

Handbook 2020-2021





A physician is obligated to consider more than a diseased organ, more even than the whole man - he must view the man in his world.

— *Harvey Cushing* —

AZ QUOTES

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West Virginia University Health Sciences Center

Department of Neurosurgery Resident Manual

Overview of Neurosurgical Training Program, Aims

The mission of the clinical training program is excellence in patient care, scholarship, and neurosurgical education. Program goals have been established to assure this mission is successfully executed. Residents first establish fundamental clinical and surgical skills. As training progresses, increasing neurosurgical expertise, both clinical and scholarly, is acquired. Upon completion of the neurosurgery residency training program, each graduate is highly skilled in managing the full spectrum of neurosurgical disease, and has developed the scholarly tools needed to contribute to the peer-reviewed literature. The resident is required to publish 6 PubMed indexed articles, as well as pass the ABNS Written Board Exam in order to matriculate from the program.

The WVU Neurosurgical Residency is a 7 year (84 months) program. There are 60 months of core clinical neurosurgery of which 12 months are the chief residency. In the internship, there is a six-month rotation in general care and a six-month rotation in neurocritical care. Longitudinal clinical experiences in anesthesia, neurology, pain medicine, pathology, and radiation oncology are distributed across this year. Beginning in PGY2, the resident begins to rotate on the clinical neurosurgery services. At times, Drs. Lee, Meltzer, and Hamilton may function independently as a separate pediatric service with a dedicated resident when the resident curriculum schedule dictates such. The fourth year is the academic year, and is devoted to scholarly pursuit or enfolded fellowships. Academic pursuit may include graduate classes. The fifth year includes dedicated rotations in pediatrics and endovascular. The PGY6 and PGY7 split senior and chief responsibilities. The chief resident takes overall responsibility for the entire service. In summary, there are 12 months of internship, 24 months of clinical junior residency, a year of academic work, another 24 months of clinical senior rotations, and 12 months of clinical neurosurgery serving as chief resident.

Neuro-critical care experience is emphasized throughout the training, as well as extensive exposure to subspecialty services including neurovascular, neuro-oncology, epilepsy surgery, spinal neurosurgery, stereotactic radiosurgery, neurotrauma, functional neurosurgery and pediatric neurosurgery. Conferences are protected from clinical commitments and include morbidity and mortality conference, case conference, tumor board, asynchronous learning and board review, and journal club. Subspecialty conferences such as Epilepsy Conference or Spine Conference are encouraged. The anatomic dissection lab is available for scholarly work or preparation for operative cases. Preparation of scientific manuscripts, review articles, book chapters and abstracts, as well as presentation skills and leadership/administrative skills are fostered within a structured mentored environment in a multidisciplinary fashion.

Overall Program Goals, Objectives, and Graduation Requirements

The overall goal of the residency program is to develop in our graduating residents a proficiency level appropriate for a new and independent practitioner in the six core competencies as outlined by the ACGME. We follow the standards put forth by the **Neurosurgery RRC** of the **ACGME** in the milestones project. Ideally, residents will achieve Level 4 across all of these milestones for graduation. These guidelines can be seen at [ACGME Neurosurgery Milestones](https://www.acgme.org/Portals/0/PDFs/Milestones/NeurologicalSurgeryMilestones.pdf). (<https://www.acgme.org/Portals/0/PDFs/Milestones/NeurologicalSurgeryMilestones.pdf>) These milestones reflect:

- Patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
- Medical knowledge about the established and evolving biomedical, clinical and cognate sciences and the application of this knowledge to patient care.
- Practice based learning and improvement, which involves investigation and evaluation of patient care, the appraisal and assimilation of scientific evidence, followed by improvement in patient care.

- Interpersonal and communication skills resulting in effective information exchange with patients, their families, and other health professionals.
- Professionalism manifested through a commitment to carry out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
- Systems-based practice as manifested by actions that demonstrate an awareness of and responsiveness to the larger context in systems of healthcare and the ability to effectively mobilize system resources to provide care that is of optimum value.

Each rotation is designed with these overall goals in mind. In order to direct progress, goals and objectives have been formulated for each rotation and approved by the PEC. Unique aspects of each rotation are outlined in this handbook, and the specific goals and objectives for each rotation are delineated in the appendix. Our assessment tools are designed to demonstrate progress towards these objectives by directly mapping to the milestones requirements using a common format.

Residents are responsible for reviewing all general and specific goals and objectives prior to beginning each rotation.

Professionalism

In keeping with the Common Program Requirements effective 7/1/2013, our GME programs wish to ensure:

1. Patients receive safe, quality care in the teaching setting now.
2. Graduating residents provide safe, high quality patient care in the unsupervised practice of medicine in the future.
3. Residents learn professionalism and altruism in a humanistic, quality, learning environment.

To that end, we recognize that patient safety, quality care, and excellent learning environments are about much more than duty hours. Therefore, we wish to underscore any policies which address all aspects of the learning environment, not just duty hours. These include:

1. Professionalism, including accepting responsibility for patient safety
2. Alertness management
3. Proper supervision
4. Transitions of care
5. Clinical responsibilities
6. Communication and teamwork
7. Health Care Disparities

Residents must take personal responsibility for and faculty must model behaviors that promote:

1. Assurance for fitness of duty
2. Assurance of the safety and welfare of patients entrusted in their care
3. Management of their time before, during, and after clinical assignments
4. Recognition of impairment, including illness and fatigue, in self and peers
5. Honest and accurate reporting of duty hours, patient outcomes, and clinical experience data

The institution further supports an environment of safety and professionalism by:

1. Providing and monitoring a standard Transitions Policy as defined at **Handoffs and Transitions of Care Policy** <https://medicine.hsc.wvu.edu/media/365673/handoffsandtransitionsofcare2017logo.pdf>. This policy is also available on the **SOLE GME website** (<https://sole.hsc.wvu.edu/>).
2. Providing and monitoring a standard policy for Duty Hours executed in E-value and defined formally on the GME website.
3. Providing and monitoring a standard Supervision Policy as defined by the **2017 ACGME policy Supervision Policy** <https://medicine.hsc.wvu.edu/media/365696/supervision-policy.pdf>.

A Supervision option is provided at the **Mistreatment Button** that will allow immediate anonymous reporting of inadequate supervision directly to the DIO.

<https://medicine.hsc.wvu.edu/gme/mistreatment-form/>

4. Providing and monitoring a standard master scheduling policy and process that is congruent across both E-value and hospital resources.
5. Adopting an institution-wide policy that all residents and faculty must inform patients of their role in the patient's care.
6. Providing and monitoring a policy on **Alertness Management and Fatigue Mitigation** strategy that includes (<http://medicine.hsc.wvu.edu/media/2597/alertnessmanagementpolicy1-15-16.pdf>):
 - a. Online modules for faculty and residents on signs of fatigue.
 - b. Fatigue mitigation, and alertness management including back up call schedules and promotion of strategic napping.
7. Assurance of available and adequate sleeping quarters when needed.
8. Requiring that programs define what situations or conditions require communication with the attending physician.

Process for implementing the Professionalism Policy

The program and institution will assure effective implementation of the Professionalism Policy by the following:

1. Program presentations of this and other policies at program and departmental meetings.
2. Core Modules for faculty and residents on Professionalism, Duty Hours, Fatigue Recognition and Mitigation, Alertness Management, and Substance Abuse and Impairment.
3. Institutional Fitness for Duty and Drug Free Workplace policies.
4. Institutional Duty Hours Policy, which adopts ACGME Duty Hours Language.
5. Language added specifically to the Resident Manual and the Resident Contract regarding Duty Hours Policies and the responsibility for and consequences of not reporting Duty Hours accurately.
6. Comprehensive Moonlighting Policy incorporating ACGME requirements. Orientation presentations on Professionalism, Transitions, Fatigue Recognition and Mitigation, and Alertness Management.

Monitoring Implementation of the Policy on Professionalism

The program and institution will monitor implementation and effectiveness of the Professionalism Policy by the following evaluations of residents and faculty including:

1. Daily rounding and observation of the resident in the patient care setting.
2. Evaluation of the residents' ability to communicate and interact with other members of the health care team by faculty, nurses, patients where applicable, and other members of the team.
3. Semi-annual competency based evaluation of the residents.
4. Semi-annual Milestone reporting to the ACGME.
5. By the institution via the Annual Program Evaluation (APE) and Special Program Review process.
6. By successful completion of modules for faculty and residents on Professionalism, Impairment, Duty Hours, Fatigue Recognition and Mitigation, Alertness Management, and others.
7. Program and Institutional monitoring of duty hours and procedure logging as well as duty hour violations in E-Value.

Recruitment Selection & Criteria Policy

1. Applications will be accepted via ERAS.
2. Applicants will be invited for interview based on a review of the following factors:
 - a. performance on standardized tests,
 - b. medical school performance,
 - c. letters of recommendation,
 - d. personal statement,
 - e. extra-curricular activities,
 - f. research activities.

3. Applicants will be ranked on the basis of the preceding factors in combination with a subjective evaluation of the interview by the faculty.
4. Residents will be accepted via the National Residency Matching Program.
5. If the program does not fill through the usual matching process, the position will be filled outside the match from available applicants. The most qualified individuals based on the above factors may be invited for interview.
6. There must not be any discrimination in the selection process with regard to race, age, religious affiliation, creed, sexual orientation, gender, gender identity, color, national origin, disability or veteran status.
7. Further information can be found in the institutional document **Criteria for the Selection of Candidates**. (<http://medicine.hsc.wvu.edu/media/2577/criteria-for-selection-of-candidates-5-2008-nl.pdf>)

Physician Licensure Requirements

As of July 2019, all residents and fellows in training programs sponsored by the West Virginia University School of Medicine must hold at all times during their training either a valid educational training permit or a valid unrestricted license by either the West Virginia Board of Medicine or the West Virginia Osteopathic Board of Medicine. It is the trainee's responsibility to request the initial permit or license from the appropriate board of medicine and to annually renew this authorization during their training.

For more information, please go to:

<https://medicine.hsc.wvu.edu/media/365699/resident-physician-licensure-requirements-policy-2019.pdf>

Clinical Competency Committee (CCC)

The Clinical Competency Committee serves at the invitation of the Program Director and forms the highest departmental authority in the evaluation of each resident in terms of attainment of milestones for reporting to the ACGME, and makes recommendations to the Program Director for advancement or remediation or dismissal.

All core faculty are invited for participation in the CCC. Dr. Voelker serves as CCC Chair.

Program Evaluation Committee (PEC)

The Program Evaluation Committee is the guidance committee which makes recommendations to the Program Director for determination or modification of the curriculum, policy, and procedures of the training program. The PEC meets at least yearly to review all program data and create action plans for program improvement. The Program Director, at the recommendation of the PEC, has authority to modify the contents of this manual at any time to respond to real or potential deficiencies in the program, as determined by the PEC. When this occurs, all residents will be notified of new policy by departmental email.

Current members of the PEC are all core faculty and one resident representative.

Duties of the Residents in Each Year

Duties of the residents in the WVU Neurosurgical Residency program are structured to provide a graduated experience and involvement in neurosurgical patient management and preoperative, intraoperative, and postoperative patient care, foster a learning environment to develop the resident as a neuroscientist, and mentor the resident to mature as a thoughtful, caring, and compassionate physician.

The WVU Department of Neurosurgery residency training program adheres to the Milestones Evaluation Standard as described by the Neurosurgery RRC of the ACGME, and the Matrix Curriculum as put forth by the Society of Neurological Surgeons.

The standard rotation schedule for neurosurgery rotations is depicted below. Note that variations will occur based on individual circumstances and personnel changes.

Curriculum

| Year | Rotation | Duration |
|-------|--------------------------------------|-----------|
| PGY-1 | General Care & Clinical Neuroscience | 6 months |
| | Neurocritical Care | 6 months |
| PGY-2 | Neurosurgery - Junior | 6 months |
| | Neurosurgery - Junior | 6 months |
| PGY-3 | Neurosurgery - Junior Peds | 3 months |
| | Neurosurgery - Junior | 9 months |
| PGY-4 | Academic Rotation | 12 months |
| PGY-5 | Pediatric Neurosurgery | 3 months |
| | Neurosurgery - Senior | 9 months |
| PGY-6 | Neurosurgery – Senior/Chief Resident | 12 months |
| PGY-7 | Chief Resident & Subspecialty | 12 months |

PGY 1—First Year Neurosurgery Resident

The PGY1 year is divided into two six-month rotations. One rotation will be in General Care and Clinical Neurosciences, and will incorporate experiences in trauma, endovascular, radiation oncology and gamma knife. The second block will be in Neurocritical Care, and will incorporate training in anesthesia as well. The intern is integrated into the Neurosurgical Inpatient Service throughout the year. Neurosurgical bedside procedures must be done WITH direct supervision and logged on the provided procedure tracking log before any such procedures can be done with indirect supervision. A Training License from the West Virginia Medical Board is required prior to starting the PGY1 year. **The USMLE Step 3 exam must be taken in this year.**

PGY 2-3—Second and Third Year Neurosurgery Resident

The PGY-2 and 3 years are spent on the general neurosurgery service at Ruby Memorial Hospital. The resident will take a leadership role in the primary management of the inpatient service. The resident will begin to develop the skills of neurosurgical patient management by following the patient through the course of their treatment with more involvement in surgical care as neurosurgical patient care skills develop. In addition, the 3rd year resident is expected to design an independent research curriculum for their PGY4 year (see below).

