



**San Antonio Uniformed Services
Health Education Consortium
San Antonio, Texas**

**SAUSHEC Neurology Residency
Resident Supervision Policy**

Section I. Introduction

Careful supervision and observation are required to determine the trainee's abilities to perform technical and interpretive procedures and to manage patients. Although they are not licensed independent practitioners, trainees must be given graded levels of responsibility while assuring quality care for patients. Supervision of trainees should be graded to provide gradually increased responsibility and maturation into the role of a judgmentally sound, technically skilled, and independently functioning credentialed provider.

Section II. General Details

1. Residents will be supervised by SAMMC Neurology staff attendings (heretofore defined as a licensed and ABPN board-certified neurologist, credentialed to provide care in neurology at both SAMMC and UTHSC) or as defined by a Program Level Agreement. Staff attendings must be credentialed for the specialty care and diagnostic and therapeutic procedures they are supervising. In this setting, the supervising staff attending is ultimately responsible for the care of the patient.
2. The Neurology Program Director (PD) uses this policy to define how residents in our program advance in independence of specific patient care activities while still being appropriately supervised by medical staff. Graduated levels of responsibility are delineated for each year of training by a job description contained within each Program Rotation Curricula (Section V). This program's resident supervision policy is in compliance with TJC policies on resident supervision.
3. Each Rotation Curricula is reviewed by either the PD or Associate Program Director (APD) on an annual basis and updated / revised accordingly.
4. The PD and APD will ensure the supervision policy is distributed to and followed by residents and the medical staff supervising them. This Neurology program policy is in alignment and compliance with the SAUSHEC Resident Supervision policy, and compliance will be monitored by the Neurology PD.
5. The PD and APD will determine if residents can progress to the next higher level of training on a semi-annual to annual basis (dependent upon the skill being assessed). The requirements for progression are determined by standards set by the PD and APD. This assessment will be documented in the annual evaluation of the trainees.
6. Duties of Residents: **Please reference Appendix I under Resident handbook and Section VII below.**
7. Definition of Terms:
 - a. Intermediate Resident: refers to PGY-2 level Neurology Resident
 - b. Final Years of Training: Refers to PGY-3 and PGY-4 level resident

Section III. The following are the job descriptions and levels of supervision for residents per year of training, subcategorized per neurology rotation curricula:

III-a: Outpatient Clinic Rotation

- **New Patient Clinic:** Each resident is expected to perform a thorough neurological history and examination on all new patients seen in clinic. The resident is to synthesize the history and physical examination and to discuss the case, the differential diagnosis, and diagnostic and treatment plans with the clinic attending physician. PGY2 residents will be allowed 90minutes for each appointment during the 1st 6 months of the academic year and only two patients per half-day clinic. This allows extra time to gain familiarity with the neurologic history and examination, to become accustomed to new administrative requirements, and to allow extra teaching time from the staff attending while the case is being presented. After six months, the PGY2 resident should have the skills to perform all expected duties in a shorter time; all new patient clinics will be allowed 60 minutes per appointment thereafter, and three patients per half-day are scheduled.
- **Follow-Up Clinic:** Each resident should be able to perform an appropriate problem-oriented examination on all patients seen. PGY2 resident will be allowed 60 minutes per follow-up appointment. After six months, all follow-up clinics will be 30 minutes per appointment, and 4-6 patients per half-day are scheduled.
- **All clinics:** PGY2 residents will have **Direct Supervision** to discuss both new patients and follow up patients with the staff attending during the clinic. PGY3 residents will have **Direct Supervision** to discuss **new** patients with the staff attending. For follow up patients with stable, uncomplicated neurologic conditions, PGY3 residents may forward a copy of their clinic note to the staff attending for signature without presentation (**indirect supervision, immediately available**). PGY4 residents are required to discuss new and follow up patients only if there are questions about the patient's diagnosis or management (**indirect supervision, immediately available**). However, for both PGY3 and PGY4 residents it is always encouraged to discuss all patients with the staff attending regardless of clinical stability.
- All residents must have their outpatient clinic notes co-signed by the clinic staff attending. The resident prepares an electronic clinic note (utilizing AHLTA), which is then forwarded to the clinic attending for review and electronic signature. The resident is responsible for ensuring the note is routed to the appropriate staff attending. The timely completion of clinic notes is inherent to good clinical practice **and to ensure patient safety**; all clinic notes are to be completed and forwarded to staff attendings for co-signature within 48 hours of the patient encounter.
- The resident is responsible for counseling the patient on their condition. PGY2 residents during their 1st six months will be accompanied by the staff attending to discuss critical components of the prepared management plan with the patient. Following this, all residents may request staff assistance for supervision if needed. Critical findings are expected to be relayed to the referring provider and/or dealt with immediately as appropriate (**structured hand-off, patient safety**).
- The resident's clinical responsibilities also include answering any telephonic or written communications from patients in a timely manner and to document those interactions

