



# UC Davis, School of Medicine

## Department of Neurological Surgery

### Residency Program Overview

#### PROGRAM DESCRIPTION

The teaching program in Neurological Surgery is based at the UC Davis Medical Center in Sacramento. The Medical Center handles a large volume of emergencies, and referrals of complex, specialized problems are received from all over the northern inland portion of the state.

The residency program is structured to fit the needs and goals of the individual. It is seven (7) years in length. The program consists of two initial basic years of residency (PGY.1 and PGY.2) in which the trainee is introduced to the general disciplines of surgical care, neurology, neurosurgical intensive care, and basic neurosurgical procedures. The PGY 3 and 4 years are the intermediate years of training. During this time, the resident will spend time at the Kaiser Foundation Hospital and in subspecialty electives such as pediatric and endovascular neurosurgery. During the PGY 5 and 6 years senior years of training, one year is spent on research and the remainder on the clinical neurosurgical service. The training is concluded by a final year of chief residency.



The call schedule is designed to optimize the surgical and clinical experience of the resident as he/she goes through the program. In the early years of training, the primary call frequency is 8-10 calls a month, followed by 4-6 in the intermediate years and 1-2 in the senior years of training. The primary call resident always has a (acting) chief resident as back up and residents typically start taking chief call in their PGY5 year.

Overall, the residency program is designed to provide the trainee with increasing responsibility for the care of the neurosurgical patient. Under the supervision of more senior residents and the attending staff, the beginning resident evaluates the neurosurgical patient on admission to the hospital and in the outpatient clinic, selects what may be appropriate diagnostic studies, and formulates a treatment plan. The resident serves as an assistant during operations and becomes familiar with the care of the seriously ill patient while working in the Neurosurgical Intensive Care Unit.

In the intermediate years, the resident will master neurosurgical procedures such as placement of ventriculoperitoneal shunts, lumbar decompressions, microdissectomies, craniotomies, and basic spinal instrumentation. During this time the resident develops progressive responsibility in supervising junior residents. In addition to the pediatric, functional and endovascular rotations, the resident will spend time in neuropathology, radiology, and ophthalmology. These rotations are designed to increase the resident's knowledge of diseases affecting the central nervous system and become familiar with diagnostic procedures commonly used in neurosurgical patients. During this time the resident is also encouraged to lay the foundation for his/her elective time in senior residency.

Additional clinical teaching is provided at the Kaiser Foundation Hospital in Sacramento. Kaiser-North, Sacramento is one of the most active in the Kaiser system and exposes the resident to a large volume of elective

patients, similar to those seen in the community practice of neurological surgery. The resident spends 6 months on the Kaiser clinical service.

In senior residency, the resident is encouraged to spend one year in the laboratory developing and completing a research project with the guidance of the faculty. Here the objective is to provide the resident with an appreciation of how the scientific method is applied to the clinical and to basic research in neurological surgery. Upon the completion of the project, residents are encouraged to present the results at national conferences and to publish their research in a peer-reviewed journal. Some of our current residents have elected to participate in a more clinically oriented elective such as an infolded spine fellowship.

During the on service time of senior residency, the resident performs more complex procedures under the guidance of the faculty, including complex spinal instrumentation and correction of deformity, excision of brain tumors, vascular lesions, epilepsy surgery, and spinal cord tumors. This training culminates into the chief year where the resident performs or serves as first assistant to the attending neurosurgeon in operations such as the neurovascular decompression of cranial nerves, clipping of aneurysms, and excision of cerebellopontine angle tumors.

Throughout the residency, the trainee is required to attend departmental teaching conferences and participates by presenting patients and topics relevant to neurosurgery. All conferences are scheduled on a dedicated academic day to maximize resident and faculty exposure.