PGY 2-3 — Clinical and Academic Duties

Hospital patients are generally in the ICU or on the post-op surgical floor although some patients, including most consultation patients, are on other floors. The census generally runs from 25-40 patients. Residents make early morning rounds, evaluating and examining all patients, reviewing charts and studies, and planning dispositions. Rounds may be made with the attending in the morning, or later in the day, depending on the operative schedule and meetings, emergencies, and other factors at the direction of the attending. The residents and medical students are fully integrated into the outpatient clinics. Patients are first seen by a resident and/or medical student. The attending then sees the patient and the case is discussed with the resident. The resident will create the consultation or post op note but it will be read, corrected, and signed by the attending. When other duties permit, the junior resident is expected to report to the operating room whenever possible. The resident is allowed increasing involvement in the operation as surgical skills improve. Following or during the operation details are discussed and critiqued and recommendations for improvement made. On Friday, all residents not on vacation attend the didactic block. When possible, the resident is encouraged to attend any others of the multiple conferences at the Health Science Center. The PGY3 resident will spend 3 months on the pediatric neurosurgical service. Both PGY2 and PGY3 will take the neurosurgery written board exam for self-assessment. The PGY3 resident is expected to pass the exam prior to taking it for credit in PGY4. **The PGY2 resident must obtain a WV License prior to matriculating to PGY3. ECFMG residents must obtain WV License prior to matriculating to PGY4.**

PGY4—Fourth Year Neurosurgery Resident

The fourth year of training is spent in pursuit of neurosurgical scholarship or selected subspecialty offerings, often in a laboratory in the RNI or a departmental faculty member. We also encourage enfolded clinical experiences in neuro critical care for residents who have interest. The resident is expected to develop a plan well in advance with the program director. Clinical duties are limited, though call coverage is expected to maintain clinical skills through this period. This academic year is an opportunity for the resident to fine-tune their skills in academic pursuit including research design, conduct, and ethics, as well as academic professional communication skills. The content of the investigation is largely determined by the interests of the resident, but must be of high quality as determined by the program director and CCC. It is furthermore expected that the PGY4 resident take the written board exam, and pass it, in this year.

Graduation Requirement

It is required prior to graduation that every resident will have at minimum 6 PubMed indexed, peer reviewed papers in print (roughly one per year).

PGY5—Fifth Year Neurosurgery Resident

In the fifth year, the resident returns to the RMH service as a senior resident, spending 3 months running the pediatric neurosurgery service, and the other 9 months on the neurosurgery service as well as experience in endovascular procedures. The resident has more autonomy in the operating room under the direction of the neurosurgical staff. Managerial skills are developed and implemented during this year. Medical student and junior resident teaching are encouraged through daily rounds and conference lectures, and the resident will receive dedicated didactic training to better fulfill these roles.

PGY6—Sixth Year Neurosurgery Resident

In the sixth year, the resident takes a leadership role on the RHM service in preparation for chief residency. When the chief resident is unavailable to take chief call, the PGY-6 will fill this role. The resident is expected to begin to assist or perform the most complex level of operative cases. The resident will begin to transition into the chief role halfway into their PGY6 year.

PGY7—Seventh Year Neurosurgery Resident

At the midway point of the PGY-6 year, the resident is amply prepared for the true chief residency. The chief resident is fully responsible for coordination of all patient care at RMH, resident manpower decisions, complication review, and the conference and call schedules. The total duration of the chief residency is 12 months, as per RRC requirements.

Clinical and Academic Duties (NS6-7)

The NS6-7 year, the resident is responsible for the day-to-day running of the neurosurgical service under the supervision of the faculty. He/she is expected to discuss and plan patient management including surgical operations with the attendings, take leading roles in patient evaluation, planning of treatment, surgical procedures, and postoperative care. He/she is responsible for supervising resident assignments to the clinic and operating room, reviewing call and vacation schedules, and supervising the junior residents and medical students. He/she provides overall supervision for conferences including data collection for morbidity and mortality conferences, and works with the Chairman of Neurosurgery and the Program Director to support the academic learning experience. He/she communicates with Chief Residents in other medical and surgical specialties to coordinate consultations, manage multi-trauma or other cases requiring team management. At this level, the resident is responsible to be fully familiar with billing and coding, medical liability and patient safety issues, governmental regulatory concerns and practice development. It is anticipated that the finishing resident will be fully qualified to practice the highest level of neurosurgery.

Promotion, Criteria for Yearly Advancement

There are several areas where a resident must demonstrate accomplishments and proficiency to advance to the next level of training or be considered qualified to practice neurosurgery at the highest level. These are as follows: proficiency in the 6 Competencies, satisfying graduate medical requirements, satisfying ACGME Milestone requirements, successful completion of the written neurosurgical board exams for the appropriate year of training, Quality Improvement and Patient Safety (QI/PS) research project involvement, and scholarly activity (presentations and manuscript preparation).

Graduation Requirement:

The Resident must pass the written board exam when taken for self-assessment BEFORE being allowed to take the exam for credit. This effectively means that the exam must be passed for practice in the PGY3 year in order to take it for credit during the PGY4 year.

Oral examinations by the faculty will be incorporated into the CCC evaluations for each rotation. Poor performance on oral examinations may be cause for remediation, failure to advance, or dismissal. The practice of an excellent standard of medical care in each area of the six competencies is regularly evaluated through the biannual evaluation process as well as in regular clinical mentoring. Milestone evaluations are reported to the ACGME biannually. By participating with the American Board of Neurological Surgery (ABNS) examinations, the Residency Review Committee for Neurological Surgery (RRC) and the Accreditation Council for Graduate Medical Education (ACGME) oversight, the residents are assessed compared to national standards for neurosurgery. The WVU School of Medicine requires the completion of Core Curriculum Modules for resident advancement to the next year of training. Duty hours and operative case logs must be up to date daily, and medical documentation must be timely.

Scholarly Activity Requirement

It is required prior to graduation that every resident will have at minimum, 6 PubMed indexed, peer reviewed papers in print (roughly one per year, excepting the chief year). Only residents who have made significant contribution to a research project will be listed as authors. Residents are encouraged to work together to carry research project to completion, however roles and authorship are to be decided and should be made clear at the beginning of collaboration. Any authorship disputes will be handled by the faculty mentor for the research. Presentation of research at national meetings is encouraged and the same authorship standards apply. The resident who plans to present the research should submit the research for consideration.

Research Procedures and Ethics

All research activities within the Department of Neurosurgery are bound by institutional research ethics. All research projects in which residents participate must be brought before the Residency Research Committee (Chair: Nick Brandmeir), be on file with Patricia Dekeseredy and/or Dan Cifarelli (Research Coordinators) and have IRB approval. All residents must have completed required training modules. All participants in a research project must be documented and approved by the faculty of record. NO PHI should be distributed in any fashion which will constitute a HIPAA violation. This includes sending PHI to medical student (MIX) email accounts. Case reports must have documented consent form signed by the patient.

Quality Improvement (QI) Project Requirements

QI projects are a required part of the residency curriculum. These may take a variety of formats. QI training takes place during the annual resident orientation.

Table of Contents

Conferences and Attendance

The conferences occur during a block of time protected from elective clinical activity. **Punctual attendance is required by all residents and medical students on the service.** Designated faculty are assigned to oversee each conference. All faculty members are encouraged to attend all conferences and are required to attend selected conferences. Vacation days, days off, and emergent patient care issues are the only excused absences. All residents with the exception of the chief resident must be present for the entire conference period.

Resident Core Curriculum Conference: All residents, medical students and designated faculty will attend. Lectures are given that cover the knowledge base requirements of the Neurosurgery Residency Core Curriculum. These are repeated every 3 years. Residents participate in giving grand rounds and are expected to present a thorough review of the literature in a formal power point presentation on their.

SNS LECTURE SERIES

| Topic | Category |
|--|---------------|
| Rhoton Anatomy | Anatomy |
| Cardiopulmonary Issues in the NICU (MI, Afib, CHF, Stunned Myocardium, PA Catheters) | |
| Fluid and Electrolytes, CSW, SIADH, Nutrition and Renal/Endocrine Issues in the ICU | Critical Care |
| Hematologic and Coagulation Issues in the NICU (DVT/PE, transfusion, platelet issues) | Critical Care |
| Pharmacology of vasoactive, anticonvulsants, diuretics, ionotropes | Critical Care |
| Pre-Operative Evaluation for Epilepsy | Epilepsy |
| DBS for Parkinsons, Tremor, Other | Functional |
| Parkinson's Disease, Parkinsons-like Syndromes (Diagnosis/Medical Management) | Functional |
| Epilepsy (syndromes, natural history, medical management, EEG) | Epilepsy |
| Facial Pain syndromes (Tic, Atypical, Glossopharyngeal neuralgia, hemifacial spasm, medical and surgical management) | Functional |
| Other movement disorders (benign essential tremor, dystonia, OCD) | Functional |
| Pain and Analgesia and other pain syndromes (failed back, cancer, sympathetic mediated, post-herpetic, phantom limb) | Functional |
| Stereotactic techniques (Frame based, frameless, applications) | Functional |
| Surgical management of epilepsy (presurgical workup, resection, outcomes) | Functional |
| History of Neurosurgery | History |
| Infections: meningitis, encephalitis, abscess, empyema, post op infections | Infections |
| Ataxias with review of cerebellar/vestibular pathology | Neurology |
| "Coma and altered consciousness" and brain death | Neurology |
| Dementia (AD, Picks, Frontotemporal, Multi-Infarct...) | Neurology |
| EMG/NCS | Neurology |
| Headache Syndromes | Neurology |
| Multiple Sclerosis and Variants | Neurology |
| Spinal Muscular Atrophy, Muscular Dystrophies, ALS | Neurology |
| Systemic Approach to neuromuscular disorders (Motor neuron, axon, myelin, muscle, NMJ) | Neurology |
| Autonomic Nervous System | Neuroscience |

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| CSF, CBF, BBB physiology | Neuroscience |
| Motor system/cortical/brainstem/cerebellar control | Neuroscience |
| Nerve Biology I, membrane potential/ion channels | Neuroscience |
| Nerve Biology II, Synaptic transmission | Neuroscience |
| Somatic Sensory System | Neuroscience |
| Special Sense: Vision | Neuroscience |
| Special Sense: hearing, balance, smell, taste | Neuroscience |
| Chemotherapy (principles, apoptosis, anti-angiogenic, antiproliferative agents) | Oncology |
| CNS Cysts (colloid, dermoid, epidermoid, arachnoid, pineal) | Oncology |
| CPA tumors | Oncology |
| Meningiomas | Oncology |
| Metastatic Disease | Oncology |
| Neurocutaneous syndromes (NF, VHL, Tuberous sclerosis, Sturge-Weber) | Oncology |
| Pineal Region tumors | Oncology |
| Primary Neoplasms I (astrocytomas, and oligodendrogliomas) | Oncology |
| Primary Neoplasms II (JPA, PXA, SGCA, ganglioglioma, DNET) | Oncology |
| Primary Neoplasms III (ependymoma, choroid plexus tumors, primary central neuroblastoma, intraventricular tumors) | Oncology |
| Radiation Therapy (radiation biology, fractionated, conformal) | Oncology |
| Radiosurgery (principles, planning, gamma knife) | Oncology |
| Sellar/Suprasellar Tumors (Pituitary tumors, hormone syndromes, Dex Supp test, craniopharyngiomas, rathke's) | Oncology |
| Skull Base Approaches (Craniofascial, OX, Transtemporal, Far-Lateral) | Oncology |
| Skull Base Tumors and Orbital Tumors (Chordoma, chondrosarc, orbital tumors, glomus tumors) | Oncology |
| Tumor biology, epidemiology, genetics, risk factors, WHO grading | Oncology |
| Acute management of SAH and Seizures | Critical Care |
| Adult and Pediatric Head Trauma (CHI, GCS, herniation syndromes, ICP monitoring, decompressive craniectomy) | Trauma |
| Spine Trauma: Evaluation and management | Spine |
| Ventriculostomy/ICP monitor placement | Critical Care |
| Surgeon Scientist | PBLI |
| Cortical Mapping | Pediatric |
| Craniosynostosis (plagiocephaly, non-syndromic, syndromic) | Pediatric |
| Embryology | Pediatric |
| Hydrocephalus I (pathophys, SVS, pseudotumor, adult and NPH) | Pediatric |
| Hydrocephalus II (Shunt techniques, ETV techniques, managing infection) | Pediatric |
| Spasticity and movement disorders in children | Pediatric |
| Pediatric Tumors (posterior fossa) | Pediatric |
| Pediatric Tumors (Supratentorial) | Pediatric |
| Pediatric Vascular (AVM, Moya moya, VoG malformations) | Pediatric |
| Congenital I (spina bifida, CP, spasticity/movement disorders) | Pediatric |
| Congenital II (chiari malformation, syrinx) | Pediatric |
| Brachial Plexus and peripheral nerve injury, or lumbo-sacral plexus (types, classification, regeneration, treatment) | Peripheral nerve |
| Peripheral entrapment syndromes (radial, ulnar, median, peroneal, tibial, suprascapular) | Peripheral nerve |
| Spinal Anatomy (bone, ligamentous, craniocervical junction, vascular, spinal cord) | Spine |
| Biomechanics (criteria for instability, white and panjabi, denis, tumor) | Spine |
| Bone healing (normal bone physiology, allograft vs autograft, BMP, bone growth stimulators) | Spine |
| Degenerative Spinal Disease I (cervical radic, myelopathy, OPLL, ACDF, laminectomy vs laminoplasty, treatment algorithm, thoracic disc disease, approaches) | Spine |
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| Degenerative Spinal Disease II (lumbosacral radiculopathy, DDD, spondylosis, discectomy, interbody fusion, evaluation, algorithm) | Spine |
| Spinal Infections (Diskitis, osteomyelitis, post op infections) | Spine |
| Oncology I (primary bone tumors, classification, treatment, metastatic disease, management algorithm) | Spine |
| Oncology II (intramedullary, intradural extramedullary, surgical treatment, xrt) | Spine |
| Other Spinal Disorders (RA, AS, DISH, osteoporosis, compression fracture, vertebroplasty, kyphoplasty) | Spine |
| Spinal cord injury (imaging, management, steroids, stem cells, rehab) | Spine |
| Spinal Trauma I (cervical, halo, braces, traction, fracture types, operative positioning) | Spine |
| Spinal Trauma II (thoracolumbar bracing, fractures, operative approaches) | Spine |
| Aneurysms I (unruptured, natural history, ISUIA, treatment) | Vascular |
| Aneurysms II (ruptured intracranial, SAH, Hunt/Hess, HCP, vasospasm, treatment) | Vascular |
| AVMs (natural history, Spetzler-Martin, surgery, radiosurgery, embolization, management principles) | Vascular |
| Cerebrovascular anatomy and surgical approaches and Clipping techniques | Vascular |
| Evidence-based treatments for acute ischemic stroke | Vascular |
| Intracerebral hemorrhage | Vascular |
| Other malformations (cavernous, venous angiomas, dAVFs, moyamoya) | Vascular |
| Spinal Vascular Malformations (natural history, grading, surgery, endovascular) | Vascular |

