for Adult Neurology Resident
- Adult Neurology for Child Neurology Resident

#### Date

**Level of Training PG**

**Age of Patient (For Pediatric Cases)**

### PERFORMANCE RATINGS

<table>
<thead>
<tr>
<th>Unacceptable</th>
<th>Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Very Poor</td>
<td>5 Acceptable</td>
</tr>
<tr>
<td>2 Poor</td>
<td>6 Very Good</td>
</tr>
<tr>
<td>3 Unsatisfactory</td>
<td>7 Excellent</td>
</tr>
<tr>
<td>4 Borderline but Unacceptable</td>
<td>8 Outstanding</td>
</tr>
</tbody>
</table>

#### A. Medical Interviewing Skills

<table>
<thead>
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<th>Unacceptable</th>
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#### B. Evaluation of Neurological Examination Skills

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- Mental status
- Cranial nerves
- Sensory
- Motor exam
- Reflexes
- Cerebellar
- Station and gait

#### C. Humanistic Qualities, Professionalism, and Counseling Skills

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#### D. Overall Evaluation (score 1 - 8)

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#### E. Presentation / Formulation (score 1 - 8)

A score of 8 is needed to pass for level

Circle your answer: Did the resident pass at their level? **Y** / **N**

At a graduate level? **Y** / **N**

Evaluator’s Comments:

(Main strengths, weaknesses, and goals for improvement)
Patient Feedback Form v1

Patient review of Dr. ____________________________ Date ____________________________

Physician Specialty - Please select one:  ☐ Psychiatry  ☐ Neurology  ☐ Child Neurology

PERFORMANCE RATINGS
The following guidelines are to be used in selecting the appropriate rating:

Please select a performance rating for your doctor for each of the following statements:

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<tr>
<td>Never</td>
<td>Rarely</td>
<td>Occasionally</td>
<td>Frequently</td>
<td>Always</td>
<td>Not Applicable</td>
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1) Physician listens carefully to your symptoms.

2) Physician asks questions regarding your health history.

3) Physician explains tests that he/she ordered.

4) Physician discusses treatment options with you, including the expected course of treatment.

5) Physician explains drugs and other treatments (for example, psychotherapy), their expected effects, and possible side effects.

6) Physician discusses the treatment costs, insurance, and payment options with you.

7) Physician encourages you to ask questions about your treatment.

8) Physician answers questions to your satisfaction.

9) Physician gives you advice on what to do if symptoms persist or worsen.

10) Physician refers you to another specialist when necessary.

11) Physician tells you when to schedule a return visit.

12) Physician treats you in a professional manner.

Please Return Completed Form To Physician For His/Her Confidential Records - Do Not Send to the ABPN

American Board of Psychiatry and Neurology, Inc., 2150 E. Lake Cook Road, Suite 900, Buffalo Grove, IL 60089
Ph: 847.229.6000  Fax: 847.229.6600  www.abpn.com
Elements and Style of Notes, Consults, Discharge Summaries and Correspondence

General Concepts:

- All the notes written in O2 need to be cosigned by the attending physician (regardless the attending physician evaluated the patient at bedside or not).
- Patients seen on call, while discussed with the night attending are assigned to the daytime ward/consult/stroke attending for signature (and billing)
- Document the physician that you discussed the case with, by name, by service (e.g. vascular neurology) is not acceptable.
- If you examined the patient with the physician, state I examined the patient with Dr. X.
- Quick update notes are not allowed unless the quick update note is an addendum to a full note.
- Impression and plan are separate paragraphs.
- No cutting and pasting notes, either yours or someone else’s. The conclusion when you copy one of your prior notes is that you did not examine the patient at all, because there is no evidence that you did. Copying someone else’s note is plagiarism. Repeated plagiarism is grounds for disciplinary action or dismissal from the program.

Elements and Style of a good History and Physical

The purposes of an admission History and Physical note are:

- To document why the patient is being admitted and what problems are to be addressed
- To communicate with other health care providers, both now and in the future
- To document the clinical history and findings at a set point in time
- To convey your clinical reasoning through the assessment and plan

Before graduation a competent resident should be able to document an admission History and Physical in 10 minutes.

History of present illness:
- What has led to this admission. This must include the complaint, the time course, diagnostic work up and therapeutic trials

Medical and Surgical History:
- Document other illnesses and interventions

Social History:
- Document social aspects of the patient that are important to this problem or their overall health.

Medications:
- Self-evident

Review of Systems:
- Both neurological and general
Examination:

**General Neurological:**
Mental status: Orientation, ability to comprehend and to express themselves, if appropriate clinic cognitive test results (SLUMS, MOCA, set generation, similarities, apraxia testing); and if not normal, and the level of consciousness.

**Cranial Nerve Examination**
Document all 12. Yes it is important to test smell, the function of CN I. While ophthalmoscopes are available in the clinics, resident should have their own.

**Motor**
Document: bulk, tone (resistance to passive movement), strength using Medical Research Council of Great Britain (MRC) scale. May also include tests of minimal distal weakness such as a pronator drift of Alter's sign.

