

## UCLA Neurology Residency Program Neuro Critical Care Rotation

### 1. Description:

A 4-6-week rotation for neurology residents on the neurocritical care service at UCLA-RRMC.

### 2. Participants: R3 Neurology Residents

### 3. Educational goals of the rotation:

- a.) Learn the basic concepts for the treatment of critically ill neurological patients.
- b.) Observe neurosurgical perioperative management and learn the fundamental indications for and complications of common neurosurgical procedures.
- c.) Study the resident-level neurocritical care core curriculum.
- d.) Achieve competency in effective consultation for emergency neurological care.
- e.) Complete multimedia self-study module.

**This overview outlines the Neuro Critical Care Rotation as a unified or integrated curriculum. This rotation provides a structure for resident education in all of the core competency areas; however there are rotation activities that promote growth in specific competency areas, which are further identified below using the following key:**

**Patient Care: 1**

**Medical Knowledge: 2**

**Practice-Based Learning and Improvement: 3**

**Interpersonal and Communication Skills: 4**

**Professionalism: 5**

**Systems-Based Practice: 6**

### 4. Schedule of Activities

06:00 - 8:00	Neurology resident pre-rounds on a cohort of patients
08:00 - 12:00	Neuro-ICU attending rounds: teaching, patient care
14:00-15:00	Conference time on Monday, Wednesday, Friday
12:00-18:00	Work rounds, family meetings, procedures,
Nights	Resident reading and study time

5. Patient Care Responsibilities by the Neurology Resident: The resident will closely follow designated ICU patients on service and have responsibilities for neurological examination, plan development, result documentation, and care coordination for these patients. The fellow and the attending will closely supervise the resident. The resident will observe and perform invasive procedures and surgeries for these patients under the direct supervision of the ICU team and commensurate with the resident's capabilities.

**Competencies addressed: 1, 2, 3, 4, 5, and 6.**

6. Call Schedule: The neurology resident participates in a call schedule for the Neurology service. Participation in the ICU duties during this night/weekend call time will not be expected.

7. Weekly schedule: The neurology resident will round on 1 Saturday/weekend day per month.

8. Conferences:

Monday	14:00	Neuro-ICU fellows conference
Wednesday	14:00	Neuro-ICU Professor rounds
Friday	14:00	Neuro-ICU core curriculum lectures

The **Neuro-ICU Fellows Conference** will be a 1-hour discussion led by the Attending and will cover educational topics stipulated by the UCNS training guidelines for Neurocritical Care. The topics rotate based on a yearly calendar.

**Competencies addressed: 1, 2, 3, and 6.**

The **Neuro-ICU Professor Rounds** is a 1-hour bedside didactic discussion session with both neurology and neurosurgery residents with a focus on core curriculum topics and new scientific literature as it relates to a case-based discussion and comprehensive review of a single contemporary patient in the ICU.

**Competencies addressed: 1, 2, 3, 4, 5, and 6.**

The **Neuro-ICU Core Curriculum Conferences** will be resident and/or fellow led. These will be 40 minute presentations of a core curriculum topic and be provided on a rotational basis. The resident will be paired with the attending in order to discuss the topic on a fundamental and advanced basis. Power point presentations will be preferred.

**Competencies addressed: 1, 2, 3, and 6.**

9. Self-study, multimedia, educational module: This will consist of a multimedia program available via a secure intranet that presents cases in an interactive question-answer format. Completion of the module will be required.

**Competencies addressed: 1, 2, 3, 5, and 6.**

10. Core Curriculum: This curriculum will serve to guide the resident in reading, self-study, and educational conferences and interactive discussions with the attending and fellow:

1. Status epilepticus
2. Coma and encephalopathy
3. Subarachnoid hemorrhage and aneurysms
4. Arteriovenous Malformations
5. Intracerebral hemorrhage
6. Guillain Barre syndrome
7. Myasthenic Crisis and other neuromuscular emergencies
8. Neurologic complications of pregnancy
9. Encephalitis and CNS infections
10. Brain death and organ donation
11. Traumatic brain injury
12. Brain tumor perioperative management
13. Treatment of malignant brain edema from stroke
14. Intracranial pressure
15. 21<sup>st</sup> century brain monitoring techniques (EEG, TCD, Evoked Potentials, microdialysis)
16. Sedation and agitation in the ICU
17. Spinal Cord trauma and acute spinal compression syndromes
18. Critical Illness Polyneuropathy and myopathy
19. Fundamental Principles of Respiratory failure and mechanical ventilation
20. Cardiac arrhythmias and heart failure
21. Electrolyte and endocrine emergencies in neurologic patients
22. Fundamentals of Sepsis
23. Hypertensive crisis
24. Neurologic illness induced by poisons and toxins
25. Neurologic complications of critical illness and transplantation
26. 21<sup>st</sup> century interventions: Hypothermia, etc.
27. Neurologic complications of surgery
28. Neurosurgery treatment of brain tumors
29. Prognosis scales and determination
30. Ethics and end-of-life issues

Educational materials:

1. UCLA Neurocritical Care Manual
2. Journals: Neurocritical Care, Critical Care Medicine
3. Compendium of Neuro-ICU articles
4. Multimedia Neurocritical Care Educational Module

Book Reading List:

- Handbook of Neurocritical Care – Rabinstein and Wijdicks  
Neurologic and Neurosurgical Intensive Care – Ropper et al  
Critical Care Neurology and Neurosurgery – Suarez  
Critical Care Neurology – Wijdicks

Rev. 6/13/08 AA