Table of Contents

FOREWORD 4

PART 1 MISSION STATEMENT, DEPARTMENT GOALS AND OBJECTIVES 5

PART 2 ACGME MILESTONES AND NEUROLOGY CORE COMPETENCIES 7

PART 3 WORK ENVIRONMENT 10

PART 4 – DIDACTICS 12

NEUROLOGY CONFERENCE SCHEDULE 12
Conferences: 12

PART 5 TRAINING OVERVIEW 14

PGY 1 14
PGY1 LEARNING OBJECTIVES 14
PGY 2 15
PGY2 LEARNING OBJECTIVES: 15
DESCRIPTION PGY3: 16
PGY3 LEARNING OBJECTIVES: 16
DESCRIPTION PGY4: 17
PGY4 LEARNING OBJECTIVES: 17
PEDIATRIC NEUROLOGY FELLOW 18

PART 6 HOW WE DO THINGS 19

INPATIENT ROTATIONS 19
COMBINED CLINIC AND CONSULT SERVICES 19
LONGITUDINAL CLINICS 19
OTHER MANDATORY ROTATIONS 20
NEUROPATHOLOGY / NEURORADIOLOGY 20
NICU 20
EPILEPSY / EEG 20
NEUROMUSCULAR MEDICINE / EMG 20
PEDIATRIC NEUROLOGY 20
SUPERVISING RESIDENT KUH WARDS 21
PSYCHIATRY 21
ELECTIVE GUIDELINES 21
CLINICAL ELECTIVE: 21
RESEARCH ELECTIVE 21
HAND-OFFS 22
NOTES 22

PART 7 EVALUATIONS 23

RESIDENT EVALUATION TOOLS 23
RESIDENCY IN-SERVICE TRAINING EXAMINATION 32
ABPN CLINICAL SKILLS EVALUATION OF RESIDENTS 33
ASSESSMENT BY MEDICAL STUDENTS 33
**Foreword**

This handbook encompasses the basic information for our neurology residency program and is updated annually. New this year are links to recommended key articles and a revision of our Goals & Objectives. The G&P are presented as a separate appendix document while basic information on the rotations is in this handbook in a friendlier format. Our G&O and assessment tools are changing as we prepare to adopt the Next Accreditation System (NAS) in July 2014. The milestones that we are using in Academic Year (AY) 2013-14 are the proposed milestones from the Neurology RRC working committee.

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 thorough out 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 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:

**History—Patient Care**

<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>Obtains a neurological history</td>
<td>Obtains a complete and relevant neurological history</td>
<td>Obtains a complete, relevant, and organized neurological history</td>
<td>Efficiently obtains a complete, relevant, and organized neurological history</td>
<td>Efficiently obtains a complete, relevant, and organized neurological history incorporating verbal and non-verbal clues</td>
</tr>
</tbody>
</table>

During AY 2012-13 we will be piloting the 29 draft milestones proposed for Neurology. As the final milestones are developed we may adopt them during that AY or wait for the next. 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 by each rotation is available from the program director and education coordinator. It is also published along the goals and objectives for each rotation in a separate 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 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 Program Outcomes Assessment and Action Plan Report).

- 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,

- 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,

- 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

- E*Value, ‘On The Fly,’ praise and concern comments can be sent through E*Value 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 E*Value user menu. MedHub has a similar mechanism for when we transition over during AY 2013-14.

- 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.

- 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.

- 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, and the two rotations (NICU and Pediatric Neurology) where they are excused from regular lecture attendance. 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.

Lecture and Conference Schedule:

Monday
- 7:30–8:00 am Morning report with Dr. Barohn
- 8:00–8:30 am Lecture
- 5:30 pm Neuro-Oncology tumor board

Tuesday
- 7:30–8:00 am Lecture
- 8:00–8:30 am Lecture
- Or
- 7:30–8:30 am Monthly Neuro-Ophthalmology lecture
- Or
- Or
- 6:30–7:30 am Monthly core competency lecture at KUH

Wednesday
- 7:30–8:30 am Dr. McVey’s reading conference
- 3:00–4:00 pm Brain cutting with Dr. Newell

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 Monthly 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
- 10:00–11:00 am Sleep Disorders lecture with Dr. S. Stevens (elective residents)
- 12:00–1:00 pm Clinical EEG conference with Dr. Giron (KC VAMC only)

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.

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 on 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, neuroparmacology 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. Thirty-minute long lectures are given by both faculty and senior residents.

**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**

One Tuesday 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. Another Tuesday each month is devoted to neuro-ophthalmology presentations by Dr. Whittaker at the KUMC Eye Clinic, 73rd and State Line. One Thursday each month is a pediatric neurology presentation by the faculty at Children’s Mercy Hospital.

**Journal Club**

Each month a resident presents an article of their choice for Journal Club. They are mentored by either Dr. Gronseth or Dr. Dubinsky. 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, each resident presents 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. Six months are spent at the University of Kansas Hospital (KUH and six 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 and the clinic and consult services at the KC VAMC. Call is taken at their assigned institutions.

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. Two to three months are spent doing clinics at the KC-VAMC. 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.

There is an additional one-month rotation on combined Neuroradiology / Neuropathology.

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 evaluate and manage ICU patients.
• 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.
• 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, one month is spent in the Neuro-Sciences Intensive Care Unit (NSICU), one month each in Electromyography (EMG) and electroencephalography (EEG), one month supervising the KUH ward service, and one month elective. We are transitioning Pediatric Neurology to PGY-3, when that happens some of the one-month rotations will transition to PGY-4.

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 develop skill in reading electroencephalograms and evoked potentials.
• To develop skill in the performance and interpretation of electrodiagnostic testing (EMG/NCV).
• 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.

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 and five 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 demonstrate proficiency in reading EEGs, neuroimaging studies, and performing EMG/NCV studies.
• 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.
• To have taken and passed USMLE 3 or COMLEX 3

Pediatric Neurology Fellow

The pediatric neurology fellow, or fellows, rotate at KUH functioning as a PGY2 resident in Neurology. The difference are that they do not rotate at the VAMCs, they spend one to three months in the out patient clinic, and they do one month of NICU towards the end of this year of their training.
Part 6 How we Do Things

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 current plan for the stroke service is to be staffed by a PGY2 resident, a nurse practitioner, at time the vascular neurology fellow and 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 in the afternoon by the neurology attending physician prior seeing the consult patients.

Residents assigned to the KU ward, stroke, and consult services take in house call at the University of Kansas Hospital.

Combined Clinic and Consult Services

At the Kansas City VAMC the three residents staff the clinic and perform consults. 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 three residents at the KC-VAMC divide the call, which is taken from home. The resident at Leavenworth VAMC takes call in rotation at KUH.

