Updated July 14, 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:** R4, R5

**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 1 or 2 months in R1, four months in R3 and 2 months 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.

CHIEF RESIDENTS (R4 and R5)

R4 and R5: The chief resident on the trauma and critical care service oversees and coordinates the care of all patients on the service with minimal assistance. Provides guidance to the junior residents. The chief resident is also responsible for all administrative and teaching activities on the service. More specifically the chief resident on the rotation is expected to:

**Patient care:**

1. Have a thorough understanding of surgical pathology and be able to develop a diagnostic and therapeutic plan for a wide spectrum of trauma and surgical critical care diseases.
2. Guide junior residents through all simple surgical bedside or operating room procedures.
3. Be familiar with and teach junior residents about the ethical issues such as informed consent, patient’s rights, end of life issues, etc. commonly encountered in the care of injured and critically ill patients.
4. Develop mature judgment and uniformly pay attention to fine details.
5. Note subtle findings and make patient management plans and decisions for complicated trauma and surgical critical care cases with minimal attending staff involvement.
6. Evaluate and manage pre and post-operative trauma and critically ill surgical patients to a high level of sophistication.
7. Develop treatment plans for complex situations.
8. Read all complex imaging studies obtained for the services’ patients.

**Medical Knowledge:**

1. Become proficient in the evaluation and management of at the least the following:
   a. Trauma Systems and pre-hospital care
   b. Organization prior to trauma patient arrival and coordination of resuscitation efforts
   c. Trauma resuscitation in the ED
d. Patterns of Blunt and Penetrating injuries
e. Measurement of Injury Severity and scoring systems
f. Trauma Airway Management
g. Vascular access and emergency ED procedures
h. Imaging of Trauma Patients
i. Head injury
j. Injuries of the Spine and Spinal Cord
k. Treatment of Facial fractures and soft tissue injuries of the face
l. Penetrating Neck Trauma
m. Blunt Neck Trauma
n. Thoracic injuries (overview and principles of treatment)
o. Cardiac injuries, cardiac tamponade
p. Esophageal injuries
q. Tracheobronchial injuries
r. Pneumothorax, hemothorax, chest tubes, long term and short term complications
s. Chest wall injuries, fractures, flail chest
t. Pulmonary contusion and lung injuries
u. Thoracic vascular injuries
v. Transmediastinal GSW
w. Diaphragmatic injuries
x. Abdominal injuries (overview and principles of treatment)
y. Liver and biliary tree injuries
z. Spleen injuries
aa. Duodenum and pancreatic injuries
bb. Small and large bowel injuries
cc. Abdominal vascular injuries
dd. Abdominal compartment syndrome
e. Damage control and open abdomen
ff. Genitourinary injuries
gg. Orthopedic injuries
hh. Pelvic fractures
ii. Extremity injuries and compartment syndrome
jj. Rhabdomyolysis
kk. Peripheral vascular injuries
ll. Pain management, sedation, paralytics in the trauma patient
mm. Blood transfusion, hemostasis and complications
nn. Nutritional support and metabolism of the trauma patient
oo. Support of the potential organ donor and brain death
pp. Burns and inhalation injuries
qq. Pediatric trauma and child abuse
rr. Trauma in pregnancy
ss. Geriatric trauma
tt. Deep venous thrombosis, pulmonary embolism, prophylaxis, diagnosis, treatment
uu. Fat embolism
vv. Physiology of the critical care, Shock/ SIRS and Hemodynamic monitoring
ww. Electrolyte abnormalities and Acid-Base disorders
xx. Neurological disorders in ICU
yy. GI prophylaxis in ICU
zz. Acute respiratory failure/ ARDS and Ventilator management
aaa. Renal Failure
bbb. End of life issues in the trauma and critically ill patient
ccc. Endocrine problems in the ICU (DM, adrenal insufficiency, thyroid dysfunction)
ddd. Sepsis, Fever in the ICU (ventilator associated pneumonia, etch)
eee. Antibiotics in trauma patients
fff. Alcohol and drugs in trauma patients

2. Be familiar with the indications, anatomy, pathophysiology, technical details, and complications associated with all surgical procedures commonly performed in injured and critically care patients. Be able to perform most of these procedures with minimal assistance from the faculty members.

3. Be able to perform all general surgery and laparoscopic procedures performed on trauma and critical care patients with minimal supervision and be the operating surgeon on complex procedures assisted by the surgical attending.

4. Expand clinical fund of knowledge to include tackling subject areas of controversy. Have a thorough understanding of relevant anatomy, physiology, pathology and bacteriology of common trauma and surgical critical care topics.

**Practice-based learning:**

1. The chief resident is responsible for organization of teaching conferences as assigned. The chief resident should be a mentor to the junior house officer and teacher to the medical student.
2. Regularly educate self and junior residents/ medical students about each surgical problem encountered as well as related topics in trauma and surgical critical care.
3. Critically assess the quality of care as discussed during rounds, conferences and the weekly M & M conference and contribute to those.
4. Practice self-study and professional growth with guidance from the teaching staff and senior residents.
5. Utilize current literature resources to obtain up-to-date information in the care of trauma and critically ill patients and practice evidence-based medicine.
6. 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.
7. Participate in the Department Morbidity & Mortality conference and utilize information to further improve patient care.
8. Lead daily teaching ward rounds
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 ongoing 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. Discuss with the patient and their families, in layman's terms, their probable diagnosis, its implications, the recommended treatment and any operations under consideration.
3. Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
4. 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 medical legal implications of medical practice and take actions to minimize the risk.

**Educational methodology:**

1. Direct involvement in patient care and management
2. Observation, assistance and performance of surgical procedures
3. Lectures and teaching conferences
4. Self-reading assignments that will be discussed on rounds, and presented at the conferences

**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.