UPDATED: July 2009

ROTATION: TRAUMA AND CRITICAL CARE (L AND A SURGERY)

ROTATION DIRECTOR: Areti Tillou, M.D.

CHIEF OF TRAUMA SURGERY: Henry G. Cryer, M.D.

SITE: UCLA Medical Center – Westwood

GOALS:

To provide trainees an opportunity to participate in the management of injured and critically ill patients and to teach them the principles of diagnosis and treatment of general surgical emergencies including trauma and surgical critical care patients.

LEVEL OF TRAINEE: R3

ASSESSMENT:

Monitoring of the accomplishment of the stated objectives will be performed using the following methods:

1. Global Rating: end of rotation evaluation of resident performance to assess the resident's demonstration of Core Competencies with respect to the stated objectives by faculty, other team resident members, students, and nursing staff.

2. Case Logs: auditing of operative cases pertinent to the specialty in the Surgical Operative Log.

3. Written Examination: performance on the annual ABSITE examination, Cardiovascular and Respiratory systems section.

4. Patient Survey: performance will be assessed by patient surveys administered though the rotation.

DESCRIPTION OF THE ROTATION:

The Trauma and critical care rotation (L and A Surgery) will consist of 2 months in R1, four months in R3 and 1 month in R4 and 2 months in R5 years.

1. All residents rotating will be part of the Trauma Team responding with specific time standard to all trauma codes (including all forms of blunt and penetrating trauma) activated on the field based on the existing activation criteria.
2. The surgery residents will perform trauma resuscitations in conjunction with the ED residents with the guidance and supervision of an attending physician at all times.

3. The surgery residents will provide in-patient care including routine admissions and critical care of the severely injured patients.
4. Residents will further participate in surgical operations needed on these patients under direct supervision by the surgical faculty.
5. The rotating residents will participate in all Department of Surgery educational conferences and didactic presentations.
6. Residents are expected to actively participate and present at the weekly Trauma Conference.
7. Residents are further expected to conduct the combined ED/Surgery Trauma and Critical Care Conference that take place bimonthly.

R3 RESIDENT

COMPETENCY BASED LEARNING OBJECTIVES

The R3 resident functions as the consult resident on the service responsible for all new admissions and consults. He or she assumes senior level responsibility when the chief resident is not available. In that capacity he or she organizes and oversees the care of patients of the service. By the completion of this rotation the R3 resident:

Patient care:

1. Should be able to perform a concise and efficient history and physical examination, initiate a diagnostic workup, and formulate a therapeutic plan in all trauma and critically ill patients, regardless of complexity.
2. Should be able to direct the treatment of all trauma and critically ill patients with the guidance of the chief resident and the surgical faculty.
3. Should be available and responsive to junior residents and involve the senior residents and attendings when appropriate.
4. Be able to evaluate surgical risk in both the elective and emergency setting especially for complex cases.
5. Be able to provide a logical and organized analysis of data and learn to utilize diagnostic studies effectively.
6. Understand the indications and complications of different radiologic and interventional studies commonly used in the evaluation of trauma and critical care problems such as CT, MRCP, HIDA scan, ERCP, EGD, Upper GI, Barium Swallow, Barium Enema, Angiogram, etc.
7. Be able to read and analyze radiologic studies, such as MRCP, HIDA scan, Upper GI, Barium Enema, angiogram, etc. utilized in the evaluation of trauma and critical care patients.
8. Be proficient in more advanced operating room surgical procedures commonly performed in trauma patients such as exploratory laparotomy,
splenectomy, repair of hollow and solid organ lacerations, repair of
diaphragmatic lacerations, thoracotomy, repair of lung lacerations,
pericardial window, repair of cardiac lacerations, and retroperitoneal
exploration. Perform these procedures under the supervision of a faculty
member.

9. Know the indications, technical details, and possible complications of the
surgical procedures most commonly performed on critical care patients in
the intensive care unit.

10. Be able to provide complete, advanced preoperative, postoperative,
perioperative care to all trauma patients with the guidance of the chief
resident and surgical faculty.

11. Be able to handle all problems in the intensive care unit under
the guidance of the chief resident and the faculty members.

Medical knowledge:

1. Understand, describe and demonstrate comprehensive clinical knowledge
in the diagnosis and treatment of common and unusual trauma and critical
care problems such as:
   a. Trauma Airway Management,
   b. Vascular access and basic emergency ED procedures
   c. Trauma resuscitation, Primary and Secondary Survey
      and basic imaging of Trauma Patients
   d. Head injury
   e. Injuries of the Spine and Spinal Cord
   f. Treatment of Facial fractures and soft tissue injuries of the face
   g. Blunt and Penetrating Neck Trauma
   h. Thoracic injuries, thoracic vascular and chest wall injuries
      (overview and principles of treatment)
   i. Cardiac injuries, cardiac tamponade
   j. Abdominal injuries and abdominal compartment syndrome
   k. Common Orthopedic injuries
   l. Pelvic fractures
   m. Extremity compartment syndrome
   n. Peripheral vascular injuries
   o. Pediatric trauma and child abuse
   p. Trauma in pregnancy
   q. Rhabdomyolysis
   r. Pain management, sedation, paralytics in the trauma patient
   s. Blood transfusion, hemostasis and complications
   t. Nutritional support and metabolism of the trauma patient
   u. Support of the potential organ donor and brain death
   v. Deep venous thrombosis, pulmonary embolism,
      prophylaxis, diagnosis, treatment
   w. Electrolyte abnormalities and Acid-Base disorders
   x. Neurological disorders in ICU
y. GI prophylaxis in ICU  
z. Acute respiratory failure/ ARDS and Ventilator management  
   aa. Renal failure  
   bb. Hemodynamic monitoring  
   cc. Ethics and End-of-life issues in the trauma and critically ill patient  
   dd. Endocrine problems in the ICU (DM, adrenal insufficiency, thyroid dysfunction)  
   ee. Sepsis/ SIRS in injured and critically ill patients  
   ff. Fever in the ICU (ventilator associated pneumonia, etch)  
   gg. Alcohol and drugs in trauma patients