**Sensory**
Document peripheral modalities: light touch, pinprick, pressure, temperature, 128 Hz tuning fork vibration, and proprioception; and when appropriate central sensation: graphesthesia, stereognosis, finger identification. Documentation must include any abnormalities between sides, proximal vs. distal and the presence of a sensory level.

*The Romberg test is a test of posterior column proprioception function, by looking for a difference between eyes open and eyes close conditions.*

**Coordination**
Document postural stability while seated, rapid alternating tasks, stance, gait; and when appropriate finger-to-finger nose, heel-to-shin, standing on tip toes or standing on heels, praxis testing, tandem gait, reverse tandem gait, standing on one leg, and reverse tandem gait on heels.

**Reflexes:**
Muscle stretch reflexes from both sides are documented, including the presence or absence of pathological and primitive reflexes (if appropriate). Please remember that historically normal reflexes were documented as ++, not 2+.

**Abnormal movements:**
Describe the abnormal movements, if necessary by body region, include the results of distraction.

**Assessment:**
What is going on, what might be going on

**Plan:**
What is going to happen, why, and that you discussed this with the patient, and when appropriate their family members, and with the attending physician. Include proposed tests and treatments.

---

**Progress Notes:**
Are in a SOAP note format
**Subjective:** of what are the patients complaints are on the day of assessment, and anything of note that has happened since the last note

**Objective:** Physical exam on the that date (not a copied note from the ICU that still says pt on the floor is intubated, see section above on plagiarism)

**Assessment:** Impression of what the patient’s current problems are and what is the trend

**Plan:** Plan for the day and potentially the rest of the hospital stay. To benefit the resident’s thought processes, this will need to be in a problem based or system based format so as to not over look anything.

---

**Elements and Style of a Good Discharge Summary**

The purposes of a Discharge Summary are:

- Document for other health care professionals why the patient was admitted and what happened.
- Provide for continuity of care

A discharge summary should be brief, but inclusive. With the electronic health record it is easy look up the results of laboratory, imaging, and clinical test results for any given day.

Suggested outline:

**History of Present Illness:** Why they were admitted, including the chief complaint, time course of the illness prior to the hospitalization and pertinent findings on admission clinical examination and initial studies. Include relevant admission medications (e.g. phenytoin dose and route if they were admitted for phenytoin toxicity or break through seizures).

**Hospital course:** In general terms, not day-by-day unless this is important for the future care of the patient.

**Pertinent labs and completed investigation:** These are the results of key imaging studies, lipid studies, HgBA1c, CSF etc.

**Discharge diagnosis:** Primary diagnosis first. This should outline the thought process for establishing the diagnosis

**Discharge medications:** self-evident

**Discharge disposition:** where are they going, what follow-up has been arranged or is needed

**Follow-up appointment:** who they are to see, where (LCOA, Indian Creek, etc) and when.

**Pending studies and results:** While this is self evident, you must clearly document these elements:

- Pending laboratory or imaging studies, pending therapies, transfer of care to the responsible health care provider, and acknowledgement that the communication has occurred.
- If warfarin is started, outline and arrange as to who will follow the INR
- Immunotherapies: what follow laboratories are needed, additional treatment, and who has accepted responsibility to follow them
- Further testing: e.g. repeat LP, repeat imaging
Be certain that the patient’s primary care physician, appropriate specialists and any physicians that will be assuming care of the patient are sent copies of the discharge summary.
Elements and Style of a good daily Progress Note

The purpose of the daily progress note is:
• To document what has happened,
• How the patient is doing,
• What your clinical thinking is and
• What is going to happen next.

Interval History: what has happened since the last note.

Additional medical, family, social history or review of systems: self-evident.

Examination: This can be either brief, documenting any changes, or extensive. Do not copy and paste from prior days.

Pertinent study results: laboratory, imaging, consult recommendations

Pending results: self evident

Assessment: What you think is going on

Plan: what you are going to do.
Elements and Style of a Good Clinic Note

The purposes of a clinic note are:
- To communicate with other health care providers, both now and in the future
- To document the clinical history and findings at a set point in time
- To convey your clinical reasoning through the assessment and plan

Before graduation a competent resident should be able to document a hospital progress note or a return clinic visit in five to seven minutes; and an admission History and Physical, transfer note, or new patient clinic visit in 10 minutes.

History of present illness:
- What has led up to this visit for a new patient, what has happened since the last visit for a return encounter. For a new patient this must include the complaint, the time course, diagnostic work up and therapeutic trials

Medical and Surgical History:
- Document other illnesses and interventions

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**Assessment:**

What is going on, what might be going on

**Plan:**

What is going to happen, why, and that you discussed this with the patient, and when appropriate their family members. Include tests, treatments, next clinic visit or how you are going to be in touch with them.
Elements and Style of good correspondence

The purpose of medical correspondence to inform other health care practitioners of the results of your clinical encounter with the patient. This is mainly a matter of style. Some choose to send a copy of their complete clinical encounter note. Others prefer an extremely brief summary of just a few sentences. And lastly, some prefer to combine a brief letter with an attached copy of the clinical encounter note.