Longitudinal Clinics

All residents in PGY2–4 have a weekly ½ day clinic at the Landon Center on Aging. These occur on Thursday mornings and afternoons and Friday mornings. The clinics are composed of residents from all three levels and are staffed by neurology faculty. The typical work load 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 PGY2 our residents spend one month working with both neuro-radiology and neuro-pathology. 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 a ABPN board certified neurologist and not a by an anesthesiologist.

Epilepsy / EEG
During PGY3 or 4 each resident completes 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.

Neuromuscular Medicine / EMG
During PGY3 or 4 each resident completes 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.

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 over all 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 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.

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

Psychiatry

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

Elective Guidelines

Clinical Elective:

Residents are encouraged to develop month long clinical rotations covering either 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:

**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.

**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
A resident is required to have a research mentor, a project, and a product at the end of the rotation.

**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 themselves 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.
- 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 check-out 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.

**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 past notes.** This is unprofessional behavior and hinders rather than helps communication. Copying someone else’s notes, be it a resident or an attending is plagiarism. 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 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 team 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

Resident Evaluation Tools

The forms used for resident evaluations are in a separate document. Samples of our current Goals and Objectives and evaluation tool are provided below:

KU Ward Service Curriculum
Required Rotation PGY2

Description of Rotation or Educational Experience

KU Ward Service
Supervising Faculty for Rotation, responsible for review of Goals & Objectives:
Jayasharee Sundararajan, MBBS MD
Additional faculty: Collen Lechtenberg, MD, Yunxia Wang, MD, Michael Rippee, MD,
Michael Abraham MD, Kitty Husmann, MD and Sharon Lynch, MD

One month long rotation providing medical care to inpatients on the Neurology service at the University of Kansas Hospital.
This is one of the 18 months of inpatient and consult training mandated by the Neurology RRC
This month is repeated during PGY2.

Overall Goals:
During the KU Ward rotation, residents are expected to be able to demonstrate and apply an evidence-based medicine approach to patient care that reflects an integration of basic science and clinical knowledge.

Residents are also expected to improve their skills with the neurological examination, performance of lumbar punctures, communication skills with patients, patients’ families, and colleagues.

Residents will gain an understanding of neurological diseases and the management of common neurological disorders encountered in the inpatient setting.

Over the course of PGY2 the neurology resident will handle increasing responsibility as demonstrated by managing patients with more complex disorders, providing care for a higher number of patients and effectively teaching rotating residents and medical students about neurology.

Patient Care
Goal
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
Residents are expected to:
Competencies
Evaluate and manage patients with neurological disorders and neurological manifestation of systemic diseases
Objectives
The PGY2 resident in neurology will:

- Perform an efficient and thorough general physical examination
- Perform an efficient and thorough neurological examination
- Competently perform all essential medical and invasive procedures

As measured by checklist (direct observation), global clinical performance, and chart stimulated recall.

Medical Knowledge

Goal
Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Residents are expected to:

Competencies
The resident must learn the basic sciences on which clinical neurology is founded and integrate them into their evaluation and treatment of patients. This includes knowledge of neuroanatomy, neuropathology, neurophysiology, neuroimaging, neuropsychology, neural development, neurochemistry, neuropharmacology, molecular biology, genetics, immunology, epidemiology, and statistics.

Objectives
The PGY2 resident will:

- Improve their fund of knowledge appropriate for the PGY2 level
- Become familiar with the principles of bioethics
- Provide cost effective evaluation and treatment

as measured by checklist (witnessed examination), global clinical performance and Resident In-service Training Examination (RITE).

Practice-Based Learning and Improvement

Goal
Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Residents are expected to develop skills and habits to be able to:

Competencies

- Set learning and improvement goals
- Participate in the education of patients, families, students, residents and other health professionals, as documented by evaluations of a resident’s teaching abilities by faculty and/or learners

Objectives
The PGY2 resident will

- Incorporate formative evaluation feedback into their daily practice of
neurology

- Participate in the education of patients, families, students, residents and other health professionals

As measured by checklist (witnessed examination) global clinical performance

---

**Systems Based Practice**

**Goal**

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

**Competencies**

- Coordinate patient care within the health care system relevant to their clinical specialty
- Incorporate considerations of cost awareness and risk-benefit analysis in patient care

**Objectives**

The PGY2 resident will:

- Coordinate patient care within the health care system
- Advocate for quality patient care and optimal patient care systems

As measured by, chart stimulated recall and global clinical performance.

---

**Professionalism**

**Goal**

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

**Competencies**

- Respect for patient privacy and autonomy
- Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation

**Objectives**

The PGY2 resident will demonstrate:

- In the process of providing care to inpatients, resident to demonstrates sensitivity to patient privacy, autonomy and diversity.
- Be responsive to patient primary and autonomy

As measured by checklist (witnessed examination), global clinical performance, and 360° evaluation.

---

**Interpersonal and Communication Skills**

**Goal**
Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Residents are expected to:

**Competencies**
- Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds
- Maintain comprehensive, timely, and legible medical records

**Objectives**
The PGY2 resident will:
- The resident communicates effectively with patients and their families.
- Work effectively as a member of a health care team
- The resident maintains the medical record in a comprehensive, timely and legible manner
As demonstrated by chart review and global clinical performance.

**Teaching Methods**
What teaching methods are used on this rotation or educational experience?
- Didactic lectures of specific topics, including the neurological examination, localization and evaluation of neurological disorders

**Assessment Method (Residents)**
How do you measure the resident’s performance on this rotation or educational experience?
- Checklist: Direct supervision of resident performing history and clinical evaluation (PC, MK, PROF, LCS)
- RITE (MK)
- Checklist: Lumbar puncture proficiency (PC)
- Global Clinical Performance: Discussion of differential diagnosis, use of laboratory, patient management (PC, MK, SBL, PBL, LCS, PROF)
- Chart Stimulated Recall: (PC, MK, SBL, PBL)
- 360° evaluation (LCS, PROF)
- Chart review (LCS, PROF)

**Assessment Method (Program Evaluation)**
How do you evaluate whether this educational experience is effective?
- Monthly evaluation of the rotation by the resident
- Yearly program evaluation
- Twice-yearly evaluation of the resident and solicitation of feedback.

**Level of Supervision**
How is the resident supervised on this rotation?
- Daily direct supervision by ward attending and other faculty
- The resident reviews every admission and consultation with the attending in a timely fashion. Attending neurologists are available
24 hours a day, 365.25 days a year.

**Educational Resources**

List the educational resources

- Flaherty, A. *The Massachusetts General Hospital Handbook of Neurology*, Lippincott Williams & Wilkins.
- Practice Parameters from the American Academy of Neurology, are available for a large range of conditions, therapies, and assessment tools at AAN.com.

Journals:

- Neurology
- Archives of Neurology
- Journal of Neurology, Neurosurgery, and Psychiatry
- Annals of Neurology
- Brain
- Stroke

**KUH Wards PGY2**

**Global Clinical Performance Tool (GCP)**

Resident
Month/year

**Patient Care**

Does the resident perform and present a thorough general physical examination?