appropriately. Our expectations are for contact to be attempted within one duty day but definitely within 72 hrs (**patient safety**).

- If any resident is to be away from clinic, he/she should designate a surrogate for the aforementioned communications. That surrogate is expected to treat the patients as his/her own, provide medication refills, and to see (or arrange follow-up for) the patients as appropriate. Surrogates will be from the same academic year (i.e. PGY2 residents cover for each other, etc: **Structured hand-off, patient safety**).
- Pending Graduation of the two outgoing Chief Residents, each Chief will personally go through their patient list, select those patient that require ongoing neurological care and divide them equally between incoming PGY-2 resident(s), and current PGY-2 and PGY-3 residents, and/or select staff as well to maintain continuity of care.
- **Supervision:** For PGY2 residents, all cases will be discussed with the staff physician who will independently verify pertinent aspects of the history and physical exam. A progressively decreasing level of supervision, commensurate with experience and clinical judgment, will occur for PGY3 & 4 residents (**progressive authority and conditional independence**). A staff physician will be readily available for supervision and assistance at all times during the clinical hours (indirect supervision, direct supervision immediately available). The staff assigned to the clinical rotation will be the evaluator for the clinic resident, while the primary evaluation for the residents on other rotations will be the staff supervisor of that section (i.e. EMG attending, EEG attending etc).

III-b: Inpatient Neurology Consult Rotation (SAMMC, UTHSCSA)

- PGY2 neurology residents are assigned to 6-7 months of adult inpatient neurology consult rotations at SAMMC. PGY3 and PGY4 residents are similarly assigned, but with fewer months. To demonstrate increased levels of responsibility and more complex interpretive and management decisions, they will be assigned with a junior resident and will assume the role of “team leader” (**progressive authority and conditional independence**). All residents supervise rotating students, interns, and residents of other services and assume the responsibility for consultation to the emergency department, medical & surgical wards and intensive care units.
- Each resident rounds daily (or more often as needed) on assigned patients to review charts, perform histories and physical examinations, and recommend diagnostic and therapeutic plans based upon the patient problem and diagnosis. The neurology resident will demonstrate and teach these components of patient evaluation to students and residents rotating with the neurology resident. The resident participates in all weekly conferences.
- For the overnight “on-call” resident following a consultation and in addition to completing inpatient consult in Essentris, will also update the Inpatient roster located under Internal Medicine drive under Neurology. Here the name of the patient, admitting diagnosis, pertinent medications and neurological issues will be added to this template to ensure appropriate continuity to the day-time team. In addition, they will discuss their overnight consultations with the day-time resident(s). (**Structured hand-off, patient safety**)

- All inpatients assigned to residents as consults who have not been seen in our clinic within the prior 12 months will become the outpatient of that resident for follow-up purposes.
- **Supervision:** All residents are supervised by an assigned staff attending in the completion of consultations and the supervision of trainees. The staff attending evaluates all consultations within the twenty-four hour period immediately following the resident's consultation, and co-signs all notes electronically entered in Essentris for as long as the patient is followed by the consult service. In addition, the staff will write a separate note on any patient whose hospital admission is > 3 days or as necessary on any critically-ill patients (**Structured hand-off, patient safety**).

