

# NS-4 Year

## Educational Program Goals and Objectives

The NS-4 year will be spent entirely at the Methodist and Children's Hospital with the individual serving as Senior Resident. The resident is expected to participate in patient care in the inpatient setting, the operating room, and emergency room. The senior resident will be responsible for the evaluation of new and follow-up patients, including consults, and will provide coverage of the emergency rooms at these institutions in collaboration with faculty neurosurgeons. The resident will operate on standard neurosurgical procedures up to and including major craniotomies and complex spinal surgery under the direction of the faculty. The Senior Resident will assume administrative and clinical oversight of junior residents working on the neurosurgery service at these hospitals, including assigning clinical duties and establishing the call schedule. The Senior Resident will also be involved in quality improvement and teaching. This will include preparation and presentation of the morbidity and mortality conferences, grand rounds, and the neuro-oncologic tumor planning conferences.

During the NS-4 year, the Senior Resident should assimilate the knowledge and skills learned in the preceding years of training, improve clinical judgment, and refine technical skills with the goal of developing progressively greater independence and autonomy with respect to patient care. In the NS-4 year, the resident will be expected to evaluate patients independently (under supervision of faculty and the Chief Resident), order and interpret appropriate diagnostic tests, and formulate a treatment plan. The Senior Resident may implement the treatment plan for non-critical issues but is expected to report to faculty in a timely manner. The Senior Resident will be expected to participate in as many operative procedures as possible and with special attention to gaining exposure to a wide variety of cases, including complex spine, tumor, skull base, vascular, and peripheral nerve. The Senior Resident should serve as primary surgeon for all procedures for which s/he is qualified. As the year progresses, attention should be given toward participating in more complex cases and toward assuming progressively greater degrees of function as the primary surgeon. The Senior Resident is expected to work collaboratively with other members of the healthcare team, request and respond to consults in a timely and professional manner, and draw on the resources of the broader healthcare system as needed to provide optimal care to the patients. The Senior Resident is expected to increase the depth and breadth of knowledge of neurosurgical disorders and their management and apply this information to the care of patients. The Senior Resident should educate patients and their families regarding their medical disorders, be able to explain options for treatment and the relative advantages of each approach, and work with the patients to develop the treatment plan that is appropriate. The Senior Resident is expected at all times to maintain a professional demeanor and serve as a good role model for junior residents and students. Global evaluation of resident performance will be performed by the neurosurgery faculty and support staff ("360 degree evaluation") each 6 months. Residents will also complete a "self-assessment" and formal evaluation of the program and the faculty (see Appendix for sample forms) annually.

## Educational Goals and Objectives of Training Year NS-4

### Patient Care

*Goal: develop clinical judgment and technical skills appropriate for senior level neurosurgical resident*

*Specific objectives:*

- 1. Perform and document a senior level neurosurgery history and physical, emphasizing efficient, timely, and thorough patient assessment*
- 2. Order and interpret appropriate diagnostic tests and apply results to formulate a treatment plan*
- 3. Establish and implement effective patient care plans, assuming the leadership role on a health care team, under appropriate supervision by an attending surgeon*
- 4. Evaluate and manage patients with immediately life-threatening neurosurgical disorders (under faculty oversight)*
- 5. Counsel patients on the risks, goals, limits and alternatives to simple and complex neurosurgical procedures*
- 6. Perform complex neurosurgery (cranial and spinal) procedures and begin to assist at the chief resident level with a higher degree of independence*

*Assessment: observation by faculty*

## **Medical Knowledge**

*Goal: demonstrate knowledge of simple and complex neurosurgical disorders and their management*

*Specific objectives:*

- 1. Demonstrate advanced knowledge of anatomy, physiology and pharmacology related to neurosurgical and neurological disorders through teaching junior residents and students and interaction with faculty*
- 2. Demonstrate advanced familiarity with the neurosurgical literature and apply to patient care*
- 3. Instruct residents and medical students regarding the performance of selected noncomplex surgical procedures appropriate to their level of training*

*Assessment: observation by faculty*

## **Practice-Based Learning and Improvement**

*Goal: demonstrate an ability to evaluate and improve patient care through self-evaluation, self-learning, and review of scientific evidence*

*Specific objectives:*

- 1. Organize, prepare, and present cases at morbidity and mortality conferences and grand rounds, including critical appraisal of causes of morbidity and mortality*
- 2. Assess current knowledge related to neurosurgical disorders treated on the neurosurgery service, conduct literature search and review critically, present results to faculty, residents, and students; apply finding to improve patient care*
- 3. Instruct junior residents and medical students regarding neurosurgical diseases*

*Assessment: observation by faculty*

## **Interpersonal and Communication Skills**

*Goal: demonstrate effective of information between physicians and patients and among members of the healthcare team*

*Specific objectives:*

- 1. Demonstrate an ability to communicate effectively with patients and families from a variety of socioeconomic and cultural backgrounds*
- 2. Demonstrate an ability to work, as the Neurosurgery Senior Resident, as the team leader, organizing and coordinating activities of the team*
- 3. Maintain accurate, timely, and legible medical records*
- 4. Initiate and respond professionally to requests for consultations with other physicians and healthcare providers*

*Assessment: observation by faculty; 360 degree assessment*

## **Professionalism**

*Goal: demonstrate commitment to professional responsibility and integrity*

*Specific objectives:*

- 1. Demonstrate sensitivity to patients' culture, age, gender, and disabilities*
- 2. Demonstrate integrity and a commitment to patients that supersedes self-interest, serving as primary neurosurgeon and taking "ownership" of your patients and their well-being*
- 3. Participate meaningfully in multidisciplinary conferences, serving as the primary representative of neurosurgical practice*

*Assessment: observation by faculty; 360 degree evaluation*

## **System-Based Practice**

*Goal: develop an understanding of types of medical practices and demonstrate the ability to use a variety of healthcare resources to provide optimal patient care*

*Specific objectives:*

- 1. Demonstrate an understanding of medical practice types, health care delivery systems, and medical economics*
- 2. Advocate for high-quality patient care and assist patients in dealing with system complexities, especially in settings providing care for the indigent or underserved by identifying and using resources available for their support (e.g., social services, community-based services)*
- 3. Use evidence-based medical practices to provide cost-effective health care and resource allocation that does not compromise quality of care*
- 4. Understand practice management issues such as patient processing, evaluation and management coding, procedural terminology, documentation of services rendered and other reimbursement processes*

*Assessment: observation by faculty; 360 degree evaluation*