1 (Unsatisfactory)
Frequently misses obvious clinical findings, examination and presentation are not

2 (Satisfactory)
Consistently performs a thorough and efficient neurological examination. Presents the examination

3 (Exemplary)
Performs and presents the neurological examination above their level of training. It is exceedingly
Does the resident perform and present an efficient and thorough neurological examination?

<table>
<thead>
<tr>
<th></th>
<th>(Unsatisfactory)</th>
<th>(Satisfactory)</th>
<th>(Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frequently misses obvious clinical findings, examination and presentation are not organized</td>
<td>Consistently performs a thorough and efficient neurological examination. Presents the examination in an organized, yet thorough manner.</td>
<td>Performs and presents the neurological examination above their level of training. It is exceedingly rare that the attending can't reproduce all of the resident's findings. Minimal, if any spurious findings or lapses in presentation</td>
</tr>
</tbody>
</table>

Can the resident develop a plan of evaluation and treatment?

<table>
<thead>
<tr>
<th></th>
<th>(Unsatisfactory)</th>
<th>(Satisfactory)</th>
<th>(Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frequently does everything by rote. Shotgun approach without narrowing the evaluation by likelihood ratios. Must rule out <em>everything</em> rather than the likely diagnoses based on prevalence</td>
<td>Consistently develops an efficient plan of evaluation and treatment based on their examination and localization. Prioritizes tests based on sensitivity, specificity, disease prevalence, and the need for emergent intervention. Chooses appropriate therapies.</td>
<td>Excels at development of a plan for evaluation and treatment. Makes extensive use of sensitivity, specificity, disease prevalence, and the need for urgent intervention when developing the evaluation plan. Frequently evaluates the magnitude of benefit vs. the cost and risk of therapies.</td>
</tr>
</tbody>
</table>

**Medical Knowledge**

The resident demonstrates a fund of knowledge appropriate for their level of training and has demonstrated consistent maturation in the fund of knowledge.

<table>
<thead>
<tr>
<th></th>
<th>(Unsatisfactory)</th>
<th>(Satisfactory)</th>
<th>(Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Insufficient fund of knowledge. Has not</td>
<td>Their fund of knowledge is appropriate for their level</td>
<td>Their fund of knowledge is well above that of their</td>
</tr>
</tbody>
</table>
matured over time. Their trajectory is such that without action on their part they are at risk of being let go.

The resident applies the principles of bioethics in working with critically ill patients.

1  (Unsatisfactory)  
The resident fails to understand or apply the principles of bioethics.

2  (Satisfactory)  
The resident understands and applies the principles of bioethics.

3  (Exemplary)  
The resident excels at bioethics. They teach the teachers.

The resident provides cost effective evaluation and treatment;

1  (Unsatisfactory)  
The resident fails to consistently provide cost effective evaluation and treatment. Orders tests by rote (e.g. always ordering Tb culture for CSF even when the presumptive diagnosis is MS)

2  (Satisfactory)  
The resident consistently provides cost effective evaluation and treatment.

3  (Exemplary)  
The resident excels at cost effective evaluation and treatment. They consider disease prevalence and likelihood ratios before ordering tests. They are capable of challenging the attending and using the medical literature to explain their evaluation and treatment choices.

Practice Based Learning
The resident incorporates formative evaluation feedback into their daily practice

1  (Unsatisfactory)  
Does not take feedback well. Denies problems, blames others, they have no insight.

2  (Satisfactory)  
Consistently incorporates formative evaluation feedback into their daily practice.

3  (Exemplary)  
Actively seeks and applies formative evaluation feedback into their daily practice with the goal of practice improvement.

The resident participates in the education of patients, families, students, residents and other health professionals, as documented by evaluation of a resident’s teaching abilities by faculty and/or learners

1  (Unsatisfactory)  
Either does not educate others or fails in their efforts to educate others.

2  (Satisfactory)  
Consistently teaches patients, families, other health care personnel

3  (Exemplary)  
Excels at teaching patients, families and other health care
both formally and informally professionals. They are able to determine their audience's level of knowledge and adapt their teaching to that level. The resident has achieved mastery in this area.

**Systems Based Practice**

Does the resident coordinate patient care within the health care system relevant to their clinical specialty?

<table>
<thead>
<tr>
<th></th>
<th>(Unsatisfactory)</th>
<th>(Satisfactory)</th>
<th>(Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Has no idea, or performs poorly in coordinating patient care within the health care system relevant to their clinical specialty.</td>
<td>Consistently coordinate patient care within the health care system relevant to their clinical specialty.</td>
<td>Exels at coordinate patient care within the health care system relevant to their clinical specialty.</td>
</tr>
</tbody>
</table>

Does the resident advocate for quality patient care and optimal patient care systems

<table>
<thead>
<tr>
<th></th>
<th>(Unsatisfactory)</th>
<th>(Satisfactory)</th>
<th>(Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The resident is clueless</td>
<td>Consistently advocate for quality patient care and optimal patient care systems.</td>
<td>Always advocates for quality patient care and optimal patient care systems with proficiency well above their level of training.</td>
</tr>
</tbody>
</table>

**Professionalism**

The resident demonstrates compassion, integrity and respect for others.

<table>
<thead>
<tr>
<th></th>
<th>(Unsatisfactory)</th>
<th>(Satisfactory)</th>
<th>(Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Does not demonstrate compassion, integrity or respect towards others.</td>
<td>Consistently demonstrates compassion, integrity and respect for others.</td>
<td>Always demonstrates compassions, integrity, and respect for others with proficiency well above their level of training.</td>
</tr>
</tbody>
</table>

The resident demonstrates responsiveness to patient needs that supersedes their own self-interest.
<table>
<thead>
<tr>
<th>1 (Unsatisfactory)</th>
<th>2 (Satisfactory)</th>
<th>3 (Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not demonstrate responsiveness to patient needs that supersedes their own self-interest.</td>
<td>Consistently demonstrates responsiveness to patient needs that supersedes their own self-interest.</td>
<td>Always demonstrates responsiveness to patient needs that supersedes their own self-interest with proficiency well above their level of training.</td>
</tr>
</tbody>
</table>

**Does the resident demonstrate respect for patient privacy and autonomy?**

<table>
<thead>
<tr>
<th>1 (Unsatisfactory)</th>
<th>2 (Satisfactory)</th>
<th>3 (Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequently does not demonstrate respect for patient privacy and autonomy. Discusses private details in open areas, does not allow the patient to participate in determining their course of treatment.</td>
<td>Consistently demonstrates respect for patient privacy and autonomy. Engages the patient in determining diagnostic and treatment options.</td>
<td>Excels at demonstrating respect for patient privacy and autonomy above their level of training. The resident has achieved mastery in this area.</td>
</tr>
</tbody>
</table>

**Interpersonal Communication Skills**
The resident communicates effectively with patients and families across a broad range of socioeconomic and cultural backgrounds.