III-c: EMG Rotation (PGY3 and PGY4 residents: Final; PGY2 residents (Intermediate) on elective only)

- **NCS / EMG studies:** assigned residents will initially perform a brief, directed history and neuromuscular examination to ascertain the clinical findings (it is recommended that the resident review the consults prior to clinic in order to read about the underlying disease process and generate a diagnostic plan). This plan will be discussed with the staff attending prior to embarking on the study. The staff physician will be in the room supervising the resident's nerve conduction examination [PGY3 or PGY4]. If the resident demonstrates adequate proficiency at NCS (typically ≥ 1 rotation), the staff attending may simply review the studies performed (**progressive authority and conditional independence**) and repeat any of questionable accuracy (**Indirect supervision, immediately available**); however, a staff attending will always be available for direct supervision if requested. A staff attending will always be present to perform the needle EMG exam, or supervise the examination once the resident has mastered the pertinent anatomy and technique to perform this (typically ≥ 1 rotation) (**Direct Supervision**). After the study's completion, the resident will discuss the case, generate an impression and recommendations, and then complete the NCS/EMG report. The report should carry both the resident's and the staff attending's signature blocks and signatures [PGY3 and PGY4].
- **MDA clinic (Tues AM):** assigned residents will evaluate new and follow-up patients. After obtaining a history and physical exam with attention to the neuromuscular system, the case will be presented to the neuromuscular attending. The attending will then review the history and perform a neuromuscular exam (**Direct Supervision**). After discussion of the case and generation of an impression and plan with the attending, the resident will assist in arranging appropriate lab and consultation requests as well as any treatment. The resident will also assist the staff attending with entering the clinic consultation or follow up note into the electronic medical record during or at the end of the clinic [PGY3 and PGY4].
- **Botulinum toxin clinic (variable):** will initially be observational only. Over time, and at the discretion of the attending, the resident will increase their level of involvement proportional to their demonstrated mastery of the underlying concepts and procedures [PGY3 and PGY4]..... **Direct Supervision**.
- **Supervision:** see above for details. All residents are supervised by the assigned staff attending in the completion of NCS / EMG, and during MDA and botulinum toxin clinics.

III-d: Electroencephalography (EEG) / Electrophysiology (EP) Rotation

- **EEG / EP studies:** assigned residents will review all EEG and EP studies performed in the EEG laboratory during the rotation. It is recommended the resident independently interpret these studies prior to the daily afternoon review by the staff electroencephalographer (SEEGer). The resident will participate in all afternoon EEG reading conferences held by the SEEGer (**Direct Supervision**). Conferences will normally occur Monday-Friday afternoons, but may be changed based upon time constraints and patient care needs. These sessions will also include review of EP and VEEG studies. The resident will complete reports on all assigned EEG and EP studies within 24 hours of interpretation by SEEGer. The content of the reports will be finalized by the SEEGer and final reports distributed to inpatient and outpatient medical records by the resident. In addition, all inpatient studies will have a preliminary interpretation hand written by the resident and placed on the chart the same day of the study if there will be a delay in completing the final report (**patient safety**). The resident will be expected to complete assigned readings and discuss them at regularly scheduled periods weekly and, on occasion, to take brief tests when given (see schedule below for details).
- PGY2&3 residents are encouraged to become familiar with EEG and EP techniques. This is best done by dedicating some time to working with EEG technicians in placing scalp electrodes and performing the studies. This “hands-on” experience will facilitate learning of standard montages and viewing the impact that patient movements, muscle activity, and electrical interference have in producing artifacts encountered in routine EEG and EP studies. This hands-on experience is experienced at the beginning of their PGY-3 year during their two week-long Neurophysiology Course.
- PGY4 residents must have at least 2 months of experience with EEG interpretation by the start of their senior year. Part of their role as chief resident ‘back-up’ will be to assist the on-call resident in EEG interpretation for any urgent EEG’s performed overnight (**progressive authority and conditional independence**). Staff re-review of these studies will occur the following day, or on any study that same day in which the PGY4 resident is not confident about his/her interpretation (**Indirect supervision, available or oversight**).
- **Supervision:** see above for details. All residents are supervised by the assigned staff attending (SEEGer) in the interpretation of EEG and EP and the proper completion of EEG and EP reports.

III-e: Neuropathology Rotation (PGY3 & PGY4 residents only)

- PGY3 and PGY4 residents will be assigned to the Neuropathology Department at UTHSCSA for their two month rotation. The staff attending physician is Dr. James Henry, retired Army Colonel, who was previously stationed at the Armed Forces Institute of Pathology (AFIP) for >20 years. The purpose of the rotation is for the resident to become thoroughly familiar with the basic principles and techniques of neuropathology, and with the pathogenesis and gross and microscopic features of traumatic, ischemic, hemorrhagic, demyelinating, degenerative, infectious, inflammatory and degenerative conditions of the brain, spinal cord, and peripheral nervous system. Residents will review neurologic gross and microscopic pathological specimens processed by the

neuropathology laboratory at UTHSCSA. Whenever possible, it is recommended that the house officer independently interpret these specimens prior to review with Dr. Henry.