M&M/Complications: Morbidity and Mortality Conference covering the cases of the previous month is held each month. This conference is held to discuss in detail surgical cases that have had associated deaths or complications. It is the responsibility of the chief resident to lead accurate data on all surgical cases, including deaths and complications, performed on the service the month prior, although generally the PGY2 resident is the presenter. Each case presentation should include:

- detailed history and physical examination of the patient
- details of the hospital course
- details of the decision process made in the care of the patient
- literature review relevant to the case
- alternative treatments
- options/suggestions to avoid complications or death in the future.
- consideration of whether the case warrants a root cause analysis

This is to be presented in a power point format. The chief resident should be able to answer questions on any of the cases included in the statistics. All residents on the service are required to attend and participate in the discussions. Psychosocial complications will also be considered in this venue alongside medical and surgical complications. Button pushes or patient complaints can be included in the case list for the month's M&M if issues pertinent for group discussion are uncovered in the routine investigation. On an average of once per quarter the chief resident will select an outcome for root cause analysis and will assign individual tasks for analysis to more junior residents. Additionally Dr. Brandmeir serves as the neurosurgical liaison to the RNI QI Committee and he will oversee M&M, meet with residents monthly to assess, and include resident participation in QI Committee discussions and activities.

Journal Club: Several recent meritorious journal articles are presented and reviewed in depth by a resident, and should be placed in context using classically quoted articles on that topic. Teaching articles for faculty development, as well as "landmark papers" may be included. Designated faculty and all residents are required to attend. An analysis of the quality of the article should be presented critically by the resident. Journal club format may change yearly depending upon resident and faculty preference.

Neurosurgery Case Conference: Cases from the two weeks prior to conference will be discussed in case conference. Indications, outcomes, surgical procedures, other options, etc. will be discussed in a multidisciplinary fashion.

Lab and operative skills curriculum: A lab and operative skills curriculum will be conducted at the conclusion of the didactic sessions, covering all areas of neurosurgery.

Evaluations

Purpose

The program recognizes the need to provide a structure by which performance related to the training program will be assessed and consideration given for promotion to the next level of training. Evaluation will be provided in accordance with Graduate Medical Education Committee policy and ACGME common program requirements.

Note: This policy addresses performance relating to academic program requirements and does not supersede other institutional or legal requirements that must be met by the resident to remain in a training program.

Policy

Residents will receive written evaluation, goals and objectives from their faculty for each year and/or major rotation of their training program, as well as receive monthly “on the fly” formative feedback. All residents participating in training will be provided, at a minimum, a semi-annual formal evaluation developed by the faculty. Residents shall be allowed to review semi-annual evaluations contained in permanent records and other evaluations as determined by program policy. The formal written evaluation shall:

1. Address each of the six ACGME core competencies and RRC milestones.
2. Include scoring and rating criteria that seek to minimize subjective assessment of performance.
3. Include language indicating satisfactory performance, advancement to the next level of training (if applicable) or provide specific actions and performance requirements by the resident to return to a level of satisfactory performance or advancement to the next level of training.
4. Be signed and dated by the resident and Program Director.
5. Become a part of the permanent record file for the resident.

In addition, each resident will meet near the midpoint of each rotation with an assigned faculty advisor according to PGY year for an informal progress evaluation to assess strengths and weaknesses in performance, so that adjustments can be made over the remainder of the rotation. Each meeting with the advisor will address multiple domains on a standardized form as determined by the PEC.

Residents will be assigned evaluations to complete semi-annually. Self, peer, program and faculty evaluations must be completed in a timely manner, which is defined as within two weeks of assignment, and meet completion deadline as assigned by the Program Coordinator.

Milestones

The milestones are designed only for use in evaluation of resident physicians in the context of their participation in ACGME accredited residency or fellowship programs. The milestones provide a framework for the assessment of the development of the resident physician in key dimensions of the elements of physician competency in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competency, nor are they designed to be relevant in any other context.

For more information about [The Neurological Surgery Milestone Project](http://www.acgme.org/Portals/0/PDFs/Milestones/NeurologicalSurgeryMilestones2.0.pdf?ver=2018-06-14-104857-233), please go to: <http://www.acgme.org/Portals/0/PDFs/Milestones/NeurologicalSurgeryMilestones2.0.pdf?ver=2018-06-14-104857-233>

Mentorship of Residents

Each resident will have a faculty advisor assigned by resident year. This faculty member will track the resident’s progress through the year and will meet with the resident to perform the mid-cycle formative evaluation. The review will contain, but not be limited to, the following elements:

1. Clinic volume and mix
2. Operative Skill progression and case numbers by category
3. Humanism, Professionalism, and Communication
4. Progress on scholarly projects
5. Contribution to QI projects
6. Boards preparation

In addition, each faculty member will have a specific emphasis for the year, based upon personal interest/strengths and the needs/emphasis of each specific year of residency. The rotation is designed to have each resident develop a mentorship relationship with each faculty member.

Mandatory focus by year:

| | |
|------|---------------------------------------|
| PGY2 | Efficiency and teamwork |
| PGY3 | Research year planning |
| PGY4 | Written boards preparation |
| PGY5 | Fellowship and career planning |
| PGY6 | Humanism and professionalism |
| PGY7 | Leadership and operative independence |

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Departmental Policies and Procedures

Inter-departmental Policies

Neuro ICU Admission Criteria:

The following will be admitted under neurosurgery OR NCCU Primary coverage to NCCU:

- Primary Neurosurgery patients requiring ICU care
- Post-op crani
- Cerebral aneurysms (pre-intervention, post intervention, vasospasm)
- Operative stroke
- Neurosurgery post op spine surgery needing ICU
- Isolated TBI (operative and non-operative)
- NeuroIR patients
- Acute hemorrhage into tumors
- Intra-parenchymal hemorrhage (hypertensive or spontaneous)
- Post TPA patients first 24 hours
- Primary Neurology patients requiring ICU care
- Status Epilepticus
- Patient with known underlying seizure disorder having seizure requiring mechanical ventilation
- Neuromuscular Disease as primary reason requiring ICU care
- Complicated ischemic stroke requiring ICU care

SICU will admit:

- TBI with other injuries (trauma service and SICU)
- Ortho Spine patients needing ICU care

MICU will admit:

- Meningitis, encephalitis requiring ICU care
- AMS or seizure status due to unknown origin requiring ICU

SDU:

- Isolated TBI under 55, no anticoagulants, GCS 14/15 to do SDU on Trauma Service
- Uncomplicated ischemic stroke without TPA – SCU or floor on Neurology Service

Patient phone calls:

All patient contact and MARS line calls must be documented in the medical chart. Summarize clinical findings as described by patient or referring provider and your recommendations. Document disposition you have recommended and why, particularly if patient is being sent to ER rather than being directly admitted to the neurosurgical service.

ER Consults and Transfers:

Brief documentation is required for ER “Side line” consults including clinical findings as described by referring provider, imaging findings if reviewed, and your recommendations. The ER may ask for help expediting MRIs or giving recommendations for type of imaging needed but consults do not have to be seen before imaging is obtained and a call back/formal consult is expected after imaging is obtained. All formal consults must be seen in a timely fashion.

Patient Safety

The Department of Neurosurgery takes patient safety seriously and works to ensure multiple layers of patient safety. The beginning of the year orientation includes a small group patient safety activity and includes the main types of patient safety threats as well as how to avoid them. During this activity we also emphasize the importance of handoffs and correct handoffs are demonstrated and role-played by the residents. The Patient Safety Net (PSN) is explained, including methods of access and reporting. Furthermore, all residents, in accordance with GME policy, complete the self-directed modules regarding patient safety from IHI. The PSN is also outlined in our resident handbook.

Handoffs continue to be supervised by the chief resident and experienced midlevel providers. They are assessed by the PD at least monthly and hand-offs are assessed in “on the fly” faculty evaluations.

Patient safety continues to be addressed and assessed throughout the academic year. Residents are encouraged to work to improve patient care through a variety of mechanisms. Adverse events and near misses are reported. The PD or APD provide feedback to all residents involved in patient safety events. All residents and faculty participate in interprofessional, interdisciplinary, systems-based improvement efforts including patient safety event reviews and analyses which include departmental M and M, review of stroke and trauma/TBI/SCI performance, and multi-departmental M and M when appropriate (e.g. neurosurgery and anesthesia when relevant). Our departmental M and M is supplemented by the attendance of an interprofessional team to ensure accurate reporting, representation, and statistical analysis and comparison to previous months and national benchmarks. Patient safety is included in the neurosurgical milestones and is assessed at mid- and end-of-year evaluations for every resident.

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Resident Incentive Program

Professional Days:

The department will allow 5 professional days, separate from vacation days, for professional development in the form of interviews for fellowship or faculty positions, or for conference attendance in the continental US in which the resident is not presenting. Reasonable expenses up to +/- \$2000 for conference attendance (travel, hotel, and registration) will be covered by the department for this purpose. Interview travel costs will be covered by the resident or interviewing institution. These days may be utilized for remedial activities. ALL days away from service must first receive approval by the Chief Resident, Program Manager, and Program Director.

Meeting Attendance:

The Department will pay reasonable travel expenses for neurosurgical conferences within the continental US in which the resident is presenting their research. Travel arrangements should be made through the residency coordinator. ALL days away from service must first receive approval by the Chief Resident, Program Manager, and Program Director.

Resident Incentive Program:

As an incentive for excellence in written board performance and the output of high quality research work by residents, the following incentive program will be instated. These funds may be used at the discretion of the resident for work-related expenses, including extra loupes, loupe lights, additional conference funding, laptops, etc. These funds will be dispersed through departmental purchase of the desired items for the resident.

Written Board Passing Score for credit: \$500

Oral presentation at national Neurosurgical Meeting: \$500

Publication in one of the three primary Neurosurgical journals (red, white, world neurosurgery): \$500 – for first author who may split between co-authors at their discretion.

The process for obtaining these funds includes:

1. The “incentive program form” is obtained from the program manager and filled out by the resident including qualifying event descriptions, PMID, etc.
2. The “incentive program form” is approved by the PD
3. The resident takes the approved form to MaryAnne, who will give further instructions regarding purchase or reimbursement depending upon the item.

Well Being

The WVU Department of Neurosurgery fully supports and complies with the ACGME requirements for physician well being utilizing a variety of both formal and informal programs.

<https://medicine.hsc.wvu.edu/media/365698/well-being-policy.pdf>

Formal programs:

1. Quarterly social events (team building exercise for residents in the summer (ropes course, escape room), Labor Day picnic in the fall, Holiday party in the winter, and social event tied to a visiting professor in the spring such as a baseball game).
2. Wellness days for independent wellness needs (done about quarterly; 5th Friday of each month)
3. Welcome letter to parents and family of residents which includes ways that they can help support their loved ones during training, as well as contact info for program faculty and staff with whom to discuss any concerns.

Informal wellness support:

In addition to the programs delineated above, the Department of Neurosurgery residency program benefits from close interactions with staff physicians and a resident-to-staff ratio of less than 1:1. As a result, individual attention and close relationships are developed which evolve over the 7 year duration of the residency program. Wellness concerns, particularly with regard to psychological wellness, have previously been successfully identified and managed through these close relationships and protocols. The main contacts for these concerns have been the PM (Melissa Acocella) and PD (Cara Sedney) both of whom have pursued additional education regarding this issue (via relevant reading: eg “Physician Suicide Letters” by Patricia Wimble, “Developing Resilience among Neurosurgery Residents” by Gary Simonds, and via relevant educational lectures/seminars at neurosurgical educational meetings) and participate in committee and research-level Wellness endeavors.

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Diversity and Non-Discrimination

The Department of Neurosurgery Residency Program is the only neurosurgery residency program in the state, and as such has dual goals for its training program as related to diversity:

1. Attract and retain top talent reflective of a diverse world population to WVU Medicine Neurosurgery in order to provide world-class tertiary neurosurgical care to the people of West Virginia and beyond.
 - a. In order to do this, the program seeks to create a community reflective of the broader world community and focused on excellence or potential in research and patient care.
2. Train and retain neurosurgeons who are culturally competent to provide care to the population of West Virginia, in particular those from the state.
 - a. In order to do this, the program seeks to actively foster an interest in neurosurgery amongst students within the state, while creating opportunities for training and subsequently retention of these students, residents, and faculty within the state.
3. The WVU School of Medicine is the flagship institution of medical education, healthcare, and research for the state of West Virginia. As a land grant institution, our goal is to improve the health and wellness of West Virginia residents. The School endeavors to select a gender-balanced, diverse, and tolerant graduate student body, faculty, and staff. Our priority is to recruit key, value-added, underrepresented in medicine groups that include African-Americans, Hispanics, LGBTQ, and Native Americans/Pacific Islanders. The WVU School of Medicine also aims to recruit residents/fellows who are included in the socioeconomically and educationally disadvantaged rural Appalachian population.

