

**KERN MEDICAL CENTER
GENERAL SURGERY RESIDENCY**

TRAUMA ROTATION

The Trauma rotation consists of 1 month in PGY1, two months in PGY2, three months in PGY3 and 1 month in PGY4 years. These rotations will take place at Kern Medical Center. The residents rotating on the Trauma service will be exposed to blunt and penetrating trauma occurred as a result of motor vehicular collisions, boating accidents, falls, industrial accidents and intentional injuries. The residents will be part of the Kern Medical Center Trauma Team responding with specific time standard to all trauma codes activated on the field based on the Kern County Emergency Medical Service activation criteria. The surgery residents will perform trauma resuscitations in conjunction with the ED residents and will be under direct supervision at all times. The surgery residents will further provide in-patient care including routine admissions and critical care of the severely injured patients. They will further participate in surgical operations needed on these patients under direct supervision by the surgical faculty.

Rotating residents will participate in all Department of Surgery educational conferences and didactic presentations. They are further expected to conduct the combined ED/Surgery Trauma Conference that takes place bi-weekly. The PGY-1 residents will be expected to gain significant experience in the initial care of trauma patients while the more senior level residents are expected to fine tune their diagnostic and procedural skills and further develop leadership role during their rotations. Upon completion, a written evaluation of each resident's performance, based on the ACGME General Competency initiatives, will be completed by each of the supervising general surgery faculty. Feedback evaluations of the faculty and rotation by the rotating residents are expected.

LEARNING OBJECTIVES

PATIENT CARE AND MEDICAL KNOWLEDGE

The following is a list of patient care and medical knowledge objectives for the surgery residents rotating on the trauma service. PGY-1 residents are expected to learn the basic principles in trauma diagnosis strategies, resuscitation, and patterns of injury, management of minor and severe trauma patients, and surgical critical care including organ donor management. The PGY2, 3, and 4 residents will fine-tune their management skills and surgical techniques related to traumatized patients. They will further advance their knowledge in non-operative management of solid organ injuries and advanced operative skills including vascular and thoracic surgeries. All residents on the trauma service will participate in the biweekly trauma conferences and teach junior residents and medical students.

- A. Demonstrate and understand the initial approach to multiple-injury patients; the significance of the “golden hour”, trauma resuscitation priorities, primary and secondary surveys.
- B. Demonstrate and understand the evaluation, stabilization and management of:
 - a. head and neck trauma as a result of blunt and penetrating trauma including the recognition of various intracranial injuries.
 - b. thoracic trauma including great vessel injuries, cardiac injuries, pulmonary injuries, simple and tension pneumothoraces, hemopneumothoraces, flail chest, diaphragmatic injury, esophageal injury, tracheal injury and bronchial injuries.
 - c. Blunt and penetrating abdominal trauma. Residents must be able to describe criteria for non-operative management of abdominal trauma.
 - d. Extremities trauma including the diagnosis and management of compartment syndromes.
 - e. Genitourinary tract trauma and perineal trauma including the management of rectal injuries.
 - f. Pregnant patients with severe trauma.
- C. Demonstrate and understand the special problems involved in the management of pediatric trauma.
- D. Demonstrate and understand the initial management and complications of burns including the appropriate fluid management therapy.
- E. Demonstrate and understand the management of severe soft tissue injury including tissue loss and proper techniques for limb preservation for replantation.
- F. Demonstrate and understand the nutritional assessment and provision in trauma patients.
- G. Describe the indications and become proficient in the following procedural skills:
 - a. Diagnostic peritoneal lavage
 - b. “F.A.S.T.” ultrasound of the abdomen
 - c. Central venous access including percutaneous techniques and cutdown
 - d. Arterial line placement
 - e. Tube thoracostomy
 - f. Pulmonary artery catheter placement
 - g. Emergency thoracotomy and open cardiac massage
 - h. Interpretation of CT studies of the head, abdomen, chest and pelvis.
 - i. Tracheostomy and cricothyoidotomy
 - j. Percutaneous gastrostomy for nutrition
 - k. Simple and complex repair of wounds
 - l. Debridement of devitalized wounds
 - m. Pericardiocentesis
 - n. Overall coordination of the care of the multiply injured patients.

SYSTEM-BASED PRACTICE

Residents on the trauma service are expected to become familiar with system-based practice of trauma care. Specifically, residents are expected to gain competency in:

- A. Trauma system operating in Kern County
- B. Trauma activation procedure
- C. Multidisciplinary trauma care practice
- D. Med-alert activation system operating in Kern County
- E. Triage in single and multiple casualty situations
- F. Discharge planning, including social service, rehabilitation, and long term care
- G. Cost containment in trauma care
- H. Funding options in trauma care

PRACTICE-BASED LEARNING

Residents are expected to utilize resources available to them at Kern Medical Center to improve their care of trauma patients. Specifically, residents are expected to:

- A. Participate in trauma QA process to improve quality and outcome of patient care
- B. Utilize internet based resources to obtain up-to-date information in the care of trauma patients.
- C. Practice evidence-based medicine.
- D. Educate medical students and allied health professional in trauma care
- E. Utilize the trauma registry to further improve patient care, participate in research and to understand the prevention of trauma.

INTERPERSONAL AND COMMUNICATION SKILLS

Residents are expected to acquire and practice adequate interpersonal and communication skills on the trauma service. They are expected to communicate effectively with family members of critically injured patients in a manner that is professional and compassionate. Specifically, the residents will:

- A. Build relationships with patients and families in the practice of medicine.
- B. Practice the art of listening to patient concerns.
- C. Gather medical and personal information effectively from patients.
- D. Explore the patients' perspective about their life events, illness, and treatment.
- E. Show and explain information effectively to patients.
- F. Collaborate with patients and their families in treatment decisions.
- G. Provide closure for patient communication/visits.

PROFESSIONALISM

Residents on the trauma service are expected to acquire and practice professionalism. Specifically, trauma residents are expected to:

- A. Respect to patients and their families.
- B. Show compassion to patients and their families.

- C. Demonstrate integrity in the practice of medicine.
- D. Be responsive to patients' needs.
- E. Be accountable to their profession in their actions and decisions.
- F. Practice in on-going medical education and self-improvement.
- G. Respect and protects patient confidentiality.
- H. Be sensitive to patients' culture, age, gender, and disabilities.
- I. Be self-aware and have knowledge of professional limits.
- J. Communicate and collaborate effectively in a team of health care providers.

EVALUATION AND FEEDBACK

The trauma attending will conduct teaching rounds everyday and provide direct supervision on all aspect of trauma care. The trauma director and each rounding faculty will evaluate the residents on the rotation based on demonstrated clinical experience and competency. 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. The annual ABSITE will further provide feedback on the residents' clinical and basic science knowledge. An annual mock oral examination will further provide experience and feedback on each resident's performance.

Each resident in turn, will be asked to evaluate the rounding faculty and the rotation upon completion of each rotation. The aggregate input from the residents will be tabulated and presented at the faculty meeting at least semi-annually. Based upon these results, improvement will be formulated by the program director and recommended to the faculty. Upon approval, these improvements will be made as appropriate.

RECOMMENDED READINGS

Moore EE, Mattox KL, Feliciano DV, eds. Trauma, 4th ed., Norwalk, Connecticut: Appleton & Lange; 2000.

American College of Surgeons Committee on Trauma. Advanced Trauma Life Support program for physicians. Chicago; American College of Surgeons; 1998

Surgical Clinic of North America, various trauma topics.

Greenfield L; Complications of trauma