- **Supervision:** see above for details. All residents are supervised directly by Dr. Henry in the interpretation of neuropathologic specimens provided throughout the rotation (**Direct Supervision**).

III-f: Pediatric Neurology Rotation (PGY3 & PGY4 residents only)

- **Inpatient and outpatient consults:** both PGY3 and PGY4 residents (Final Year) will be the physician of first contact during standard daytime working hours and is expected to obtain a complete and relevant history and perform a detailed neurologic examination. The patient will be presented to the pediatric neurology staff attending, and abnormal physical findings, differential diagnoses, and evaluation and treatment plans will be discussed. Overnight call is covered by the pediatric neurology staff attending.
- **Pediatric EEG:** both PGY3 and PGY4 residents will review EEGs performed on pediatric patients from both outpatient and inpatient settings. The EEG procedure will be discussed and classic EEG patterns (partial versus generalized discharges, 3 Hz spike and wave) will be reviewed. All studies and the reports generated will be done with the pediatric staff attending (**Direct Supervision**). For PGY4 residents with more EEG exposure, they will be allowed the opportunity for individual review of the EEG and the independent preparation of the EEG report to be later reviewed and approved by the staff attending (**Indirect supervision, immediately available**).
- **Supervision:** All residents are supervised by the pediatric neurology staff attending assigned to the inpatient consult service in the completion of consultations and the supervision of trainees. The pediatric neurology staff attending evaluates all consultations within the twenty-four hour period immediately following the resident's consultation, and co-signs all notes electronically entered in Essentris for as long as the patient is followed by the consult service (**Direct Supervision, Indirect Supervision immediately Available, Patient Safety**).

III-g: Neuroradiology Rotation (PGY2 residents; PGY3&4 residents as added elective only)

- PGY2 residents (or PGY3/4 residents on elective) assigned to Neuroradiology are expected to attend daily interpretive sessions conducted by Neuroradiology staff attending physicians. They will attend and participate in reading sessions four mornings and four afternoons per week to provide exposure to CT, CTA, MRI, MRA, MRS, myelography, angiography, and plain films.
- Residents should attempt to review patient studies on their own prior to these sessions to perform an independent interpretation which can be discussed and critiqued with the staff attending. This interpretation should include modality utilized and technical specifications of the study, anatomic localization of the lesion(s), morphology of the lesion and differential diagnosis, and take into account cost considerations.
- Residents will attend bimonthly case conferences given by the Neuroradiology staff attendings. They will also attend the one-month long formal didactic Neuroradiology lecture series held each year (time permitting, and as long as it does not interfere with other Neurology core didactics or resident responsibilities).

- PGY2 and/or PGY3 residents will attend the 2-day Neuroradiology Review Course, which is held in conjunction with the 5-day Neuropathology Review Course, in Washington DC.
- **Supervision:** see above for details. All residents are supervised directly by assigned Neuroradiology staff attendings in the interpretation of all neuroradiology cases, utilizing all neuroimaging modalities employed (**Direct Supervision**).

III-h: Psychiatry Rotation (PGY2 residents)

- As psychiatric illness is pervasive among many chronic neurologic illnesses, PGY2 residents are now assigned to a psychiatry rotation (previously reserved for PGY3 or PGY4 residents) for exposure to various disorders and appropriate treatments early in their residency.
- Assigned PGY2 residents participate primarily on the inpatient psychiatry consultation service which evaluates patients throughout the hospital, but also includes exposure to the psychiatry inpatient service and to neuropsychologic testing. Didactic lectures are presented by both psychiatry staff and residents, all of which are mandatory attendance for neurology residents while on rotation. Topics addressed include, but are not limited to: safety assessment, delirium, dementia, violence risk assessment, personality disorders, schizophrenia & schizophreniform disorders, depression, and psychopharmacology. Exposure to group-therapy and other non-pharmacologic treatments is provided primarily in didactic format, but direct encounters with individual sessions is also offered.
- Computerized neuropsychologic testing is offered for residents to experience directly so they may better understand how patients are tested when referred for evaluation, and how to better understand the reports generated on patients’ results (conditional to schedule availability).
- **Supervision:** All residents are supervised by the psychiatry staff attending assigned to the inpatient consult or ward service in the completion of consultations and in discussion on proper management of inpatients. The psychiatry staff attending evaluates all consultations within the twenty-four hour period immediately following the resident’s consultation, and co-signs all notes electronically entered in Essentris when applicable.

