PATIENT CARE
GOALS AND OBJECTIVES

Head Injury (Traumatic Brain Injury—TBI)
1. Perform at least 6 focused neurological evaluations (history, physical examination, laboratory data) on patients with suspected traumatic brain injury.
2. Interpret the results of focused neurological evaluations (history, physical examination, laboratory data) performed on patients with traumatic brain injury (TBI) to
   a. Perform an acute assessment and categorization of neurological status, using the Glasgow Coma Scale and other appropriate clinical parameters
   b. Construct an initial plan of care.
3. Interpret the results of post-TBI on-going clinical assessment and monitoring to
   a. Identify the need for intracranial pressure measurement and monitoring
   b. Identify the need for head CT imaging, including
      i. Timing of initial study
      ii. Timing of interval follow-up studies
4. Analyze the risk of secondary brain injury and develop management plans to avoid precipitating factors including
   a. Hypotension
   b. Hypoxia, including need for airway protection (intubation) and respiratory support (mechanical ventilation)
   c. Malnutrition
   d. seizures
5. Using evidence-based medicine, initiate timely and effective venous thromboembolism (VTE) prophylaxis.

Spinal Cord Injury (SCI)
1. Perform at least 6 focused neurological evaluations (history, physical examination, laboratory data) on patients with suspected spinal cord injury.
2. Interpret the results of focused neurological evaluations (history, physical examination, laboratory data) performed on patients with spinal cord injury to construct an initial plan of care.
3. Follow protocol for spinal cord clearance.
4. Interpret the results of focused neurological evaluations (history, physical examination, laboratory data) performed on patients with spinal cord injury to identify
   a. Spinal shock
   b. Cauda equina syndrome
   c. Central cord syndrome
   d. Complete spinal cord injury
   e. Incomplete spinal cord injury
5. Develop an initial management plan for patients with spinal shock, including
   a. Volume resuscitation
   b. Use of pressors
6. Implement protocol for management of spinal cord injured patients
   a. Bowel
   b. Bladder
   c. Pressure sore prevention
   d. Evidence-based role of steroids
7. Using evidence-based medicine, initiate timely and effective venous thromboembolism (VTE) prophylaxis.

RESPONSIBILITIES AND EXPECTATIONS

1. Respond promptly when called to the emergency department to evaluate a patient with potential TBI or SCI.
2. Respond immediately when called to the ICU to evaluate a patient with a possible change in neurologic examination.
3. Accompany patients with possible neurological injuries to the CT scanner and review the findings with the radiologist.
4. Communicate immediately with the neurosurgery chief resident and/or attending staff after the initial evaluation of a patient with possible neurologic injury.
5. Immediately communicate any change in a patient’s neurological status to the neurosurgery chief resident and/or attending staff.
6. Implement the clinical decisions made by the team (on rounds, during the day) in a timely manner
   a. Arrange consultations
   b. Schedule diagnostic tests
   c. Schedule therapeutic procedures
7. Notify the senior resident/fellow/attending if unable to implement the clinical decisions.
8. Communicate the results of consultations, diagnostic tests and therapeutic procedures to the team in a timely manner.

MEDICAL KNOWLEDGE
GOALS & OBJECTIVES

Head Injury

1. Describe the Glasgow Coma Scale and its use to categorize neurologic status.
2. Correlate level of consciousness with need for airway protection.
3. Compare the methods of head and brain imaging after TBI, including
   a. Indications
   b. Contraindications
   c. Limitations
4. Describe and analyze the presentation of intracranial neurologic emergencies including
   a. Cerebral herniation
   b. Subarachnoid hemorrhage
   c. Intracranial hypertension
   d. Acute subdural hematoma
   a. Epidural hematoma
   b. Seizures
5. Describe secondary brain injury and identify
   a. Risk factors
   b. Precipitating factors
   c. Methods of prevention
6. Identify the factors that lead to increased intracranial pressure, and their physiologic manifestations.
7. Identify indications for
   a. Gastrostomy tube placement
   b. Tracheostomy
8. Describe the anatomic layers of the scalp, and the principles of closure
   a. Irrigation
   b. Layered closure
   c. Scalp vascularity and hemostasis
9. Describe the process for identifying a potential organ donor.
Spinal Cord Injury
1. Describe and compare the presentation of the following spinal cord injury syndromes
   a. Spinal shock
   b. Cauda equina syndrome
   c. Central cord syndrome
   d. Complete spinal cord injury
   e. Incomplete spinal cord injury
2. Compare blunt and penetrating spinal cord injury
3. Identify indications for continued ventilatory support with a high spinal cord injury
4. Describe methods of spine stabilization
5. Describe the process for and elements of spine clearance
6. Interpret spine X-rays (cervical, thoracic, lumbar)
7. Describe the approaches to spinal cord injury rehabilitation.
8. Analyze factors that influence rehabilitation potential after SCI

RESPONSIBILITIES & EXPECTATIONS
1. Use the on-line protocols (SFGH intranet) for
   a. VTE prophylaxis
   b. Spinal cord clearance

TECHNICAL SKILLS
GOALS & OBJECTIVES
1. Manage cranial wounds
2. Perform basic management of extra-ventricular drains
3. Participate in the placement of at least 6 intracranial pressure monitoring devices
   a. IVD
   b. Camino
4. Assist in the operating room
   a. With at least 4 cranial and/or neurosurgical procedures
   b. At least once a week

RESPONSIBILITIES & EXPECTATIONS
1. See UCSF Common G&Os

PRACTICE-BASED LEARNING
GOALS & OBJECTIVES
1. See UCSF Common G&Os

RESPONSIBILITIES & EXPECTATIONS
1. Participate in the weekly M&M conference to review and analyze treatment outcomes and complications, including
   a. DVT
   b. Skin breakdown
   c. Unplanned reintubation
2. Present at least one review of a complication and the relevant literature at one of the service teaching conferences
3. Meet with the faculty education representative at least three times during the rotation (beginning, midpoint, exit) to review goals & objectives.
INTERPERSONAL & COMMUNICATION SKILLS
GOALS & OBJECTIVES
1. Communicate with neurologically impaired patients with respect and sensitivity
2. Communicate with nurses, members of other disciplines providing care to mutual patients, and families on a regular basis.
3. Incorporate the wishes of the patient’s family in the care plan, while preserving the autonomy of the comatose or neurologically impaired patient.
   a. Patient with unknown wishes
   b. Patient with known wishes
4. Initiate communication with nursing staff about potential organ donation, including communicating family inquiries.

RESPONSIBILITIES & EXPECTATIONS
1. Do not initiate a discussion about organ donation with the patient’s family.

PROFESSIONALISM
GOALS & OBJECTIVES
1. describe the criteria of brain death in TBI, identifying factors that affect validity
2. discuss the medicolegal implications of withdrawal of support in TBI crime victims
3. discuss surrogate decision-makers
   a. role
   b. legality
   c. validity

RESPONSIBILITIES & EXPECTATIONS
1. participate in at least one discussion with a patient’s family regarding withdrawal of support
2. regularly participate in family meetings

SYSTEMS-BASED PRACTICE
GOALS & OBJECTIVES
1. Optimize the patient’s potential for maximal benefit from rehabilitation

RESPONSIBILITIES & EXPECTATIONS
1. Use a team approach with occupational, speech and physical therapists to insure the patient gets the full benefit of rehabilitation therapy.