<https://medicine.hsc.wvu.edu/media/365745/gme-policy-on-diversity.pdf>

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Transition of Care

The transitions policy is created in recognition that multiple studies have shown that transitions of care create the most risk of medical errors (ACGME teleconference July 14, 2010.) In addition to the below specific policies, promotion of patient safety is further ensured by:

1. Provision of complete and accurate call schedules on the hospital intranet [On Call](#).
2. Presence of a backup plan for those cases where a resident is unable to complete their duties.
3. The ability of residents to freely, and without fear of retribution, report their inability to carry out their clinical responsibilities due to fatigue or other causes.

Policy and Process

Residents receive educational material on Transitions during orientation as a core module. This utilizes the IPASS system.

In any instance where care of a patient is transferred to another member of the health care team (including service hand-offs or between services) an adequate transition must be used. Although transitions may require additional reporting than required in this policy, a minimum standard for transitions must include the following information:

1. Demographics
 - a. Name
 - b. Medical Record Number
 - c. Unit/room number
 - d. Age
 - e. Attending physician – Phone numbers of covering physician
 - f. Gender
 - g. Allergies
 - h. Admit date
2. History and Problem List

- a. Primary diagnosis(es)
- b. Chronic problems (pertinent to this admission/shift)
3. Current condition/status
4. System based
 - a. Pertinent Medications and Treatments
 - b. Oral and IV medications
 - c. IV fluids
 - d. Blood products
 - e. Oxygen
 - f. Respiratory therapy interventions
5. Pertinent lab data
6. To do list: Check x-ray, labs, wean treatments, etc., *including rationale*
7. Contingency Planning – What may go wrong and what to do
8. **ANTICIPATE** what will happen to your patient.

Example: *“If seizures > 5 minutes, give Ativan 0.05mg/kg. If still seizes, load with 5mg/kg of fosphenytoin.”*
9. Difficult family or psychosocial situations
10. Code status, especially recent changes or family discussions

Handoffs should be completed in person. Occasionally, circumstances may require a phone call, but must always be completed with direct verbal communication between the two responsible providers. Whenever possible, additional members of the team, including staff, patients, families, and physician extenders, should also be included. The EMR “Hand off sheet” should be maintained.

How Monitored:

The process and effectiveness of the handoff system is monitored by direct supervision of handoffs at least monthly by faculty and by evaluation of modeled handoffs in the conference environment. Contributions of the handoff process to outcomes will be considered at the monthly Morbidity and Mortality Conference. The PEC will ultimately evaluate the effectiveness of the system in the Annual Program Evaluation (APE) on a yearly basis, and the sponsoring institution will evaluate by the Internal Review process. The institution and program will monitor this by periodic sampling of transitions.

In addition, please note the institutional policy regarding the Professionalism Standard for Interruption of Patient Care.

<http://medicine.hsc.wvu.edu/media/2575/residentprofessionalismstandardforinterruptionofpatientcare2011revised11-11-11.pdf>

- A. If a resident is aware of any conflict that may arise during the course of any upcoming procedure or patient care activity, whether such a procedure or activity is scheduled or emergent, that resident must inform the attending physician and/or Residency Program Director in advance to allow the physician or service to determine whether patient safety will allow for reasonable accommodations. It may be necessary to alter a resident’s rotation schedule if breaks cannot be reasonably accommodated.
- B. In surgical settings and other patient care activities, residents may not scrub out of surgical procedures, leave the operator or any patient care setting for any non-emergent reason (e.g. medical conditions, breast feeding, or child or adult care). While emergencies will sometimes arise, in the event of an unforeseen emergency, residents must appropriately notify the attending physician of the emergency and seek the necessary permission to be excused only when and if the circumstances warrant. In absolutely no instance should a resident scrub out of surgery or leave the operator without first informing the attending physician and obtaining permission to exit. Residents are expected to be compliant with current duty hour standards and program duty hour policies and procedures.

Consequences for failure to comply will be at the discretion of the Residency Program Director.

Fit for Duty

Alertness Management /Fatigue Mitigation Strategies

Policy and Process

Residents and faculty are educated about alertness management and fatigue mitigation strategies on line via SOLE GME for Residents (“Fundamentals of Fatigue Prevention”), and in departmental conferences/residency orientation. Alertness management and fatigue mitigation strategies include:

1. Warning Signs
 - a. Falling asleep at Conference/Rounds
 - b. Restless, Irritable w/ Staff, Colleagues, Family
 - c. Rechecking your work constantly
 - d. Difficulty Focusing on Care of the Patient
 - e. Feeling “like you just don’t care”
 - f. *Never drive while drowsy*
2. Sleep Strategies for House Staff
 - a. Pre-call Residents
 1. Don’t start call with a sleep deficit – get 7-9 hours of sleep
 2. Avoid heavy meals and/or exercise within 3 hours of sleep
 3. Avoid stimulants to keep you awake
 4. Avoid ETOH to help you sleep
 - b. On-Call Residents
 1. Tell Chief/PD/Faculty if too sleepy to work
 2. Nap whenever you can (> 30 min or < 20 min)
 3. BEST Circadian Window 2PM-5PM & 2AM-5AM
 4. AVOID heavy meals
 5. Strategic consumption of coffee (t ½ 3-7 hours)
 6. Know your own alertness/sleep pattern
 - c. Post-call Residents
 1. Lowest alertness 6AM –11AM after being up all night
 2. Full recovery from sleep deficit takes 2 nights
 3. Take 20 min. nap or coffee 30 min before driving
 4. Alert your chief resident, PM, or APD, or PD for accommodations if you are unable to safely drive home. We will help you!

A backup plan will be devised in the event a resident must be relieved for fatigue – this may require chief resident filling in temporarily or a temporary alteration to the call schedule. The PD and PM must be notified for instructions in the event this occurs.

How Monitored:

The institution and program monitor successful completion of the on line modules. Residents are encouraged to discuss any issues related to fatigue and alertness with supervisory residents, chief residents, and the program administration. Supervisory residents will monitor lower level residents during any in house call periods for signs of fatigue. Adequate facilities for sleep during day and night periods are available in the hospital, and residents are required to notify Chief Residents and program administration if those facilities are not available as needed or properly maintained. At all transition periods, supervisory residents and faculty will monitor lower level residents for signs of fatigue during the hand off. The institution will monitor implementation of this indirectly via monitoring of duty hours violations in E-value, the Annual Resident Survey (administered by the institution to all residents and as part of the annual review of programs) and monitoring of accurate timely reporting of hours to the program coordinator and program director to ensure residents do not exceed work hour limits.

<http://medicine.hsc.wvu.edu/media/2598/gmebylawsrevised1-15-16.pdf>

Policy Ensuring Residents Have Adequate Rest

In order to ensure residents have adequate rest between duty periods and after on –call sessions we adopt the following policies:

1. Our Duty Hours Policy contains the following relevant language:
 - a. According to the Neurosurgery Review Committee, residents must be prepared to enter the unsupervised

practice of medicine and care for patients over irregular or extended periods. This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day-off-in seven standards. While it is desirable that residents in their final years of education have eight hours free of duty between scheduled duty periods, there may be circumstances [as defined by the Review Committee] when these residents must stay on duty to care for their patients or return to the hospital with fewer than eight hours free of duty. Circumstances or return-to-hospital activities with fewer than eight hours away from the hospital by residents in their final years of education must be reported to the program manager and the program director for monitoring.

All of the above criteria are in the context of the other duty hours requirements.

2. All employees must abide by the **Fit for Duty Policy**:

<https://medicine.hsc.wvu.edu/media/365671/fitfordutypolicyrevisions3-24-17logo2017.pdf>

This describes the expectations for employees to report to work fit and safe to work. It further defines unsafe/impaired behaviors, and the requirement for self or supervisor referral to the [Faculty Staff Assistance Program \(FASP\)](#) (<http://www.hsc.wvu.edu/fsap/>) and what steps are taken thereafter.

A resident physician who is suspected of being impaired for any reason is immediately subject to drug screening.

Refusal of drug screening is grounds for immediate suspension and/or termination with referral to the Faculty and Staff Assistance Program (FSAP) and/or the West Virginia Medical Professional Health Assistance Program.

3. Residents must take personal responsibility for and faculty must model behaviors that promote:

- a. Assurance for fitness of duty.
- b. Assurance of the safety and welfare of patients entrusted in their care.
- c. Management of their time before, during and after clinical assignments.
- d. Recognition of impairment (e.g. illness or fatigue) in self and peers.
- e. Honest and accurate reporting of duty hours, patient outcomes, and clinical experience data.
- f. Adequate sleep facilities are in place at each institution and our alertness management / fatigue mitigation policy and process encourages good sleep hygiene as well as recommending such strategies and pre-call strategies, strategic napping and post-call naps.
- g. Faculty will model behaviors that encourage fitness for duty as noted above, and our Supervision Policy requires faculty to observe for signs of fatigue especially during transitions.

Use of Strategic Napping

Strategic napping is utilized while on call to ensure that residents are able to avoid fatigue. Residents are encouraged to nap overnight especially between the hours of 10 PM through 8 AM to avoid excessive fatigue. The effectiveness of this process will be monitored by faculty responsible for patient care that the resident is involved in on the following day. Difficulties must be reported to the program director for review.

Case Logging Policy

Residents are expected to log ALL operative cases and procedures in every setting, including bedside, pain clinic, Gamma Knife, interventional radiology, ICU, etc. Case logs are expected to be kept up to date at least weekly and are reviewed at each formal evaluation. Meal cards may be turned off for delinquent logging practices.

Graduation Requirement:

All case minimums are required to be met by the 6th month of the PGY7 year. If minimums are not met, specific rotations will be crafted for the final 6 months of the chief year to meet minimum requirements.

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Supervision and Progressive Responsibility Policy

SUPERVISION OF RESIDENTS

Purpose:

To ensure that residents are provided adequate and appropriate levels of supervision during the course of the educational training experience and to ensure that patient care continues to be delivered in a safe manner.

<http://medicine.hsc.wvu.edu/media/2598/gmebylawsrevised1-15-16.pdf>

Policy and Procedure:

All program faculty members supervising residents must have a faculty or clinical faculty appointment in the School of Medicine or be specifically approved as supervisor by the Program Director. Faculty schedules will be structured to provide residents with continuous supervision and consultation.

Residents must be supervised by faculty members in a manner promoting progressively increasing responsibility for each resident according to their level of education, ability and experience. Residents are provided information addressing the method(s) to access a supervisor in a timely and efficient manner at all times while on duty.

The program provides additional information addressing the type and level of supervision for each post-graduate year in the program that is consistent with ACGME program requirements and, specifically, for supervision of residents engaged in performing invasive procedures.

1. To provide patients with quality care and house officers with a meaningful learning experience, a supervising attending physician must be clearly identified for each patient admitted to or consulted by the neurosurgical service. It is the responsibility of the house officer to notify an attending physician that a consultation or admission has been initiated on his/her service, based on the call schedule and back-up mechanisms established in the department.
2. The supervising attending physician is ultimately responsible for all recommendations rendered and care delivered by house officers, paramedical personnel and other trainees on the neurosurgical service.
3. Supervision shall be readily available to all house officers on duty. Supervision should first be from the attending listed for that patient. If this physician is not immediately available, the on-call attending will be the supervising attending. A comprehensive call list of house officers and attending physicians is disseminated to all switchboard operators, hospital call centers, clinical care areas and all covering house officers on a monthly basis.
4. Supervision shall be conducted to ensure that patients receive quality care and house officers assume progressively increased responsibility in accordance with their ability and experience, based on curriculum objectives for the respective level of training.
5. Levels of supervision include attending physician demonstrating a procedure, assisting with the procedure, present physically in the area where intervention is performed, attending available by telephone, senior house officer or other supervisor present physically or available by telephone. The attending physician in charge of a respective procedure shall determine the level of supervision for a particular house officer and the specific invasive procedure.
6. The responsible attending physician may delegate supervision of more junior house officer to a more senior resident as appropriate. These determinations shall be consistent with the individual house officer's knowledge base and skills, the complexity of the case and procedure, and the house officer's prior evaluations regarding levels of performance per the residency program core curriculum objectives for each level of training.
7. House officers must request help when the need for assistance is perceived, and responsible attending physicians must respond personally when such help is requested. When a patient's attending physician is not available, a previously designated physician or the attending on call shall assume all coverage responsibilities for the patients.
8. The Chief Resident shall relay to the Department Chair and the Program Director any incident where another house staff did not notify a responsible faculty member, a responsible faculty member was not

responsive, or any other breach of supervision as outlined in this policy.

Policy and Process:

Several of the essential elements of supervision are contained in the Policy of Professionalism detailed elsewhere in this document. The specific policies for supervision are as follows.

Faculty Responsibilities for Supervision and Graded Responsibility

1. Faculty is expected to make clear to each resident that it is only the failure to seek guidance that will be considered problematic
2. Faculty is expected to respond fully and respectfully to any questions or concerns expressed by the care team, including residents, 24/7.
3. The supervising attending physician will supply timely and appropriate feedback about performance including constructive criticism about deficiencies, recognition of success, and specific suggestions for improvement.