<table>
<thead>
<tr>
<th>1 (Unsatisfactory)</th>
<th>2 (Satisfactory)</th>
<th>3 (Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds.</td>
<td>Consistently demonstrates the ability to communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds.</td>
<td>Always demonstrates the ability to communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds with proficiency well above their level of training.</td>
</tr>
</tbody>
</table>

The resident works effectively as a **member** of a health care team or other professional group.

<table>
<thead>
<tr>
<th>1 (Unsatisfactory)</th>
<th>2 (Satisfactory)</th>
<th>3 (Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not work effectively as a member of leader of a health care team or other professional group. They</td>
<td>Consistently demonstrates the ability work effectively as a member of leader of a health care team or other</td>
<td>Always demonstrates the ability to work effectively as a member of leader of a health care team or other</td>
</tr>
</tbody>
</table>
are unaware of others, professional group. professional group with proficiency well above their level of training.

The resident maintains comprehensive, timely, and legible medical records

1 (Unsatisfactory) 
Does not maintain comprehensive, timely, and legible medical records

2 (Satisfactory) 
Consistently demonstrates the ability to maintain comprehensive, timely, and legible medical records

3 (Exemplary) 
Always demonstrates the ability to maintain comprehensive, timely, and legible medical record with proficiency well above their level of training. Does not include extraneous material.

Global Assessment
Has the resident shown consistent improvement across all domains during this year of training? Are they maturing as expected?

1 (Unsatisfactory) 
Failure to improve across all (or most) domains

2 (Satisfactory) 
Consistent improvement across all domains as expected for their level of training

3 (Exemplary) 
Consistently performs as a level above that of their peers and above what is expected for their level of training

Additional Comments:

Please see Appendix 2 for rotation Goals & Objectives, Rotation specific evaluation forms and the milestones project.

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 associated with passing the American Board of Psychiatry and Neurology (ABPN) written neurology examination on the first try.

**ABPN Clinical Skills Evaluation of Residents**

To graduate 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 neurologist.

Mock oral examinations 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.

*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, rather than what they did well.*

**Assessment by Medical Students**

Starting in AY 2013-14 medical students will be evaluating resident through the E-Value system. They students self select residents to evaluate based upon their contact with the residents.

**Chart Review**

Every six months each resident chooses a new patient clinical encounter, a history and physical (or in patient consultation) and a discharge summary for review by the appropriate faculty member or the program director. Chart provides information about clinical decision-making, follow-through in patient management, and appropriate use of clinical facilities and resources (e.g., appropriate laboratory tests and consultations). These items are reviewed: chief complaint, HPI, past medical history, appropriate family and social
history, neurological examination, assessment and differential diagnosis, diagnostic and treatment plans.

It is the resident’s responsibility to complete this task. The evaluation form is in Appendix 2.

**Resident Case Log**

The Neurology RRC does not require case logs. However almost all hospital credentialing committees do require case logs and procedure logs. Therefore as of July 1, 2013 we are requiring all residents from PGY2 through PGY4 are required to keep case logs that are reviewed by the program director quarterly. You can do this using a spreadsheet of database, or get a download from the Health Information Management at KUH and the KC and Leavenworth VAMC. Most hospitals are satisfied with the number of patients seen with a given diagnosis (e.g. Parkinson’s disease, ICD9 332.0) and procedures (e.g. lumbar punctures or giving ivTPA). Therefore you are required to keep track of:

- Each admission: primary diagnosis, gender, age at admission
- Each procedure: procedure performed, diagnosis or reason for procedure, gender, age
- Each clinic visit: primary diagnosis, gender, age.

**360° Evaluation**

Each spring the residents evaluate each other; and they are evaluated by patients, nursing personnel and administrative personnel.

**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. PGY1 residents are evaluated by the Clinical Competency Committee of the Department of Medicine, at KUMC. The Neurology CCC is chaired by the program director and includes:

- Associate program directors
- At least two hospitalists
- One VAMC neurologist
- Richard Barohn, MD Chair of Neurology
- JoAnne Locke, RN, the clinic resident in support of the residents
• Nursing staff from the Neurology and NICU floors, and
• Denise Zeller, Education Coordinator, as staff support.

This committee meets each Academic Year (AY) at the beginning of January and the beginning of 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.

Residency Steering Committee

This committee meets each month to cover the day-to-day management of the residency program. It is composed of: Dr. Dubinsky, program director, as chair, associate program directors Drs. Hammond and Pasnoor, the chief resident, and a resident elected by their peers from each level of training, and Denise Zeller, education coordinator. This committee meets monthly on a Wednesday morning, just after Dr. McVey’s reading conference.

Biannual Evaluation

In early January and late June of each academic year the PGY2-4 residents meet with the program director to review their progress. PGY1 residents meet with the associate program directors. 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 of COMLEX 3 to graduate from residency. 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.
Part 8 – Research Initiatives

Resident Research Experience

Each year Drs. Gronseth and Dubinsky 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 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. Hammond is in charge of Research day and will post deadlines for title, abstract, and slides.
**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

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 can’t 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](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 for our residency program.

The Neurology Residency Selection Committee, consisting of the chair, residency program director, the associate directors, 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 Senior 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.

<table>
<thead>
<tr>
<th>Clinical activity</th>
<th>Direct, Physician present with resident and patient</th>
<th>Indirect, direct supervision immediately available</th>
<th>Direct supervision available</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PGY1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KUH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rounds</td>
<td>√√ F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New patient admissions</td>
<td>√ F</td>
<td>√ F</td>
<td>√ F R</td>
</tr>
<tr>
<td>Daily work</td>
<td>√ F</td>
<td>√ F</td>
<td>√ F R</td>
</tr>
<tr>
<td>Call</td>
<td></td>
<td>√ F</td>
<td>√ F R</td>
</tr>
<tr>
<td><strong>KC VAMC</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rounds</td>
<td>√√ F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New patient admissions</td>
<td></td>
<td>√ F</td>
<td></td>
</tr>
<tr>
<td>Daily work</td>
<td></td>
<td>√ F</td>
<td></td>
</tr>
<tr>
<td>Call</td>
<td></td>
<td></td>
<td>√ F R</td>
</tr>
<tr>
<td><strong>PGY 2-4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 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.

