RONALD REAGAN UCLA MEDICAL CENTER ADVANCED NEUROANESTHESIA
GOALS AND OBJECTIVES

GOALS	EDUCATIONAL OBJECTIVES	CLINICAL RESPONSIBILITIES / ACTIVITIES	EVALUATIONS
Patient Care: To provide the resident with advanced clinical experience in the anesthetic management of adults and children undergoing surgical treatment of diseases of the central nervous system and spine that is compassionate, appropriate, and effective.	To acquire skills in: 1. Placement of invasive monitoring lines, including IV access, arterial, and central venous lines in infants, children and adults. 2. Utilizing new imaging modalities for the placement of central venous catheters. 3. Fiberoptic intubation in halo brace, Leksell frame, and the lateral position. 4. Localization VA shunt using EKG localization 5. Set up for two channel EEG monitoring 6. Induction of anesthesia in patients with intracranial hypertension. 7. Induction of anesthesia in patients with acute intracranial bleeding 8. Management of patients undergoing intracranial vascular surgery, including use of cerebral protection techniques. 9. Use of electrophysiological monitoring for brain protection. 10. Management of patients requiring advanced neurophysiologic monitoring. 11. Management of patients undergoing treatment for intractable epilepsy. 12. Management of neonates, infants and children undergoing neurosurgical procedures.	1. There are three residents on the neuroanesthesia service each month. 2. Residents participating in the advanced clinical rotation are assigned to cases of greater complexity (e.g., neurovascular, posterior fossa, awake craniotomy) and pediatric cases. 3. Clinical assignments are based on demonstrated progress during the rotation. The individual residents experience and educational needs are an important factor in case assignment. 4. Residents may participate in simulation	1. Monthly on-line faculty evaluations. 2. 360 evaluations. 3. Quarterly meeting with program director.
Medical Knowledge: To acquire the advanced clinical and applied science knowledge pertinent to the management of the neurosurgical patient.	Basic Science Knowledge 1. Electrophysiology: anatomy, physiology, neural pathways a) Somatosensory evoked potentials b) Brain stem auditory evoked potential c) Electroencephalography d) Facial EMG e) Electrocorticography	1. Document preanesthetic evaluations on all patients. 2. Individual supervision and instruction in the operating room. 3. Directed independent study. 4. Attend annually scheduled lectures. 5. Attend resident simulation.	1. Monthly on-line faculty evaluations. 2. Quarterly meeting with program director.

	f) Lower extremity EMG monitoring g) Trigeminal facial reflex h) Motor strip mapping i) Cortical stimulation 2. Pathophysiology intracranial hypertension in infants and children 3. Pathophysiology cerebral ischemia 4. Interpretation CT and MRI Clinical Knowledge 1. Anesthetic management of neonates undergoing neurosurgical procedures a) Myelomeningocele b) Encephalocele c) Ventriculoperitoneal shunt 2. Anesthetic management of infants and children undergoing neurosurgical procedures. a) Focal resection for intractable seizures b) Hemispherectomy - functional and anatomic c) Resection of intracranial mass lesions d) Tethered Cord e) Craniosynostosis f) Craniofacial Advancement g) Ventriculoperitoneal, ventriculopleural and ventriculoatrial shunts h) Moya Moya 3. Surgical treatment of intractable epilepsy a) Asleep Awake Asleep craniotomy b) Facilitation speech mapping, ECOG, motor strip mapping 4. Intracranial vascular procedures a) Resection of AVM b) ECIC bypass c) Encephalodurosynagiosis	6. Discuss topics listed under Educational Objectives with the supervising faculty daily on a one-on-one basis as determined by the cases of the day.	
Practice Based Learning: To be able to investigate and evaluate their own patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.	1. Use information technology, on-line resources, expert consultation, and primary texts to expand their knowledge base. 2. Learn to critically evaluate the neuroanesthesia literature. 3. Apply scientific evidence to decision making. 4. Compare evidence-based practice to commonly taught experience based decision making to develop a personal practice strategy. 5. Understand how to assess the impact of one's actions on outcomes.	1. Obtain feedback from the supervising faculty. 2. Review and discuss scientific literature with the supervising faculty. 3. Participate in departmental Q/A. 4. Attend faculty lectures on statistics and critical literature evaluation 5. Attend resident simulation.	1. Daily faculty-resident interaction in the operating room. 2. Self evaluations. 3. Monthly on-line faculty evaluations. 4. Quarterly meeting with program director.

Interpersonal and Communication Skills: To be able to demonstrate communication skills that result in effective information exchange and appropriate interaction with colleagues, surgeons, patients, and ancillary personnel	1. Understand the importance of effective communication between the anesthesiologist and the surgeon, neurophysiologists, OR, ICU and PACU saff. 2. Learn effective communication techniques during periods of stress in order to decrease patient and family anxiety. 3. Demonstrate the ability to effectively communicate concerns with surgeons. 4. Learn strategies and techniques for teaching medical students the principles of neuroanesthesia.	1. Modeling by the neuroanesthesia faculty 2. Interact with patients and their families. 3. Communicate with neurosurgeon, neurophysiologists, OR, ICU and PACU staff daily. 4. Discuss the preanesthetic evaluation and plan with the supervising faculty and pertinent members of the health care team. 5. Attend resident simulation. 6. Participate in teaching medical students in the operating room.	1. Daily faculty-resident interaction in the operating room. 2. 360 evaluations. 3. Monthly on-line faculty evaluations. 4. Feedback medical students. 5. Quarterly meeting with program director.
Professionalism: Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	1. Demonstrate compassionate and respectful behaviors when interacting with patients and their families. 2. Learn communication techniques with patients and families of different cultural backgrounds who possibly speak little English. 3. Demonstrate sensitivity to patients of various age, gender, ethnic, and religious backgrounds. 4. Understand the legal and ethical issues involved in patient consent. 5. Demonstrate a commitment to advocating patient care that is appropriate for their individual needs. 6. Adhere to institutional and departmental standards and policies. 7. Demonstrate ability to appropriately take on, share and delegate patient care responsibilities. 8. Demonstrate the ability to effectively balance one's own personal affairs with clinical and educational duties as outlined in this document. 9. Demonstrate a commitment to ongoing professional development. 10. Learn how to discuss and record cases with complications and/or poor outcomes.	1. Modeling by the neuroanesthesia faculty 2. Attend conferences where many of these issues are discussed.	1. Daily faculty-resident interaction in the operating room. 2. 360 evaluations. 3. Monthly on-line faculty evaluations. 4. Quarterly meeting with program director.
Systems Based Medicine: To be familiar with the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.	1. Learn the cost of the drugs, monitoring equipment and overall procedures involved in neurosurgery. 2. Understand how to do cost analysis for health care systems 3. Understand the complex systems that form the foundation for care of patients suffering from various neurologic diseases. 4. Learn how to effect improved operating room efficiency safely. 5. Appreciate the complex interactions that go on between primary care teams, neurosurgeons and anesthesiologist in the overall hospital management of these complex patients. 6. Learn how to effectively use information management in patient care.	1. Interact with surgical, intensive care, and nursing services in a unique environment, which will require sensitivity to structured and multidisciplinary, simultaneous patient care. 2. Attend resident simulation.	1. Daily faculty-resident interaction in the operating room. 2. 360 evaluations. 3. Monthly on-line faculty evaluations. 4. Quarterly meeting with program director.