Residents must be supervised in such a way that they assume progressive responsibility as they progress in their educational program. Progressive responsibility is determined in a number of ways including:

1. Faculty determine what level of autonomy each resident may have that ensures growth of the resident and patient safety.
2. The Program Director and faculty assess each resident's level of competence in frequent personal observation and semi-annual review of each resident.
3. Where applicable, progressive responsibility is based on specific milestones
4. Completion of the SNS Boot Camp

The expected components of supervision include:

1. Defining educational objectives.
2. Faculty assessment of the skill level of the resident by direct observation.
3. The faculty defines the course of progressive responsibility allowed, starting with close supervision and progressing to increased independence as the skill is mastered.
4. Documentation of supervision by the involved supervising faculty must be customized to the setting based on guidelines for best practice and regulations from the ACGME, JACHO and other regulatory bodies. Documentation should generally include but not be limited to:
 - a. progress notes in the chart written by or signed by the faculty
 - b. addendum to resident's notes where needed
 - c. counter-signature of notes by faculty
 - d. a medical record entry indicating the name of the supervisory faculty.
5. In addition to close observation, faculty are encouraged to give frequent formative feedback and required to give formal summative written feedback that is competency based and includes evaluation of both professionalism and effectiveness of transitions.

The levels of supervision are defined as follows:

- **Direct Supervision by Faculty** - faculty is physically present with the resident being supervised.
- **Direct Supervision by Senior Resident** is same as above but resident is the direct supervisor.
- **Indirect with Direct Supervision IMMEDIATELY Available** – Faculty – the supervising physician is physically present within the hospital or other site of patient care and is immediately available to provide Direct Supervision.
- **Indirect with Direct Supervision IMMEDIATELY Available** – Resident - same but direct supervisor is resident.
- **Indirect with Direct Supervision Available** - the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide Direct Supervision.
- **Oversight** The supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.
- **Retaliatory supervision will not be tolerated.**

SECTION Q

Neurosurgery Residents Clinical Responsibilities and Procedural Supervision Requirements

NOTE:

PGY-I – A – Delineates those procedures that must be performed with direct supervision until a benchmark number of supervised procedures are performed.

| Neurosurgery | PGY-I | PGY-II | PGY-III | PGY-IV | PGY-V | PGY-VI | PGY-VII |
|--|-------|--------|---------|--------|-------|--------|---------|
| Arterial Sampling – Peripheral | X | X | X | X | X | X | X |
| Arterial Line Placements – Peripheral | A | X | X | X | X | X | X |
| Arterial Line Placements – Central | | | | | | | |
| Central Venous Line | A | X | X | X | X | X | X |
| Swan-Ganz (Pulmonary Artery) Line | | | | | | | |
| Lumbar Puncture/Lumbar Drain | A | X | X | X | X | X | X |
| Paracentesis | | | | | | | |
| Venous Sampling Central | | | | | | | |
| Endotracheal Intubation | | | | | | | |
| Peripheral Venous Access | X | X | X | X | X | X | X |
| Gastric Tubes – NG/Dobhoff | X | X | X | X | X | X | X |
| Wound Debridement | X | X | X | X | X | X | X |
| Incision and Drainage of Superficial Abscess | X | X | X | X | X | X | X |
| Laceration Repair – Complex, Simple | X | X | X | X | X | X | X |
| Cervical Reduction and Tong Placement | | X | X | X | X | X | X |
| Externalization of VP Shunts | | X | X | X | X | X | X |
| Halo Placement | | X | X | X | X | X | X |
| Intracranial Pressure Monitor Placement | A | X | X | X | X | X | X |
| Subdural Drain Placement | A | X | X | X | X | X | X |
| Twist Drill Craniotomy | A | X | X | X | X | X | X |
| Ventriculoperitoneal Shunt Tap | A | X | X | X | X | X | X |

Inpatient Services

| <u>PGY Level</u> | <u>Direct by Faculty</u> | <u>Direct by Senior Residents</u> | <u>Indirect but immediately available - faculty</u> | <u>Indirect but immediately available - residents</u> | <u>Indirect available</u> | <u>Oversight</u> |
|------------------|--------------------------|-----------------------------------|---|---|---------------------------|------------------|
| I | X | X | | | | |
| II | X | X | X | X | | |
| III - VII | X | X | X | X | X | X |

Intensive Care Units

| <u>Skill Level</u> | <u>Direct by Faculty</u> | <u>Direct by senior residents</u> | <u>Indirect but immediately available - faculty</u> | <u>Indirect but immediately available - residents</u> | <u>Indirect available</u> | <u>Oversight</u> |
|--------------------|--------------------------|-----------------------------------|---|---|---------------------------|------------------|
| I | X | X | | | | |
| II | X | X | X | X | | |
| III - VII | X | X | X | X | X | X |

Ambulatory Settings

| <u>PGY</u> | <u>Direct by Faculty</u> | <u>Direct by senior residents</u> | <u>Indirect but immediately available - faculty</u> | <u>Indirect but immediately available - residents</u> | <u>Indirect available</u> | <u>Oversight</u> |
|------------------|--------------------------|-----------------------------------|---|---|---------------------------|------------------|
| I | X | X | | | | |
| II | X | X | X | X | | |
| III - VII | X | X | X | X | X | X |

Operating Rooms:

| <u>PGY</u> | <u>Direct by Faculty</u> | <u>Direct by senior residents</u> | <u>Indirect but immediately available - faculty</u> | <u>Indirect but immediately available - residents</u> | <u>Indirect available</u> | <u>Oversight</u> |
|------------------|--------------------------|-----------------------------------|---|---|---------------------------|------------------|
| I | X | X | X | | | |
| II | X | X | X | | | |
| III - VII | X | X | X | | | |

**Neurosurgical
Bedside Procedure:**

(to be signed off by senior/chief resident or staff)

Resident _____

Lumbar Puncture

| MRN | Date | Initial |
|-----|------|---------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Lumbar Drain

| MRN | Date | Initial |
|-----|------|---------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

EVD

| MRN | Date | Initial |
|-----|------|---------|
| | | |
| | | |
| | | |
| | | |
| | | |

Camino

| MRN | Date | Initial |
|-----|------|---------|
| | | |
| | | |
| | | |
| | | |
| | | |

Subdural Drain/SEPS

| MRN | Date | Initial |
|-----|------|---------|
| | | |
| | | |
| | | |
| | | |
| | | |

Notes:

PGY 1 residents must be supervised by either faculty or more senior residents in the hospital setting until a set number of procedures are achieved. Incoming residents are required to complete 5 each of the listed bedside procedures while observed by the senior or chief prior to doing said procedures independently. A handout of the above chart will be provided.

How Monitored:

The institution will monitor implementation of the policies through Annual Review of Programs and Internal Reviews. Furthermore the institution monitors supervision through a series of questions in the Annual Resident Survey. The program will monitor this through feedback from residents and monitoring by the Chief Resident and Program Director. Supervision will be assessed annually in the APE. In accordance with AGME policy in rare instances, the CCC may judge milestone progress such that the PGY resident may be advanced to a higher degree of responsibility, though the hours rules would still be in full effect.

Mandatory Notification of Faculty

How monitored

The Chief Resident and faculty will monitor by checking for proper implementation on daily rounds. The Program Director and the Program Manager will solicit reports from faculty on lack of appropriate use of the policy.

Continuity of Care when a Resident is Unable to Perform Duties

If a resident is unable to perform, the faculty responsible for patient care assumes responsibility for continuity of care. The effectiveness of this policy will be reported to and reviewed by the program director, and any cases will be reviewed at the monthly morbidity and mortality conference to ensure optimal patient care, and at the annual Program Evaluation to determine any needed changes in policy.

Guidelines for Resident Mandatory Communication with Attending

The following situations require mandatory direct communication with the faculty responsible for patient care, both during routine working hours, and after hours and weekends. "Faculty responsible for patient care" means the staff of record for the patient, except in events when the faculty is physically out of town or can't be contacted, in which case the on call faculty should be notified. The staff of record should also be notified as soon as is feasible:

1. Death
2. DNR or other end of life decision
3. Suicide attempt
4. Violence requiring physical restraints
5. Emergency surgery
6. Acute drastic change in course
7. Unanticipated invasive or diagnostic procedure
8. Pregnancy
9. Transfer of care to another medical or surgical service, including transfer to ICU
10. Any serious adverse event
11. Any complex decision making process that the resident does not feel adequately qualified to undertake without immediate input from faculty

Any lapse in this process will be reported to the program director, who will monitor the reporting process and review monthly.

Moonlighting

Purpose

To ensure that professional activities falling outside the course and scope of the training program are consistent with policies and guidelines set forth by the Accrediting Council for Graduate Medical Education (ACGME) and Graduate Medical Education Committee. Moonlighting is defined as any professional activity not considered an integral part or required rotation of the curriculum for a postgraduate training program, irrespective of remuneration.

Policy

In-house moonlighting may be allowed for residents after their chief year concludes, at the discretion of the program director.

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Time Away, Vacation, Holiday, and Sick Time Policies

Vacations, Sick Leave Policies

Each resident will accrue 15 hours of vacation per month in every academic year. Vacations are assigned or selected based upon seniority. If there are questions or concerns from any of the resident staff, they are welcome to contact the Program Director at any time

Full time residents/fellows will accrue 1.5 sick days per month. Sick leave must be accrued prior to using it. Sick leave may be used by an employee who is ill or injured, when a member of the immediate family is seriously ill, or when a death occurs in the immediate family.

Residents must live within 20 minutes of the hospital, and should have a winter weather-capable vehicle. For more information about annual or sick leave, holidays, and the inclement weather policy, please go to:

<https://medicine.hsc.wvu.edu/media/365677/annual-leave-policy.pdf>

Professional Days

The department will allow 5 professional days, separate from vacation days, for professional development in the form of interviews for fellowship or faculty positions, or for conference attendance in the continental US in which the resident is not presenting. Interview travel costs will be covered by the resident or interviewing institution. ALL days must receive prior approval by the Chief Resident, PM, and PD.

Meetings

The Department will pay reasonable travel expenses for neurosurgical conferences within the continental US in which the resident is presenting their research, or for those days encompassed within the professional day policy above (5 days/continental US). Travel arrangements should be made through the residency coordinator. Reasonable expenses up to +/- \$2000 for conference attendance (travel, hotel, and registration) will be covered by the department for this purpose. ALL days must receive prior approval by the Chief Resident, PM, and PD.

Maternity/Paternity Leave

The West Virginia University Department of Neurosurgery complies with all federal and GME policies regarding maternity/paternity leave. Leaves of absence may potentially extend training.

Resident Schedules, Meals, Email, and Pagers

Rotations

Resident rotations are designed to optimize the educational experience of each individual resident, to allow progression per curriculum objectives and to satisfy the requirements of the ACGME in Neurological Surgery.

On all neurosurgical rotations, all residents are required to participate in the call schedule unless on vacation.

The rotation schedules are generally available in advance. Residents will be notified at the earliest possible time if necessary changes are made in the schedule. All residents should feel free to contact the Program Director with questions or other concerns regarding the rotations. The rotation schedule cannot be changed without the knowledge and consent of the Program Director.

Surgical House Staff

Surgical interns and house staff assigned to the neurosurgical service shall be integrated under the oversight of neurosurgery residents. They shall assist in clinical and call activities, although the priority of assignment to surgical procedures shall be for neurosurgery residents.

Call Schedules

The call schedule is primarily the responsibility of the PGY 5 resident. Patient care and educational objectives must be monitored, and if long weekends are too great a burden for a given resident, this option will no longer be allowed. On-call rooms are available for resident use. Resident work hours will be monitored by the program coordinator and program director on an on-going basis, with the aim of modifying call policies and manpower decisions to ensure continued full compliance with the ACGME requirements.

Meals

Meal assistance is available via the meal cards. Questions regarding the policy should be directed to the Program Manager. If policy is not followed or requested information is not provided, the Program Manager may freeze the meal card account

until policy is followed.

Email

Departmental email is an official form of departmental communication. Residents are required to check email daily and respond to departmental messages within **24 hours**.

Pagers

WVU provides digital pagers for the residents. Residents will usually retain the same pager number for the duration of their training. Extra batteries are available from the secretarial staff in the neurosurgery offices. If a pager is lost or stolen please contact the Program Manager immediately for replacement. In this situation, the resident may be held responsible for the replacement cost.

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Clinical and Educational Work Hours

The Department of Neurosurgery supports the letter and spirit of the most recent iteration of the clinical and educational workhours policy of the ACGME. Specific requirements are included below:

Maximum Hours of Work Per Week

Work hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities and all moonlighting.

Mandatory Time Free of Duty

Residents must be scheduled for a minimum of one day free of duty every week (when averaged over four weeks). At-home call cannot be assigned on these free days.

Maximum Duty Period Length

Duty periods may be scheduled to a maximum of 24 hours of continuous duty in the hospital. We encourage residents to use alertness management strategies in the context of patient care responsibilities. Strategic napping, especially after 16 hours of continuous duty and between the hours of 10:00 p.m. and 8:00 a.m., is strongly suggested.

It is essential for patient safety and resident education that effective transitions in care occur. Residents may be allowed to remain on-site in order to accomplish these tasks; however, this period of time must be no longer than an additional four hours.

Residents must not be assigned additional clinical responsibilities after 24 hours of continuous in-house duty.

In unusual circumstances, residents, on their own initiative, may remain beyond their scheduled period of duty to continue to provide care to a single patient. Justifications for such extensions of duty are limited to reasons of required continuity for a severely ill or unstable patient, academic importance of the events transpiring, or humanistic attention to the needs of a patient or family.

Under those circumstances, the resident must:

- Appropriately hand over the care of all other patients to the team responsible for their continuing care; and,
- Document the reasons for remaining to care for the patient in question and submit that documentation in every circumstance to the program director.
- The program director must review each submission of additional service, and track both individual resident and program-wide episodes of additional duty.