---

<table>
<thead>
<tr>
<th>Wards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rounds</td>
</tr>
<tr>
<td>New patient admissions</td>
</tr>
<tr>
<td>Daily work</td>
</tr>
<tr>
<td>Call</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rounds</td>
</tr>
<tr>
<td>New consults</td>
</tr>
<tr>
<td>Follow-up consults</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neuropathology / neuroradiology**</th>
</tr>
</thead>
<tbody>
<tr>
<td>√ F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neuromuscular</th>
</tr>
</thead>
<tbody>
<tr>
<td>√ F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Epilepsy</th>
</tr>
</thead>
<tbody>
<tr>
<td>√ F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NICU</th>
</tr>
</thead>
<tbody>
<tr>
<td>√√ F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clinic Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>√ F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KC VAMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinics</td>
</tr>
<tr>
<td>Consults</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Leavenworth VAMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinics and consults</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Children’s Mercy Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pediatric Neurology</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Clinic</td>
</tr>
<tr>
<td>Consults</td>
</tr>
<tr>
<td>Call</td>
</tr>
</tbody>
</table>

* F = faculty  ** Patient contact rare

R = senior resident

√√ Primary supervision
√ Secondary supervision

---
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 Denise Zeller and Dr. Dubinsky when they are used so we can complete the necessary paperwork and to replace the used voucher.

Vacation Policy

Residents have three weeks of vacation each academic year. 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.

If a resident is away during the week for an interview, vacation leave is used.

Academic Leave

On a case-by-case basis residents are granted academic leave to present at national meetings. Academic leave is not used for interviews.

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 being provided a Certificate of
Residency Training. 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.

Policy on Evaluation of Faculty and of the Residency Program
Every month the residents are assigned reviews of the appropriate faculty members for their rotation. This is arranged by Denise Zeller, Education Coordinator. These are confidential reviews. Among the faculty, only Dr. Dubinsky can view the individual level reviews, and he can’t view his, only Dr. Hammond may view his. These are summarized, comments edited as appropriate, and presented to the Chair each January as information for the faculty member’s annual evaluation.

Through the monthly Education Committee meetings, yearly program review, and ad lib conversations, the program is reviewed each year and changes implemented. For example, based upon review during AY 2012-13 a supervising resident was added to the KU Ward service and this handbook was completely rewritten.

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 $1,000 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.
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.

**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.


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

43
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 SAPHIRE 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.
# Department of Neurology Clinical Faculty

<table>
<thead>
<tr>
<th>University of Kansas Medical Center</th>
<th>Clinical Area</th>
<th>Phone*</th>
<th>Pager*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abraham, Michael</td>
<td>Vascular/Intensive Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anderson, Heather</td>
<td>Dementia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barohn, Richard</td>
<td>Neuromuscular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burns, Jeffrey</td>
<td>Dementia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dick, Arthur</td>
<td>General neurology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimachkie, Mazen</td>
<td>Neuromuscular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dubinsky, Richard</td>
<td>Movement Disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gronseth, Gary</td>
<td>Vascular and Hospital Neurology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hammond, Nancy</td>
<td>Epilepsy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husmann, Kathrin</td>
<td>Vascular neurology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lechtenberg, Colleen</td>
<td>Vascular and Hospital Neurology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lynch, Sharon</td>
<td>Multiple Sclerosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>McVey, April</td>
<td>Neuromuscular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nowack, Bill</td>
<td>Epilepsy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osorio, Ivan</td>
<td>Epilepsy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pahwa, Raj</td>
<td>Movement Disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rippee, Michael</td>
<td>Vascular and Hospital Neurology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sachen, Fred</td>
<td>General Neurology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stevens, M, Suzanne</td>
<td>Sleep disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sundararajan, Jayasharee</td>
<td>Vascular and Hospital Neurology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swerdlow, Russell</td>
<td>Dementia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uysal, Utka</td>
<td>Epilepsy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wang, Yunxia</td>
<td>Neuromuscular</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| KC VAMC                             |                                         |                 |        |
| Giron, Lou                          | General neurology                      | 816-8614700     |        |
| Glatt, Sander                       | General neurology                      | 816-8614700     |        |
| Tim Frederick                      | General neurology                      | 816-8614700     |        |

| Leavenworth VAMC                   |                                         |                 |        |
| Venkatesh, Ram                     | General neurology and clinical          | 913-6822000     |        |
|                                    | neurophysiology                        |                 |        |

* The office phone numbers and pager numbers have been redacted for posting of this handbook on the web.
Schedules for Academic Year 2013-14