2. Perform complex emergency room and ICU procedures commonly performed in trauma patients under the supervision of the chief resident and/or the surgical attending such as:
   a. Emergency room thoracotomy, crossclamping of the aorta, and open cardiac massage
   b. Cricothyroidotomy  
   c. Emergency tracheostomy  
   d. Insertion of intraosseous resuscitation lines  
   e. Diagnostic peritoneal lavage  
   f. Venous cutdown  
   g. Insertion of gastrostomy feeding tube  
   h. Pericardiotome  
   i. Debridement and repair of complex

3. Guide junior residents through all basic surgical bedside procedures such as:
   a. Placement of foley catheter  
   b. Placement of peripheral IV lines  
   c. Placement of nasogastric tubes  
   d. Measurement of extremity and abdominal compartment pressures  
   e. Focused Abdominal Sonography for Trauma (FAST)  
   f. Central venous access  
   g. Pulmonary artery catheter placement  
   h. Arterial line placement  
   i. Tube thoracostomy

Practice Based Learning:

1. Develop a personal program of self-study and professional growth with guidance from the teaching staff and senior residents. An understanding of the etiology, pathogenesis, pathophysiology, diagnosis and management of trauma and surgical critical disorders will allow for sound surgical judgment, which relies on knowledge, rational thinking and the surgical literature.

   2. Utilize current literature resources to obtain up-to-date information in the care of trauma and critically ill patients and practice evidence-based medicine.
3. Participate in teaching and organization of the educational weekly trauma and critical care conference. All rotating residents will be expected to present at the conference with the guidance of faculty (please refer to the attached schedule for more details)

4. Participate in activities of the Department of Surgery (including all teaching conferences) and assume responsibility for teaching and supervision of subordinate surgical house staff, and medical students.

5. Participate in the Department Morbidity & Mortality conference and utilize information to further improve patient care.

6. Participate in daily teaching ward rounds and assume a leading position

**Professionalism:**

1. Participate in compassionate patient care maintaining the highest moral and ethical values with a professional attitude.

2. Demonstrate sensitive understanding of the needs and feelings of others, including the patient's family members, allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.

3. Communicate and collaborate effectively in a team of health care providers

4. Demonstrate respect, compassion and integrity in the care of trauma and critically ill patients on a daily basis

5. Demonstrate mature and educated approach to Ethical issues commonly encountered in a trauma and critical care setting.

6. Show sensitivity to patients culture, age, gender and disabilities

7. Recognize and appropriately handle sensitive cases of abuse

8. To be self-aware and have knowledge of professional limits by practicing on-going medical education and self-improvement.

9. To become accountable to profession in their actions and decisions

**Interpersonal Relationships And Communication:**

1. Create and sustain a therapeutic and ethically sound relationship with patients and patient families

2. Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.

3. Maintain professional interactions with other health care providers and hospital staff

**Systems Based Practice:**

1. Understand and participate properly in the trauma activation procedure

2. Understand how the health care organization affects surgical practice of trauma and critical care

3. Demonstrate cost effective health care
4. Know how to coordinate multi-specialty and multidisciplinary trauma care practice including discharge planning, social service, rehabilitation, and long term care.

5. Follow established practices, procedures, and policies of the Department of Surgery and integrated and affiliated hospitals.

6. Complete of medical records operative notes staff sheets and notes, patient database cards and other patient care related documentation in a timely, accurate and succinct manner.

7. Understand fully the medico legal implications of medical practice and take actions to minimize the risk.

**Additional Evaluation Information:**

1. The trauma attending will conduct teaching rounds everyday and provide direct supervision on all aspect of trauma care.

2. Each resident will be evaluated at the end of the trauma rotation. The program director will evaluate the overall performance of each resident at least semiannually and will include feedback on performance of all mandatory and elective rotations including trauma and critical care.

3. The annual ABSITE will further provide feedback on the residents' clinical and basic science knowledge. Trauma and critical care related questions and respective success rates will be discussed with the residents.

4. An annual mock oral examination (with particular interest on the trauma and critical care questions) will further provide experience and feedback on each residents performance.

5. Each resident in turn, will be asked to evaluate the rounding faculty and the rotation after each rotation. The aggregate input from the residents will be tabulated and presented at the faculty meeting at least semi-annually. Input will be also discussed with the faculty members participating in the trauma and critical care rotation. Improvement will be formulated by the program director and recommended to the faculty.