Minimum Time Off between Scheduled Duty Periods

PGY-2 residents, as defined by the Neurosurgery Review Committee, should have 10 hours free of duty, between scheduled duty periods (this data is collected by the Program Director although not a current ACGME rule). They must have at least 14 hours free of duty after 24 hours of in-house duty.

Residents in the final years of education, PGY-3 and above, as defined by the Neurosurgery Review Committee, must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods.

This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day- off-in seven standards. While it is desirable that residents in their final years of education have eight hours free of duty between scheduled duty periods, there may be circumstances [as defined by the Review Committee] when these residents must stay on duty to care for their patients or return to the hospital with fewer than eight hours free of duty.

Circumstances or return-to-hospital activities with fewer than eight hours away from the hospital by residents in their final years of education will be monitored by the program director.

Maximum In-House On-Call Frequency

PGY-2 residents and above must be scheduled for in-house call no more frequently than every-third-night (when averaged over a four-week period).

At-Home Call

Time spent in the hospital by residents on at-home call must count towards the 80-hours maximum weekly hour limit. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for one-day-in-seven free of duty, when averaged over four weeks.

At-home call must not be as frequent or taxing as to preclude rest or reasonable personal time for each resident.

Residents are permitted to return to the hospital while on at-home call to care for new or established patients. Each episode of this type of care, while it must be included in the 80-hour weekly maximum, will not initiate a new "off-duty period".

Duty Hour Logging Policy

Residents are required to log all duty hours in E-value daily. This includes at home clinical duties such as answering pages and charting. Those who fail to log duty hours or log erroneous duty hours are subject to disciplinary action.

The institution as well as each program is required to monitor and document compliance with these requirements for all trainees. This policy applies to any site where trainees rotate, even in elective situations.

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Academic Disciplinary Policy and Procedures, Grievance

The Neurosurgery Department adheres to the Academic Discipline and Dismissal Bylaws, which can be found at <http://medicine.hsc.wvu.edu/media/2598/gmebylawsrevised1-15-16.pdf>

Within this document can be found bylaws regarding:

- Academic Grievance
- Harassment
- Guidelines for Appropriate Use of the Internet
<https://medicine.hsc.wvu.edu/media/365672/policy-for-appropriate-use-of-the-internet.pdf>

PRELIMINARY INTERVENTION

Substandard disciplinary and/or academic performance is determined by the Program Director with the assistance of the faculty and particularly the CCC. Corrective action for minor academic deficiencies or disciplinary offenses which do not warrant remediation as defined below, shall be determined and administered by the Program Director under this guidance. Corrective action may include oral or written counseling or any other action deemed appropriate by the Department under the circumstances. Corrective action for such minor deficiencies and/or offenses are not subject to appeal.

PROBATION and REMEDIATION

House Officers may be placed on probation for issuance of a warning or reprimand; or for imposition of a remedial program. Remediation refers to an attempt to correct deficiencies which, if left uncorrected, may lead to a non- reappointment or disciplinary action. In the event a House Officer's performance, at any time, is determined by the Program Director to require remediation, the Program Director shall notify the House Officer in writing of the need for remediation. A remediation plan will be developed that outlines the terms of remediation and the length of the remediation process. Failure of the House Officer to comply with the remediation plan may result in termination or non-renewal of the House Officer's appointment.

A House Officer who is dissatisfied with a departmental decision to issue a warning or reprimand, impose a remedial program,

or impose probation may appeal that decision to the Department Head informally by meeting with the Department Head and discussing the basis of the House Officer's dissatisfaction within five (5) working days of receiving notice of the departmental action. The decision of the Department Head shall be final, subject to appeal according to grievance policy of the university.

CONDITIONS FOR REAPPOINTMENT

Programs will provide notice in writing of the intent to non-renew or non-promote residents 4 months prior to the end of the current contract, except in the case when the cause for non-promotion/non-reappointment occurred within the final 4 months, or when the decision is made in the context of an in-process probation or remediation. In such cases house officers will be notified in writing with as much notice as possible.

TERMINATION, NON-REAPPOINTMENT, AND OTHER ADVERSE ACTION

A House Officer may be dismissed or other adverse action may be taken for cause, including but not limited to: i) unsatisfactory academic or clinical performance; ii) failure to comply with the policies, rules, and regulations of the House Officer Program or University or other facilities where the House Officer is trained; iii) revocation, expiration or suspension of license; iv) violation of federal and/or state laws, regulations, or ordinances; v) acts of moral turpitude; vi) insubordination; vii) conduct that is detrimental to patient care; and viii) unprofessional conduct.

The Program Director may take any of the following adverse actions:

- i) issue a warning or reprimand;
- ii) impose terms of remediation or a requirement for additional training, consultation or treatment;
- iii) institute, continue, or modify an existing summary suspension of a House Officer's appointment;
- iv) terminate, limit or suspend a House Officer's appointment or privileges;
- v) non-renewal of a House Officer's appointment;
- vi) dismiss a House Officer from the Program;
- vii) or any other action that the Program Director deems is appropriate under the circumstances.

DUE PROCESS

All communication regarding due process will occur by either official campus email, certified letter, or hand delivery.

Dismissals, non-reappointments, non-promotion or other adverse actions including probation which could significantly jeopardize a House Officer's intended career development are subject to appeal as delineated in the **GME Bylaws, XXV. Employment Grievance Procedure** (page 32).

Employment Grievance Procedure for Non-Academic Issues: Resident is encouraged to seek resolution of non-academic employment-related grievances relating to Resident's appointment or responsibilities, including any differences between Resident and WVUH, or WVU School of Medicine with respect to the interpretation of, application of, or compliance with the provision of the agreement, in accordance with the grievance procedures set forth on the WVU website. Forms and procedures are available from the Human Resources Department.

<http://medicine.hsc.wvu.edu/media/2598/gmebylawsrevised1-15-16.pdf>

SUMMARY SUSPENSIONS

The Program Director, or designee, or the Department Head, or designee, shall have the authority to summarily suspend, without prior notice, all or any portion of the House Officer's appointment and/or privileges granted by University or any other House Officer training facility, whenever it is in good faith determined that the continued appointment of the House Officer places the safety of patients or personnel in jeopardy or to prevent imminent or further disruption of University or other training facility operations.

Except in those cases where suspension occurs as part of other appealable disciplinary actions, within two (2) working days of the imposition of the summary suspension, written reason(s) for the House Officer's summary suspension shall be delivered to the House Officer, the department chair, and the DIO. In those other appealable cases the due process as described in the WVU grievance policy. The House Officer will have five (5) working days upon receipt of the written reasons to present written evidence in support of the House Officer's challenge to the summary suspension. A House Officer, who fails to submit a written response within the five (5) day deadline, waives his/her right to appeal the suspension.

The Department may retain the services of the House Officer or suspend the House Officer without pay during the appeal process. Suspension with or without pay will not exceed 90 days, except under unusual circumstances.

OTHER GRIEVANCE PROCEDURES

Grievances other than those departmental actions described above or discrimination should be directed to the Program Director for review, investigation, and/or possible resolution. Complaints alleging violations of the sexual harassment policy should be directed to the appropriate supervisor or the Program Director. <http://medicine.hsc.wvu.edu/media/2598/gmebylawsrevised1-15-16.pdf>

Resident complaints and grievances related to the work environment or issues related to the program or faculty that are not addressed satisfactorily at the program or departmental level should be directed to the DIO. For those cases that the resident feels can't be addressed directly to the program he/she should contact the office of the DIO.

Employment Grievance Procedure for Non-Academic Issues

Resident is encouraged to seek resolution of non-academic employment related grievances relating to Resident's appointment or responsibilities, including any differences between Resident and WVUH, or WVU School of Medicine with respect to the interpretation of, application of, or compliance with the provision of the agreement, in accordance with the grievance procedures set forth on the WVU website (<https://grievanceprocedure.wvu.edu/>). Forms and procedures are available from the Human Resources Department.

Internet, Electronic Networking and Other Media

Social and business networking Web sites or on-line communities are being used increasingly by faculty, students, residents and staff to communicate with each other, and to post events and profiles to reach external audiences. As part of the sponsoring institution's commitment to building a community in which all persons can work together in an atmosphere free of all forms of harassment, exploitation, or intimidation, resident physicians and resident dentists are expected to act with honesty, integrity, and respect for the rights, privileges, privacy, sensibilities, and property of others.

The capacity to record, store and transmit information in electronic format brings responsibilities to those working in healthcare with respect to privacy of patient information and ensuring public trust in our participating hospitals, institutions and practice sites. Significant educational benefits can be derived from this technology but physicians need to be aware that there are also potential problems and liabilities associated with its use. Material that identifies patients, institutions or colleagues and is intentionally or unintentionally placed in the public domain may constitute a breach of standards of professionalism and confidentiality that damages the profession and our institution. Guidance for resident physicians and resident dentists in the appropriate use of the Internet and electronic publication is necessary to avoid problems while maintaining freedom of expression. The sponsoring institution is committed to maintaining respect for patient privacy. Compliance with these guidelines help our residents obtain skills with the ACGME competencies of Interpersonal Communication Skills (ICS), Professionalism (P), and Systems Based Practice (SBP). <https://medicine.hsc.wvu.edu/media/365672/policy-for-appropriate-use-of-the-internet.pdf>

Institutional or Program Closure and Reduction

In the event a decision is made that the program must decrease in size or close, the Chair and PD will inform the DIO, GMEC, and the residents as soon as possible following the decision. Closure will preferentially be structured to allow enrolled residents to complete the program, and where this is impossible, the Chair and PD will work to assist residents to enroll in another accredited program to continue their education.

<https://medicine.hsc.wvu.edu/media/365687/closure-and-reduction-policy.pdf>

Practitioner Health Committee

The purpose of the Practitioner Health Committee is to serve as the primary resource in the management of impaired Practitioners. Policies can be found in Appendix One of the GME Bylaws:

<http://medicine.hsc.wvu.edu/media/2598/gmebylawsrevised1-15-16.pdf>

WVU Medicine Resident Physician Manual

Additional information about residency at WVU can be found at:

<https://medicine.hsc.wvu.edu/media/363579/2017residentphysicianmanual.pdf>

Patient Safety

The PSN is utilized to report patient safety events and near misses.

1. Access CONNECT <http://connect.wvuhealthcare.com/>
2. On the left hand menu, choose "Safety Reports"
3. Chose Patient Safety Net (PSN)
4. Choose "This web-based reporting tool" link

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Quick Reference FAQs

Things Patient Safety Champions Should Know

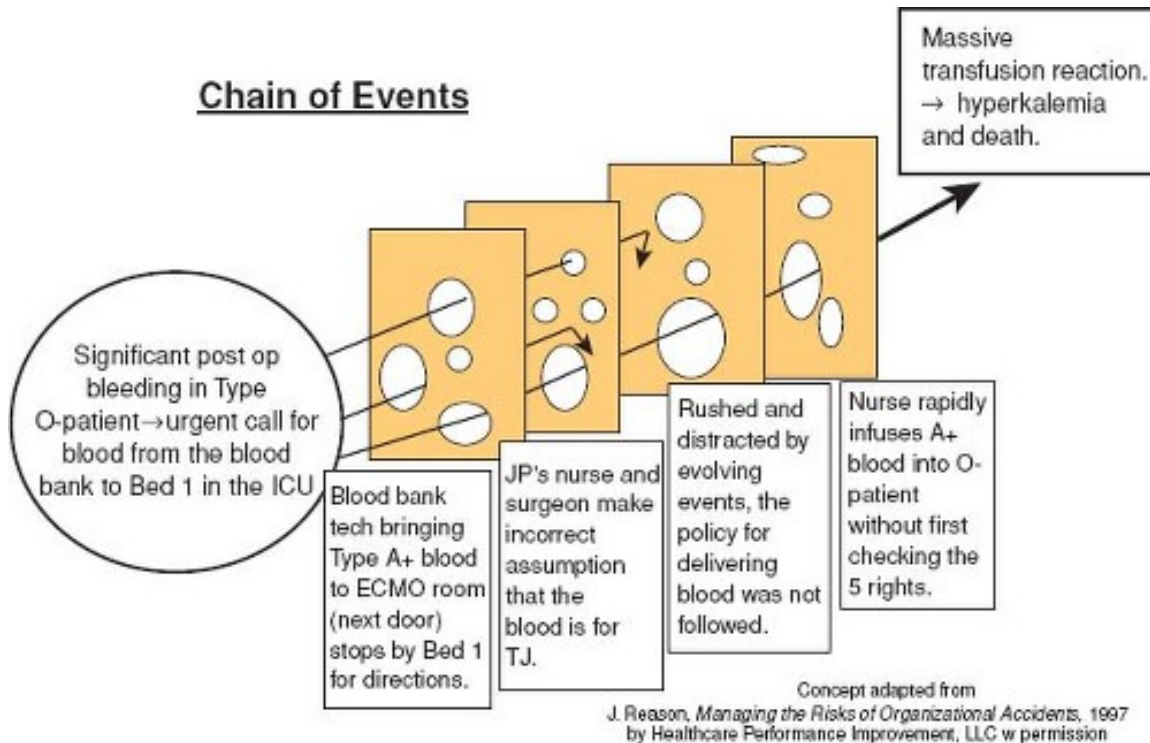
- 1) **What is a Patient Safety Champion?** Patient Safety Champions are involved with and enthusiastic about hospital patient safety initiatives and committees, and a wealth of information for their peers.
- 2) **What Patient Safety Event Reporting system do we use?** Patient Safety Net (PSN), though we are scheduled to pilot a new system in approximately 4 months.
- 3) **How do you access the PSN?**
 - a. Go to <http://connect.wvuhealthcare.com/>
 - b. In the left hand menu, choose *Safety Reports*
 - c. Choose “This web-based reporting tool”.
- 4) **Define Patient Safety Event:** An event, incident, or condition that *could have* resulted, or *did* result, in harm to a patient.
- 5) **Types of Patient Safety Events:**
 - a. Adverse Event: A patient safety event that results in harm to a patient.
 - b. No-harm event: A patient safety event that reaches the patient but DOES NOT cause harm.
 - c. Close call (or “near miss”, or “good catch”) event: A patient safety event that does NOT reach the patient due to “luck”, or “chance”.
 - d. Hazardous (or “unsafe”), condition: A circumstance (other than patient’s own disease process or condition) that increases the probability that an adverse event will occur.
 - e. Sentinel Event: An event (not primarily related to the natural course of the patient’s illness or underlying condition), that reaches a patient and results in death, permanent harm, or severe temporary harm.
- 6) **Why is it helpful to report Close Call, or Near Miss events?**

Frequently near misses are the result of a flawed system and/or protocol. Failure to report near misses results in a higher likelihood of repeated Near Misses – or, even worse, an adverse event.