Section IV. The following is the Neurology supervision criteria regarding determination of resident competence with regards to procedural skills: Regarding Lumbar punctures and Nerve blocks, the resident will input into New Innovations to be signed off by the appropriate staff.

<u>Procedure</u>	<u>Minimum # of supervised encounters</u>
Lumbar Puncture	5 Competently Performed
Occipital Nerve Blocks	5 Competently Performed
NCS	To be determined by staff (typically 1-2 months) <ul style="list-style-type: none"> • For first month, requires direct staff supervision • Following first month, and pending technical skill resident and with approval of EMG attending, NCS may be performed my resident independently with

	review of waveforms by staff (indirect supervision, immediately available)
EMG	Requires direct staff supervision
Botulinum toxin injections	Requires direct staff supervision

****In the case of lumbar punctures, if all 5 were completed during internship, at least two competently performed must be supervised by either a staff or Chief Resident to ensure competency in the procedure.

Section V: Reference to Mandatory situations where the on-call or “back-up Chief Resident” must communicate with a staff Physician:

- Acute Stroke patient and t-PA is considered as a potential interventional treatment.
- Status Epilepticus
- End-of-life issues: i.e. brain death exam
- ICU consults where the primary reason for ICU admission is neurological (i.e. Hemispheric stroke, ICH, SAH, Myasthenia Crisis, GBS with deteriorating neurological/respiratory function to name some)

Section VI: Specific criteria defined for evaluation of resident’s abilities allowing for progressive authority and responsibility, conditional independence, and taking on of supervisory roles

- Successful fulfillment (score of 5 or higher) of the 6 core competencies during their respective rotations for their PGY level (see below under Job Duties).
- Favorable cumulative review on end of year evaluation by Program Director
- In addition to the above, each resident will also undergo a mid-year evaluation to determine if any deficits are present.
 - If deficits are present, the program and the designated educational committee will review the resident(s) record(s) and will develop a Program level remediation with both the mentor and PD/APD to help resolve the noted deficits.
 - If the deficits still persist after the PLR, further determination by the GMEC will be decided at that time.

Section VII:

Appendix I: Duties by PGY year: This may be amenable pending the # of residents per class/program

PGY Year	Consult	Clinic	EMG	EEG	Neuropath	Peds	Rads	Psych	Pain	Rehab	Elective
2	6-7	1-2	0	1	0	0	1	1	0	0	1
3	4	1-2	2	1	1	1	0	0	0.5	0.5	1
4	4	1	1-3	1-3	1	2	0	0	0	0	1

- Per ABPN guidelines, the graduating resident will need 18 months of clinical adult neurology. This must include **at least** 6 months of inpatient experience in adult neurology and a minimum of 6 months (full-time equivalent) of outpatient experience in clinical adult neurology.
 - The outpt experience must include a resident longitudinal/continuity clinic with attendance by each resident half day weekly throughout the program. The continuity clinic may be counted toward the required six months of outpatient experience (i.e., assuming that one halfday clinic assignment per week for three years is equal to 3.6 months). All clinics may be credited toward the six-month outpatient requirement assuming that a half-day clinic comprises 1/10 FTE/week or 1/40 FTE/month
 - 1 month of Psychiatry,
 - 3 months of Pediatric Neurology
 - 3 months of elective
 - 2 months of Neuropathology and the remainder count as outpt clinic.
 - Experience in Neuroimaging.
- BAMC Neurology residency requirements.
 - Along with the above mandates, the BAMC Neurology Residency Program has also added the additional requirements that all graduating residents will have a minimum of 3 months of EEG and EMG prior to graduation to ensure competency upon arrival at their next duty station.

Reviewed by Neurology academic leadership: 6/2012