Department of Neurology Resident Rotation Schedules
<table>
<thead>
<tr>
<th></th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
</tr>
</thead>
<tbody>
<tr>
<td>KU Wards</td>
<td>Baumgardner</td>
<td>Baumgardner</td>
<td>Baumgardner</td>
<td>Murphy</td>
<td>Murphy</td>
<td>Baumgardner</td>
<td>Murphy</td>
<td>Mitchell</td>
<td>Murphy</td>
<td>Dowell</td>
<td>Baumgardner</td>
<td>Mitchell</td>
</tr>
<tr>
<td>KU Consults</td>
<td>Quesnell</td>
<td>Johnson</td>
<td>Costa</td>
<td>Baumgardner</td>
<td>Costa</td>
<td>Albadareen</td>
<td>Kimpler</td>
<td>Baumgardner</td>
<td>Mitchell</td>
<td>Zuccarelli</td>
<td>Dowell</td>
<td>Zuccarelli</td>
</tr>
<tr>
<td>KU Consults</td>
<td>Reynders</td>
<td>Carpenter</td>
<td>Murphy</td>
<td>Belliston</td>
<td>Bubolz</td>
<td>Belliston</td>
<td>Zuccarelli</td>
<td>Shorten</td>
<td>Shorten</td>
<td>Bubolz</td>
<td>Quesnell</td>
<td>Kimpler</td>
</tr>
<tr>
<td>KU Clinics</td>
<td>Tyler</td>
<td>Tyler</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Zuccarelli</td>
</tr>
<tr>
<td>VA Clinics</td>
<td>Murphy</td>
<td>Bubolz</td>
<td>Kimpler</td>
<td>Dowell</td>
<td>Baumgardner</td>
<td>Costa</td>
<td>Mitchell</td>
<td>Murphy</td>
<td>Belliston (vac a)</td>
<td>Quesnell</td>
<td>Reyners</td>
<td>Baumgardner</td>
</tr>
<tr>
<td>VA Call</td>
<td>Mitchell</td>
<td>Baumgardner</td>
<td>Mitchell</td>
<td>Bubolz</td>
<td>Kimpler</td>
<td>Dowell (vacation)</td>
<td>Albadareen</td>
<td>Murphy</td>
<td>Reyners</td>
<td>Kimpler</td>
<td>Albadareen</td>
<td></td>
</tr>
<tr>
<td>VA Consults</td>
<td>Shorten</td>
<td>Dowell</td>
<td>Belliston</td>
<td>Carpenter</td>
<td>Reynders</td>
<td>Kimpler</td>
<td>Dowell</td>
<td>Bubolz</td>
<td>Costa (vaca)</td>
<td>Murphy</td>
<td>Mitcell</td>
<td>Reyners</td>
</tr>
<tr>
<td>Neuro ICU</td>
<td>Allison</td>
<td>Kimpler</td>
<td>Quesnell</td>
<td>Albadareen</td>
<td>Shorten</td>
<td>Costa</td>
<td>Carpenter</td>
<td>Johnson</td>
<td>Belliston</td>
<td>Bubolz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leavenworth</td>
<td>Kimpler</td>
<td>Murphy</td>
<td>Dowell</td>
<td>Shorten</td>
<td>Carpenter</td>
<td>Reynders</td>
<td>Baumgardner</td>
<td>Dowell</td>
<td>Bubolz</td>
<td>Johnson</td>
<td>Murphy</td>
<td></td>
</tr>
<tr>
<td>KU Senior</td>
<td>Carpenter</td>
<td>Quesnell</td>
<td>Bubolz</td>
<td>Costa</td>
<td>Belliston</td>
<td>Shorten</td>
<td>Bubolz</td>
<td>Johnson</td>
<td>Kimpler</td>
<td>Albadareen</td>
<td>Costa</td>
<td>Belliston</td>
</tr>
<tr>
<td>Peds CMH</td>
<td>Albadareen</td>
<td>Albadareen</td>
<td>Albadareen</td>
<td>Johnson</td>
<td>Johnson</td>
<td>Quesnell (vacation)</td>
<td>Quesnell</td>
<td>Quesnell</td>
<td>Quesnell</td>
<td>Carpenter</td>
<td>Carpenter</td>
<td>Carpenter</td>
</tr>
<tr>
<td>Peds CMH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Path/Rad</td>
<td>Mitchell</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatry</td>
<td>Johnson (Vacation)</td>
<td>Quesnell</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EEG</td>
<td>Costa</td>
<td>Shorten</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>July</td>
<td>August</td>
<td>September</td>
<td>October</td>
<td>November</td>
<td>December</td>
<td>January</td>
<td>February</td>
<td>March</td>
<td>April</td>
<td>May</td>
<td>June</td>
</tr>
<tr>
<td>-----</td>
<td>-------</td>
<td>--------</td>
<td>-----------</td>
<td>-------------</td>
<td>-----------</td>
<td>----------</td>
<td>---------</td>
<td>----------</td>
<td>--------</td>
<td>-------</td>
<td>--------</td>
<td>----------</td>
</tr>
<tr>
<td>EMG</td>
<td>Belliston</td>
<td>Costa</td>
<td></td>
<td>Kimpler</td>
<td></td>
<td>Bubolz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>Aggarwal</td>
<td>Shorten</td>
<td>Carpenter</td>
<td>Quesnell</td>
<td></td>
<td>Costa</td>
<td>vacation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>October</td>
</tr>
<tr>
<td>Elective</td>
<td>Johnson</td>
<td>Belliston</td>
<td></td>
<td>Albadareen</td>
<td>Carpenter</td>
<td>Shorten</td>
<td></td>
<td>Albadareen</td>
<td>Shorten</td>
<td>Albadareen</td>
<td>Johnson</td>
<td>vacation</td>
</tr>
<tr>
<td>Elective</td>
<td>Bubolz</td>
<td></td>
<td></td>
<td>Quesnell</td>
<td>Johnson</td>
<td>Carpenter</td>
<td>Johnson</td>
<td>Kimpler</td>
<td>Costa</td>
<td></td>
<td>Shorten</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Carpenter</td>
<td></td>
<td></td>
<td>Costa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Holiday Coverage for 2013-2014 Academic Year.**

<table>
<thead>
<tr>
<th>Holiday</th>
<th>Day</th>
<th>Date</th>
<th>Team Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence Day</td>
<td>Thursday</td>
<td>July 4&lt;sup&gt;th&lt;/sup&gt; 2013</td>
<td>Belliston KUMC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oxley KCVA</td>
</tr>
<tr>
<td>Labor Day</td>
<td>Monday</td>
<td>September 2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Murphy/Reyniders</td>
</tr>
<tr>
<td>KUMC</td>
<td></td>
<td></td>
<td>Belliston KCVA</td>
</tr>
<tr>
<td>Veterans Day</td>
<td>Monday</td>
<td>November 11&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Dowell KCVA</td>
</tr>
<tr>
<td>Thanksgiving</td>
<td>Thursday</td>
<td>November 28&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Carpenter/Britton</td>
</tr>
<tr>
<td>KUMC</td>
<td>Friday</td>
<td>November 29&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Reynders KCVA</td>
</tr>
<tr>
<td>Christmas</td>
<td>Wednesday</td>
<td>Christmas 25&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Albadareen KUMC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oxley KCVA</td>
</tr>
<tr>
<td>New Year’s Day</td>
<td>Wednesday</td>
<td>January 1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>Baumgardner KUMC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mitchell KCVA</td>
</tr>
<tr>
<td>Martin Luther King Jr.</td>
<td>Monday</td>
<td>January 20&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Costa/Shorten</td>
</tr>
<tr>
<td>KUMC</td>
<td></td>
<td></td>
<td>Dowell KCVA</td>
</tr>
<tr>
<td>President’s Day</td>
<td>Monday</td>
<td>February 17&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Murphy KCVA</td>
</tr>
<tr>
<td>Memorial Day</td>
<td>Monday</td>
<td>May 26&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Johnson/Quesnell</td>
</tr>
<tr>
<td>KUMC</td>
<td></td>
<td></td>
<td>Bulboz KCVA</td>
</tr>
</tbody>
</table>
### Important Dates for 2013-14

<table>
<thead>
<tr>
<th>Dates</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 20, 2013</td>
<td>Welcome Party</td>
</tr>
<tr>
<td>February 27 and 28</td>
<td>RITE</td>
</tr>
<tr>
<td>April 28-May 2</td>
<td>AAN</td>
</tr>
<tr>
<td>May 10</td>
<td>Mock Orals</td>
</tr>
<tr>
<td>June 13</td>
<td>Ziegler lecture and Graduation</td>
</tr>
<tr>
<td>June 20</td>
<td>Research Day</td>
</tr>
</tbody>
</table>
Appendices:

NEX forms

**NEUROLOGY CLINICAL EVALUATION EXERCISE (NEX v.1)**

<table>
<thead>
<tr>
<th>Examiner Name</th>
<th>Examiner Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Name</td>
<td>Resident Signature</td>
</tr>
</tbody>
</table>

**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

**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>Unacceptable</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>B. Evaluation of Neurological Examination Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental status</td>
</tr>
<tr>
<td>Cranial nerves</td>
</tr>
<tr>
<td>Sensory</td>
</tr>
<tr>
<td>Motor exam</td>
</tr>
<tr>
<td>Reflexes</td>
</tr>
<tr>
<td>Cerebellar</td>
</tr>
<tr>
<td>Station and gait</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Humanistic Qualities, Professionalism, and Counseling Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Very Poor</td>
</tr>
<tr>
<td>2 Poor</td>
</tr>
<tr>
<td>3 Unsatisfactory</td>
</tr>
<tr>
<td>4 Borderline but Unacceptable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. Overall Evaluation (score 1 - 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. Presentation / Formulation (score 1 - 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A score of 6 is needed to pass for level</td>
</tr>
</tbody>
</table>