When Near Misses are NOT reported, those with the power to fix flawed systems and protocols are never alerted that there is a problem until it reaches the point of patient harm.

7) What is the Swiss Cheese Model?

The model graphically illustrates how catastrophic patient safety system failures happen. Each slice of cheese represents a safety barrier that is supposed to stop adverse events before they happen. But, no single barrier is foolproof. In the event that all of the barrier holes line up, the result is patient harm.



8) What is a Just Culture?

An organizational environment in which leadership holds individuals accountable for their actions, but does NOT punish individuals for issues attributed to flawed systems or processes.

9) What is a Culture of Safety?

The result of *an organizational commitment to safety* permeating all levels from frontline personnel to executive management.

10) What are some indicators of a Culture of Safety?

- a. Acknowledgment of the high-risk, error-prone nature of healthcare organizations
- b. Open and honest communications (transparency) regarding patient safety issues, “lessons learned”, and initiatives
- c. A just and fair environment where individuals are able to report errors and near misses without fear
- d. An expectation of inter-professional collaboration where ALL ranks are empowered to speak up when they see something wrong *without* fear of reprisal.

11) What are some of the behaviors/conditions that disrupt/hinder a Culture of Safety?

- a. Inappropriate communications – *insulting, demeaning, disrespectful, intimidating, profane, and/or abusive language*
- b. Inappropriate behaviors – *aggression and/or violence; abruptly ended consultations (i.e. slamming down a phone); slamming doors; throwing items; yelling and/or “raised” voices*
- c. Shaming others for negative outcomes
- d. Dishonest or unjustified comments, complaints, reports, and/or gossip about members of the healthcare team
- e. Rigid or inflexible barriers to requests for assistance or cooperation
- f. Refusal to promptly return pages and/or calls
- g. Refusal to comply with known and generally accepted practice standards
- h. Refusal to collaborate and/or cooperate inter-professionally

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Mistreatment and Professionalism Reporting

Faculty are expected to provide an appropriate level of clinical supervisions required of all residents during all clinically relevant educational activities. <https://medicine.hsc.wvu.edu/media/365696/supervision-policy.pdf>

To report issues:

1. Access the Office of GME website: <https://medicine.hsc.wvu.edu/gme/gme-policies/>
2. On the right side of the screen, scroll down to find either **Mistreatment** or **Professionalism**
3. Click on relevant button to submit report

Interactions with Vendor Representatives

The purpose of this policy is to establish guidelines for interactions with industry representatives for residents in graduate medical education programs sponsored by the West Virginia University School of Medicine. Interactions with industry occur in a variety of contexts, including marketing of new pharmaceutical products, medical devices, and research equipment as well as on-site training of newly purchased devices. Many aspects of these interactions are positive and important for promoting the educational, clinical and research missions of the institution. However, these interactions must be ethical and cannot create conflicts of interest that could endanger patient safety, data integrity, and the integrity of our education and training programs.

<https://medicine.hsc.wvu.edu/media/3009/medical-student-interactions-with-vendors.pdf>

West Virginia University School of Medicine GME International Rotation Policy

In order for a resident physician enrolled in any graduate medical education training program sponsored by the West Virginia University School of Medicine to obtain permission to complete an International Health Rotation for academic credit, this approval process must be followed:

<https://medicine.hsc.wvu.edu/media/2588/internationalrotationpolicy7-2014.pdf>

Institutional Disaster Policy

In the event of a disaster or the declaration of extraordinary circumstances by the ACGME (i.e. abrupt hospital closing, natural disasters, catastrophic loss of funding) impacting the graduate medical education programs sponsored by the West Virginia University School of Medicine, the GMEC establishes this policy to protect the well-being, safety and educational experience of residents enrolled in our training programs.

The definition of a disaster/extraordinary circumstances will be determined by the ACGME as defined in their published policies and procedures. Following declaration of a disaster/extraordinary circumstances, the GMEC working with the DIO and other sponsoring institution leadership will strive to restructure or reconstitute the educational experience as quickly as possible following the disaster.

In the event of a disaster or the declaration of extraordinary circumstances, please see the GME policy: <https://medicine.hsc.wvu.edu/media/365668/disasterresponsepolicy2017logo.pdf>

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Resident Spending Guidelines

Purpose:

We recognize that expenditures for professional development, both expected and unexpected, arise along the course of residency training, and funds are available for professional development. Guidelines for professional development spending, including surgical loupes, is described in the departmental Guidelines for Resident Professional Development Funds, which can be obtained from the program manager.

Policy:

Educational Fund

Each resident will be given a limit in the amount of \$1,500 with which to have book(s) purchased for them each year. The process for having the book(s) purchased will be as follows:

- 1) Residents will identify the books and email the residency program manager with the following information (title of book; author of book; edition of book; ISBN (if available) as well as any other pertinent information).
- 2) The program manager will place the order.
- 3) The program manager will notify residents once their books have arrived.

Additional texts and online educational tools will be purchased according to departmental guidelines by year utilizing these funds. Similarly, educational courses at which a resident is not presenting may be supported by professional development funds.

The educational fund may be used for neurosurgical books and learning materials (including courses, CME materials including online lectures) and all expenditures must be approved by the program director or APD, who have the discretion to deny any request. Certain required educational expenditures will be taken from the book fund including the required reading texts and didactic courses from the intern year, books being utilized in the weekly conference activities, and the “General” question bank board prep questions from SANS. Non-educational materials and professional expenses are, in general, not appropriate for the use of the educational fund (but may be purchased with resident incentive funds referenced above).

Lab Coats

The hospital will fund the purchase of up to 2 lab coats every other year. The hospital provides a cleaning service. Drop lab coats in the linen closet, basement level of HSC. The process for having the lab coat(s) purchased will be as follows:

- 1) Residents will email the program manager with the size of the lab coat needed.
- 2) The program manager will place the order for the lab coat.
- 3) The program manager will notify the residents once their lab coat has arrived.

Licensure

Payment of licensure will be covered by the department.

Travel

For all program-funded trips, the resident should make an appointment with the program coordinator to make travel arrangements at least 4 weeks prior to the date of travel.

Any other requests or deviations from the department’s guidelines must go through the program director and department head for approval.

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Rotation Goals and Objectives

The Goals and Objectives for each rotation are derived from the [Neurosurgery Milestones 2.0](https://www.acgme.org/Portals/0/PDFs/Milestones/NeurologicalSurgeryMilestones.pdf) (<https://www.acgme.org/Portals/0/PDFs/Milestones/NeurologicalSurgeryMilestones.pdf>). Please see specific G&O for each rotation below.

General Care Rotation (PGY1):

Rotation Director: Cara Sedney

Rotation Evaluators: CCC, Neuro Interventional Staff, Trauma Staff, Pain Clinic Staff

Description: Attainment of basic clinical skills are expected during this rotation. See tables below.

NeuroCritical Care Rotation (PGY1):

Rotation Director: Cara Sedney

Rotation Evaluators: CCC, NCCU Staff, Anesthesia Staff

Description: Attainment of level 1-3 milestones in critical care are expected during this rotation. See tables below.

Junior Resident Rotation (PGY2 and PGY3)

Rotation Director: Robert Marsh

Rotation Evaluators: CCC

Description: Subspecialty specific milestones are to be achieved during this rotation. See tables below.

Academic Rotation (PGY4)

Rotation Director: Cara Sedney

Rotation Evaluators: CCC

Description: Focused research or clinical experience is expected during this rotation, which should include an active research component regardless of area of focus. See tables below.

Senior Resident Rotation (PGY5 and PGY6)

Rotation Director: Chris Cifarelli

Rotation Evaluators: CCC

Description: Increasing competency in both patient care and related milestones, as well as professionalism milestones is expected. Level 4 milestone achievement in certain professionalism competencies which are seen as key for successful completion of the chief year are to be accomplished during this rotation. See tables below.

Pediatric Neurosurgery Rotation (PGY3 and PGY5)

Rotation Director: Cesar Serrano, Hal Meltzer

Rotation Evaluators: CCC

Description: All pediatrics milestones are to be satisfied within 2, 3-month rotations. See tables below.

Chief Residency Rotation (PGY7)

Rotation Director: Mark Lee

Rotation Evaluators: CCC

Description: Level 4 milestones across all domains are the target goal of the chief residency rotation. A leadership module with Dr. Lee is included and is outlined in the next section. See tables below.

Chief Subspecialty Rotation:

Rotation Director: Cara Sedney

Rotation Evaluators: Various

Description: The chief resident will have the opportunity for 6 months of focused subspecialty training in the area of their choice, in which they should strive for Level 5 milestones.

| Patient Care Domain | Level 1 | Level 2 | Level 3 | Level 4 |
|---------------------------------|---------------------|---------------------|---------------------|-------------------------|
| Brain Tumor | Junior Resident | Junior Resident | Senior Resident | Chief Resident |
| Epilepsy and Movement Disorders | Junior Resident | Junior Resident | Senior Resident | Chief Resident |
| Pain and Peripheral Nerve | Junior Resident | Junior Resident | Senior Resident | Chief Resident |
| Spinal Surgery | Junior Resident | Junior Resident | Senior Resident | Chief Resident |
| Vascular Surgery | Junior Resident | Junior Resident | Senior Resident | Chief Resident |
| TBI | General Care | Junior Resident | Senior Resident | Chief Resident |
| Pediatric Neurosurgery | Pediatrics Rotation | Pediatrics Rotation | Pediatrics Rotation | Pediatrics Rotation |
| Critical Care | PGY1 NCC Rotation | PGY1 NCC Rotation | PGY1 NCC Rotation | Optional NCC Fellowship |

| Other Competency Domain | Level 1 | Level 2 | Level 3 | Level 4 |
|---|-------------------|-------------------|-------------------|-------------------|
| Information Gathering and Interpretation | General Care | General Care | Junior Resident | Senior Resident |
| Critical Thinking for Diagnosis and Therapy | General Care | General Care | Junior Resident | Senior Resident |
| Patient Safety | General Care | General Care | Senior Resident | Chief Resident |
| Quality Improvement | General Care | Junior Resident | Senior Resident | Chief Resident |
| Healthcare Systems Awareness | General Care | Junior Resident | Senior Resident | Chief Resident |
| Evidence-based Practice | General Care | Junior Resident | Senior Resident | Chief Resident |
| Research | Academic Rotation | Academic Rotation | Academic Rotation | Academic Rotation |

| Professionalism and Communication Domain | Level 1 | Level 2 | Level 3 | Level 4 |
|---|------------------|------------------|-----------------|-----------------|
| Ethical Behavior | General Care/NCC | General Care/NCC | Junior Resident | Senior Resident |
| Well-being | General Care/NCC | General Care/NCC | Junior Resident | Senior Resident |
| Patient and Family Communication | General Care/NCC | General Care/NCC | Junior Resident | Senior Resident |
| Communication and Coordination of Care | General Care/NCC | General Care/NCC | Junior Resident | Senior Resident |
| Mentorship and Teaching | General Care/NCC | Junior Resident | Senior Resident | Chief Resident |

Level Three Leadership: Getting Below the Surface

James G. Clawson, University of Virginia - Darden Graduate School of Bus. Admin.