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. [ ]

Physician Specialty - Please select one:
- Psychiatry [ ]
- Neurology [ ]
- Child Neurology [ ]

Date [ ]

PERFORMANCE RATINGS

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

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rarely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasionally</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequently</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Applicable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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: 847-229-6500 Fax: 847-229-6600 www.abpn.com
Chart Review form

Department of Neurology
University of Kanas Medical Center
Neurology Resident Chart Review Form

Resident: ___________________________ PGY: _______________________
Date: ___________ Rotation: _______ Attending: _______________________
Type of Note: _______ Admission H&P ____ Consultation_______ Clinic new patient
Medical record number: ________________

Unsatisfactory  Satisfactory  Exemplary

Chief complaint:
HPI;
Past medical history;
Neuro. Examination;
Assessment and differential diagnosis:
Diagnostic and treatment plan:
Comments:

Signatures:

______________________________  ________________________________
Resident/date  Attending/date
Neurology Milestones
### 1 History – Patient Care

<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>• 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>
</tr>
</tbody>
</table>

**Comments:**

### 2 Neurological Exam – Patient Care

<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>• 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>
</tr>
</tbody>
</table>

**Comments:**
### 3 Localization – 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>
</table>
| • Attempts to localize lesions within the nervous system.  
• Describes basic neuroanatomy. | • Localizes lesions to general regions of the nervous system.  
• Describes basic neuroanatomy. | • Accurately localizes lesions to specific regions of the nervous system.  
• Describes advanced neuroanatomy. | • Efficiently and accurately localizes lesions to specific regions of the nervous system.  
• Describes advanced neuroanatomy. | • Consistently demonstrates sophisticated and detailed knowledge of neuroanatomy in localizing lesions. |

**Comments:**

---

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

---

58
- Continuously reconsiders diagnostic differential in response to changes in clinical circumstances.
- Diagnoses brain death.

**Comments:**

<table>
<thead>
<tr>
<th>5 Diagnostic Investigation – Medical Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>• Demonstrates general knowledge of diagnostic tests in neurology.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
• Recognizes indications of advanced imaging and other diagnostic studies.

**Comments:**

### 6 Management/Treatment – Patient Care

<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 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></td>
<td></td>
</tr>
</tbody>
</table>
### 7 Movement Disorders – Patient Care

<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>• Recognizes when a patient may have a movement disorder.</td>
<td>• Identifies movement disorder phenomenology and categories (hypokinetic and hyperkinetic).</td>
<td>• Diagnoses and manages common movement disorders. • Identifies movement disorder emergencies.</td>
<td>• Diagnoses uncommon movement disorders. • Appropriately refers a movement disorder patient for a surgical evaluation or other interventional therapies. • Manages movement disorders emergencies.</td>
<td>• Manages uncommon movement disorders. • Engages in scholarly activity in movement disorders (e.g., teaching, research).</td>
</tr>
</tbody>
</table>

Comments:
### 8 Neuromuscular Disorders – Patient Care

<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>• Recognizes when a patient may have a neuromuscular disorder.</td>
<td>• Identifies patterns of neuromuscular disease (e.g., anterior horn cell disease, nerve root, plexus, peripheral nerve, neuromuscular junction, muscle).</td>
<td>• Diagnoses and manages common neuromuscular disorders. • Manages neuromuscular disorder emergencies. • Interprets results of NCS/EMG testing in context of clinical presentation.</td>
<td>• Diagnoses uncommon neuromuscular disorders. • Recognizes when tissue biopsy is warranted.</td>
<td>• Manages uncommon neuromuscular disorders. • Engages in scholarly activity in neuromuscular disorders (e.g., teaching, research).</td>
</tr>
<tr>
<td>• Orders NCS/EMG testing appropriately.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

### 9 Cerebrovascular Disorders – Patient Care

<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>• Recognizes when a patient may have a cerebrovascular disorder.</td>
<td>• Describes stroke syndromes and etiologic subtypes. • Identifies</td>
<td>• Identifies specific mechanism of patient’s cerebrovascular</td>
<td>• Diagnoses uncommon cerebrovascular disorders.</td>
<td>• Manages uncommon cerebrovascular disorders.</td>
</tr>
</tbody>
</table>

---

62
cerebrovascular emergencies.
- Lists indications and contraindications for intravenous thrombolytic therapy.

- Manages common cerebrovascular disorders including appropriate use of thrombolytics.

- Engages in scholarly activity in cerebrovascular disorders (e.g., teaching, research).

**10 Cognitive/Behavioral Disorders– Patient Care**

<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>Recognizes when a patient may have a cognitive/behavioral disorder.</td>
<td>Identifies common cognitive/behavioral disorders.</td>
<td>Diagnoses and manages common cognitive/behavioral disorders, including cognitive effects of traumatic brain injury.</td>
<td>Diagnoses and manages uncommon cognitive/behavioral disorders.</td>
<td>Engages in scholarly activity in cognitive/behavioral disorders (e.g., teaching, research). Demonstrates sophisticated knowledge of advanced</td>
</tr>
</tbody>
</table>

| Comments: | | | | |
cognitive/behavioral disorders.
• Appropriately refers for neuropsychological testing in evaluating patients with cognitive/behavioral disorders.

diagnostic testing and controversies.

Comments:

<table>
<thead>
<tr>
<th>11 Demyelinating Disorders – Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>• Recognizes when a patient may have a demyelinating disorder.</td>
</tr>
<tr>
<td>• Manages acute presentations of demyelinating disorders.</td>
</tr>
</tbody>
</table>

Comments:
### 12 Epilepsy – Patient Care

<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>• Recognizes when a patient may have had a seizure.</td>
<td>• Identifies epilepsy phenomenology, and classification of seizures and epilepsies.</td>
<td>• Diagnoses and manages common seizure disorders and provides antiepileptic drug treatment.</td>
<td>• Diagnoses uncommon seizure disorders.</td>
<td>• Manages uncommon seizure disorders.</td>
</tr>
<tr>
<td></td>
<td>• Diagnoses convulsive status epilepticus.</td>
<td>• Diagnoses non-convulsive status epilepticus.</td>
<td>• Appropriately refers an epilepsy patient for surgical evaluation or other interventional therapies.</td>
<td>• Engages in scholarly activity in epilepsy (e.g., teaching, research).</td>
</tr>
</tbody>
</table>

**Comments:**

### 13 Headache Syndromes – Patient Care

<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>• 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></td>
<td>• Identifies headache emergencies.</td>
<td>• Diagnoses and manages headache emergencies.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
### 14 Neurologic Manifestations of Systemic Disease – Patient Care