Instructor: Mark Lee, MD, PhD, MBA
Chief Resident Position

Section 1: Introduction

Lesson 1: The Leadership Point of View

- ❖ Elements of the Leadership Point of View
 - Seeing What Needs to be Done
 - Understanding All the Underlying Forces at Play
 - Having the Courage to Initiate Action to Make Things Better

Lesson 2: The Diamond Model of Leadership in Organizations

- ❖ Leading Strategic Change
- ❖ Key Elements of Leadership
 - Leader: The Individual
 - Task: What Should We Do?
 - Others: Working Together with Followers
 - Organization: Designing the Right Context
- ❖ A Diamond in the Rough
 - Environment: The Context
 - Results: Outcomes of Leadership
- ❖ Interelement Relationships are Important
 - How the Diamond Model Relates to Other Models of Leadership
 - Basic Definitions
- ❖ Target Levels of Leadership

Lesson 3: Levels of Leadership

- ❖ Body, Head, and Heart
 - Types of VABEs
- ❖ Connecting the Three Levels to Scholarly Views
 - Learning Level Three Leadership
 - Techniques for All Three Levels
- ❖ Organizational Implications

Section 2: Strategic Thinking

Lesson 4: The Changing Context of Leadership

- ❖ Global Business Issues
- ❖ The Beginning of Human Economic Activity
 - Hunter/Gatherer
 - Aristocratic Society
 - The Industrial Revolution and Bureaucratic Society
- ❖ The Present Paradigm Shift
- ❖ The Context of Modern Infocracies

Lesson 5: Strategic Frames

- ❖ Definitions
- ❖ Frames for Strategic Thinking
- ❖ Fit Models
 - Porter's Five Forces
 - Value Chain
 - Core Capabilities
 - Growth
- ❖ Intent Models
 - The BCG Model
 - The Ecological Model
- ❖ Strategy as Revolution
- ❖ The Experience Economy
- ❖ The Innovator's Dilemma
- ❖ Good to Great Model
- ❖ Strategy Maps
- ❖ Developing Your Strategic Thinking
 - Scenario Building
 - Broad Reading
- ❖ Essential Elements of Strategic Thinking

Lesson 6: Ethical Dimensions of Leadership

- ❖ Six Dimensions of Leadership Morality
- ❖ Morality and Leadership
- ❖ The Moral Foundation of Level Three Leadership
 - Respect for the Individual
- ❖ The Normal Distribution of Employees' Value Added
- ❖ Universality of the Moral Foundation of Level Three Leadership
 - Legal Constraints

Lesson 7: Innovation and Level Three Leadership

- ❖ Techniques for Enhancing Your Creative Thinking
 - Observe Mindfully
 - Consider the Opposite
 - Avoid Deadline Stress
 - Calm Your Mind
 - Always Search for a Better Way
 - Consider the Customer's Experience
 - Stimulate Your Curiosity
 - Use Mind Mapping
 - Heighten Your Senses
 - Fight Killer Phrases
 - Allow Fuzziness
 - Look for Unexpected Connections
 - Look for What's Fun
 - The Four I's

- ❖ Innovate Like Edison

Lesson 8: Personal, Workgroup, and Organizational Charters

- ❖ Charters
- ❖ Mission
 - “To Make Money,” You Idiot: Casual Mapping
- ❖ Vision
 - Values
 - Walking the Values Talk
 - Strategy
 - Operating Goals

Section 3: Self

Lesson 9: Self-Leadership

- ❖ The Number One Question in Life
- ❖ Every Organization is Perfectly Designed to Produce the Results it's Producing
- ❖ What To Do?
 - Stress

Lesson 10: A Leader's Guide to Why People Behave the Way They Do

- ❖ Two Legacies
- ❖ The Brain
- ❖ Your Memetic Legacy
- ❖ Reflection
- ❖ Human Beginnings
- ❖ Solidifying the Tendencies
 - Recognizing the Similarities and Differences
- ❖ Motivation
- ❖ The Freedom of Choice

Lesson 11: The Reb Model

- ❖ Events
- ❖ Perceptions and Observations
- ❖ VABEs
- ❖ Jumping to Conclusions—Carefully
- ❖ Internal Conclusions
- ❖ Emotions and Feelings
- ❖ Visible Behavior
- ❖ An Example
- ❖ Meaning Chains
- ❖ The Reb Model and Leading Change
- ❖ The Self-Concept
- ❖ Defense Mechanisms
- ❖ Implications For Leaders

Lesson 12: Leadership and Intelligence

- ❖ Not One Intelligence, But Many: Gardner's Research
- ❖ Intelligence Quotient
- ❖ Emotional Quotient
- ❖ Recognizing Your Own Emotions
- ❖ Managing Your Emotions
- ❖ Paying Attention/Concentrating
- ❖ Social Quotient
 - Recognizing the Emotions of Others
 - Listening
 - Empathizing and Caring
 - Helping Others Manage Their Emotions
- ❖ Change Quotient
 - Recognizing the Need to Change
 - Understanding and Mastering the Change Process
 - Emotional Comfort with Change

Lesson 13: Resonance, Leadership, and the Purpose of Life

- ❖ Dreams
- ❖ Internal Dreams
- ❖ Flow and Resonance
 - Transporting Flow
 - Re-Creating Flow

- The Universal Search for Resonance
- ❖ Preparation
- ❖ The Energy Cycle
 - The Search for Ideas
 - Managing Your Energy
- ❖ Setbacks, Obstacles, and Alternate Successes
 - The Paradoxical Obstacle of Success
- ❖ Revisiting the Dream

Lesson 14: The Global Business Leader

- ❖ Cultures are Collections of VABEs
 - The Single Most Destructive Vabe
- ❖ Characteristics of Effective Global Leaders
 - Overseas Experience
 - Deep Self-Awareness
 - Culturally Diverse
 - Humility
 - Lifelong Learning and Curiosity
 - Honesty
 - Globally Strategic
 - Patiently Impatient
 - Well Spoken
 - Good Negotiators
 - Human
 - Presence

Section 4: Leading Others

Lesson 15: Power and Leadership: Leading Others

- ❖ Sources of Influence and Levels of Leadership
- ❖ Buy-In
- ❖ The Currency of Reciprocity
- ❖ The Role of Trust and Respect
- ❖ General Approach to Influence
 - Purpose
- ❖ Level Three Influence

Lesson 16: The Historical Strength and Modern Appeal of Level One Leadership

- ❖ Level One Leadership Assumes Consistency Across Individuals
- ❖ Level One Leadership Techniques
- ❖ The De-Energizing Impact of Level One Leadership

Lesson 17: The Challenges of Level Two Leadership

- ❖ The Human Brain
- ❖ Formulae and Deductive Reasoning
- ❖ Decision Making
- ❖ Level Two Tools and Techniques
- ❖ The Problem with Level Two Leadership

Lesson 18: The Focus and Impact of Level Three Leadership

- ❖ Level Three Techniques
 - Techniques for Showing Respect
 - Techniques for Influencing Values
- ❖ The Dark Side Potential of Level Three Leadership and Engagement
- ❖ Organizational Implications
- ❖ Applying Level Three Leadership at Both the Individual and Organizational Levels

Lesson 19: Six Steps to Effective Leadership

- ❖ Clarifying Your Center
 - Clarifying Your Center
 - Developing Character: Ends Versus Means
 - Various Forms of Meditation
- ❖ Clarifying What Is Possible
 - Clarifying Mental Images of What Can Be
- ❖ Clarifying What Others Can Contribute
 - Basic Assumptions About Others
 - Identifying the Critical Skills
- ❖ Supporting Others so They Can Contribute
 - Information Age Organizational Structures
 - Empowering Systems Design
- ❖ Being Relentless
 - Life as a Motorboat or a Wood Chip
 - Developing Commitment
- ❖ Measuring and Celebrating Progress
 - Focusing on the Right Measures
 - Focusing on the Glass Half Full

Lesson 20: The Language of Leadership

- ❖ Clarity
- ❖ Stimulating and Memorable
- ❖ Congruent Authenticity
- ❖ Respectful
 - Invitations

- Rules of the Interpersonal “Dance”
- Listening

Lesson 21: Leading Teams

- ❖ What Makes a Team?
- ❖ Team Life Cycles
 - Forming: Initiation and Orientation
 - Norming: Exploration of How We’ll Do the Task
 - Performing: Stabilization
 - Re-Forming: Reassessment
- ❖ Team Roles
- ❖ Inspired Vision that Creates
- ❖ ...A Powerful Sense of Mission
- ❖ Getting the Right People
- ❖ Distributed Leadership
- ❖ Extraordinary Coordination
- ❖ Creative Support
- ❖ Moral Foundation for Respect
- ❖ The Right Roles for the Right People
- ❖ Participation
- ❖ The Right Measures
- ❖ How Would-Be Teams Go Awry
- ❖ Virtual Teams

Section 5: Leaders as Designers

Lesson 22: Leading Organizational Design

- ❖ A General Model of Organizational Design and its Impact on Results
 - Background Factors
 - Leadership Philosophy
 - Organizational Design Decisions
 - Organizational Culture
 - Organizational Results
- ❖ Organizational Glue

Lesson 23: Human Resource Management Systems

- ❖ Selection and Hiring
- ❖ Work Design and Performance
- ❖ Appraisal
- ❖ Rewards
- ❖ Learning Systems
 - Pervasive Systems

Lesson 24: Leading Change

- ❖ A General Model of Change
- ❖ The Role of Outside Help in Managing Change
- ❖ Leading the Change Process
 - Clarifying Disconfirming Data
 - Building a Change Team
 - Designing and Leading Change Experiments
 - Relentlessly Reinforcing Results with the New Vision
- ❖ Classic and Current Change Models
- ❖ Roles in the Change Process
- ❖ Responses to Change
 - Dying “Little Deaths”
 - The Many Faces of Denial
 - Anger and Bargaining
 - Transition Through Despair and Grieving
 - Hope and the Change Process
- ❖ Levels in Change
 - John Kotter’s Model of Change
 - The Four P’s
 - The Mit Model
 - Prochaska’s Model for Positive Change
 - Fighting Your Inherent Fears of Changing

Section 6: Conclusion

Lesson 25: Conclusion

Section 7: Workbook and Exercises

Lesson 26: Level Three Leadership Workbook

- ❖ The Diamond Model of Leadership
- ❖ The Leadership Point of View
- ❖ Outside-In Versus Inside-Out: Managing the Fear of Rejection
- ❖ Leadership Levels Assessment
 - Theory
 - Scoring Your Responses
 - Interpreting Your Scores
- ❖ Strategic Challenges
- ❖ Leadership Implications of My Strategic Challenges
- ❖ My Leadership Future
- ❖ Charter for My Organization
- ❖ Charter for My Work Group
- ❖ My Personal Charter
- ❖ Survey of Managerial Style
- ❖ My Personal Leadership Development Goals (Keep, Lose, Add)
- ❖ Leadership Intelligence Self-Assessment
- ❖ Managing Your Energy
- ❖ Life's Dream Exercise
- ❖ Balancing Your Life
- ❖ Leadership Language Exercise
- ❖ Systems and Processes in My Organization that Need Redesigning
- ❖ My Personal Model of Change
- ❖ What Do I Want to Do Next?
- ❖ Your Central Point

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Graduate Medical Education Policy on Supervision from GME Bylaws

XIV. Supervision and Accountability

Programs must provide a professional, respectful, and civil environment that is free from mistreatment, abuse, and coercion of residents, faculty, and staff. All GME-related supervision will be provided in a non-retaliatory and supportive manner. Programs, in partnership with their Sponsoring Institution, must have a process for education of residents and faculty regarding inappropriate and unprofessional behavior, *especially* when exhibited toward a trainee who is requesting supervision and guidance. [VI.B.6. – with slight edits]

Although the attending physician is ultimately responsible for the care of the patient, every physician shares in the responsibility and accountability for their efforts in the provision of care. Effective programs, in partnership with their Sponsoring Institution, define, widely communicate, and monitor a structured chain of responsibility and accountability as it relates to the supervision of all patient care. [VI.A.2.a)]

Supervision in the setting of graduate medical education provides: safe and effective care to patients; ensures each resident's development of the skills, knowledge, and attitudes required to enter the unsupervised practice of medicine; and establishes a foundation for continued professional growth. [VI.A.2.a)]

Each patient must have an identifiable, appropriately-credentialed and privileged, attending physician (or licensed independent practitioner as specified by the applicable Review Committee) who is responsible and accountable for the patient's care. This information must be available to residents, faculty members, other members of the health care team, and patients. Residents and faculty members must inform each patient of their respective roles in that patient's care when providing direct patient care. [Section VI.A.2.a).(1)]

Supervision may be exercised through a variety of methods. For many aspects of patient care, the supervising physician may be a more advanced resident or fellow. Other portions of care provided by the resident can be adequately supervised by the immediate availability of the supervising faculty member, fellow, or senior resident physician, either on site, or by means of telephonic and/or electronic modalities. Some activities require the physical presence of the supervising faculty member. In some circumstances, supervision may include post-hoc review of resident delivered care with feedback. [VI.A.2.b)]

The program must demonstrate that the appropriate level of supervision in place for all residents is based on each resident's level of training and ability, as well as patient complexity and acuity. Supervision may be exercised through a variety of methods, as appropriate to the situation. [The Review Committee may specify which activities require different levels of supervision.] [VI.A.2.b).(1)]

Levels of Supervision [Section VI.A.2.c)]

To promote oversight of resident supervision while providing for graded authority and responsibility, the program must use the following classifications of supervision:

Direct Supervision:

The supervising physician is physically present with the resident and patient.

Indirect Supervision:

...with direct supervision immediately available:

The supervising physician is physically within the hospital or other site of patient care, and is immediately available to provide Direct Supervision.

...with direct supervision available:

The supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide Direct Supervision.

Oversight:

The supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.

The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each resident must be assigned by the program director and faculty members. [VI.A.2.d)]

The program director must evaluate each resident's abilities based on specific criteria, guided by the Milestones. [VI.A.2.d).(1)]

Faculty members functioning as supervising physicians must delegate portions of care to residents, based on the needs of the patient and the skills of each resident. *(Has changed from Detail to Core)* Senior residents or fellows should serve in a supervisory role of junior residents in recognition of their progress toward independence, based on the needs of each patient and the skills of the individual resident or fellow. [VI.A.2.d).(2) & (3)]

Programs must set guidelines for circumstances and events in which residents must communicate with the supervising faculty member(s). [VI.A.2.e)]

Each resident must know the limits of their scope of authority, and the circumstances under which the resident is permitted to act with conditional independence. Initially, PGY-1 residents must be supervised either directly or indirectly with direct supervision immediately available. [Each Review Committee may describe the conditions and the achieved competencies under which PGY-1 residents may progress to be supervised indirectly with direct supervision available.] [VI.A.2.e).(1).(a)]

Faculty supervision assignments must be of sufficient duration to assess the knowledge and skills of each resident and to delegate to the resident the appropriate level of patient care authority and responsibility. *(Has changed from Detail to Core)* [VI.A.2.f)]

In a vague way, I always knew neurosurgery was different - more delicate, more difficult, more demanding. After all, we say things like, 'I'm no brain surgeon,' for a reason.

~ Sam Kean, American author