<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>• 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>
</tbody>
</table>

**Comments:**

---

### 15 Child Neurology for the Adult Neurologist – Patient Care

<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>• 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>• Recognizes broad patterns of neurologic disease in infants and children.</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>• Diagnoses uncommon childhood neurologic disorders.</td>
</tr>
<tr>
<td>• Lists normal developmental milestones.</td>
<td>• Lists normal developmental milestones.</td>
<td>• Diagnoses common child neurologic disorders.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 16 Neuro-Oncology – Patient Care

<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>• Recognizes common clinical presentations of a brain or spine mass.</td>
<td>• Identifies neuro-oncological emergencies and initiates management.</td>
<td>• Provides differential diagnosis of brain or spine mass.</td>
<td>• Appropriately refers for advanced testing, including biopsy.</td>
<td>• Engages in scholarly activity in neuro-oncology (e.g., teaching, research).</td>
</tr>
<tr>
<td>• Identifies neuro-oncological emergencies and initiates management.</td>
<td></td>
<td>• Identifies neurologic complications due to cancer or the treatment of cancer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Provides differential diagnosis of brain or spine mass.</td>
<td></td>
<td>• Manages neurologic complications due to cancer or the treatment of cancer.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Recognizes when a patient's neurological symptoms are of psychiatric origin.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Identifies major side effects of psychiatric medications.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 17 Psychiatry for the Adult Neurologist – Patient Care

<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>• Recognizes when a patient may have a psychiatric disorder.</td>
<td>• Identifies common psychiatric disorders.</td>
<td>• Recognizes when a patient’s neurological symptoms are of psychiatric origin.</td>
<td>• Diagnoses common psychiatric disorders.</td>
<td>• Engages in scholarly activity in psychiatric disorders (e.g., teaching, research).</td>
</tr>
<tr>
<td>• Obtains an appropriate psychiatric history.</td>
<td>• Identifies psychiatric co-morbidities in patients with a neurologic disease.</td>
<td>• Recognizes when a patient's psychiatric symptoms are of neurologic origin.</td>
<td>• Initiates management of psychiatric co-morbidities in patients with a neurologic disease.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Identifies major side effects of psychiatric medications.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 18 Neuroimaging – Patient Care

<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>• Identifies basic neuroanatomy on brain MR and CT.</td>
<td>• Recognizes emergent imaging findings on brain MR and CT.</td>
<td>• Describes abnormalities of the brain and spine on MR and CT.</td>
<td>• Interprets MR and CT neuroimaging of brain and spine.</td>
<td>• Identifies subtle abnormalities on angiography.</td>
</tr>
<tr>
<td></td>
<td>• Identifies basic neuroanatomy on spine MR and CT.</td>
<td>• Identifies major vascular anatomy on angiography.</td>
<td></td>
<td>• Interprets carotid and transcranial ultrasound.</td>
</tr>
<tr>
<td></td>
<td>• Identifies major vascular anatomy on angiography.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 19 Electroencephalogram (EEG) – Patient Care

<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>• Explains an EEG procedure in nontechnical terms.</td>
<td>• Uses appropriate terminology related to EEG (e.g., montage, amplitude, frequency).</td>
<td>• Describes normal EEG features of wake and sleep states.</td>
<td>• Interprets common EEG abnormalities and creates a report.</td>
<td>• Interprets uncommon EEG abnormalities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Recognizes EEG patterns of status epilepticus.</td>
<td>• Recognizes normal EEG variants.</td>
<td>• Describes normal and some abnormal EEG features of wake and sleep states in children.</td>
</tr>
</tbody>
</table>
### 20 Nerve Conduction Studies (NCS)/Electromyography (EMG) – Patient Care

<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>• Explains an NCS/EMG procedure in nontechnical terms.</td>
<td>• Uses appropriate terminology related to NCS/EMG.</td>
<td>• Describes NCS/EMG data. • Lists NCS/EMG findings in common disorders.</td>
<td>• Interprets NCS/EMG data in common disorders. • Describes common pitfalls of NCS/EMG. • Formulates basic NCS/EMG plan for specific, common clinical presentations.</td>
<td>• Performs, interprets, and creates a report for NCS/EMG.</td>
</tr>
</tbody>
</table>

### 21 Lumbar Puncture – Patient Care

<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>• Lists the indications and contraindications for lumbar puncture.</td>
<td>• Lists the complications of lumbar puncture and their management.</td>
<td>• Performs lumbar puncture under direct supervision.</td>
<td>• Performs lumbar puncture without direct supervision.</td>
<td>• Performs lumbar puncture on patients with challenging anatomy.</td>
</tr>
<tr>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 3</td>
<td>Level 4</td>
<td>Level 5</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>• Demonstrates compassion, sensitivity, and responsiveness to patients and families.</td>
<td>• Demonstrates appropriate steps to address impairment in self.</td>
<td>• Demonstrates compassionate practice of medicine, even in context of disagreement with patient beliefs.</td>
<td>• Mentors others in the compassionate practice of medicine, even in context of disagreement with patient beliefs.</td>
<td>• Engages in scholarly activity regarding professionalism.</td>
</tr>
<tr>
<td>• Demonstrates non-discriminatory behavior in all interactions, including diverse and vulnerable populations.</td>
<td>• Consistently demonstrates professional behavior including dress and timeliness.</td>
<td>• Incorporates patients' socio-cultural needs and beliefs into patient care.</td>
<td>• Mentors others in sensitivity and responsiveness to diverse and vulnerable populations.</td>
<td></td>
</tr>
<tr>
<td>• Describes effects of sleep deprivation and substance abuse on performance.</td>
<td></td>
<td>• Demonstrates appropriate steps to address impairment in colleagues.</td>
<td>• Advocates for quality patient care.</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**
### 23 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>
<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>• 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>
</tr>
</tbody>
</table>

Comments:

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

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

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

<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>• Effectively communicates during patient handovers 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:**

## 26 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>
<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>• 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:**

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

<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>• 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>• Understands the limits of evidence-based medicine in patient care.</td>
</tr>
</tbody>
</table>

**Comments:**

28 Systems thinking including cost and risk effective practice - Systems-Based Practice

<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>• 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>
29 Residents will work in inter-professional teams to enhance patient safety - Systems-Based Practice

<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>• 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:
Elements and Style of Notes, Consults, Discharge Summaries and Correspondence

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.
Discharge diagnoses: Primary diagnosis first.
Discharge medications: self evident
Discharge disposition: where are they going, what follow-up has been arranged or is needed
Pending studies and results: self evident

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 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, 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, pin-prick, pressure, temperature, 128 Hz tuning fork vibration, 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.
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

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, 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, pin-prick, pressure, temperature, 128 Hz tuning fork vibration, 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. 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 is 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.