

UNIVERSITY OF MICHIGAN HEALTH SYSTEM · DEPARTMENT OF EMERGENCY MEDICINE  
**PEDIATRIC EMERGENCY MEDICINE FELLOWSHIP PROGRAM**

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**Rotation:** Trauma/Burn  
**Institution:** University of Michigan Health System  
**Duration:** One (1) Month  
**Fellow Training Year:** PD Trained Fellows (Year 1)

**Supervising Faculty:** Lena Napolitano, MD

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**EDUCATIONAL GOALS:**

1. Acquire the ability to rapidly and thoroughly assess victims of major and minor trauma. *Competencies: MK, PC, SBP*
2. Develop an organized approach to the assessment, resuscitation, stabilization and provision of definitive care for the trauma/burn victim. *Competencies: MK, PC, SBP, IC, P*
3. Acquire the ability to establish priorities in the initial management of victims of life-threatening trauma. *Competencies: MK, PC, SBP*
4. Develop familiarity with common general surgical disorders. *Competencies: MK, PC*

**EDUCATIONAL OBJECTIVES:**

1. Learn to manage the airway of trauma victims. *Competencies: MK, PC*
2. Learn the use of the diagnostic imaging modalities available for evaluation of the trauma victim. *Competencies: MK, PK, SBP*
3. Develop procedural skills necessary in the evaluation and management of the trauma victim. *Competencies: MK, PC*
4. Acquire the ability to direct a trauma team during complex resuscitations. *Competencies: MK, PC, IC, SBP, P*
5. Acquire the ability to perform an appropriate history and physical exam in patients with general surgical disorders, including an appropriate preoperative evaluation. *Competencies: MK, PC*
6. Learn indications for consultation and surgical intervention in patients with acute abdominal pain. *Competencies: MK, PC*
7. Learn to manage patients with acute and chronic peripheral vascular insufficiency. *Competencies: MK, PC*
8. Learn to recognize and treat immediate life and limb threatening injuries in the trauma victim. *Competencies: MK, PC*
9. Learn special considerations in the evaluation and management of the pregnant trauma victim. *Competencies: MK, PC*
10. Learn special considerations in the evaluation and management of the pediatric trauma victim and demonstrate the ability to direct pediatric trauma resuscitations. *Competencies: MK, PC, IC, P, SBP*
11. Learn special considerations in the evaluation and management of the geriatric trauma victim and demonstrate the ability to direct geriatric trauma resuscitations. *Competencies: MK, PC, IC, P, SBP*
12. Learn the importance of mechanism of injury in the evaluation and treatment of the trauma victim. *Competencies: MK, PC*
13. Learn to perform the following procedures: insertion of large bore peripheral and central venous lines, insertion of arterial lines, tube thoracostomy, peritoneal lavage, resuscitative thoracotomy, cricothyroidotomy, pericardiotomy, aortic cross clamping, splinting of extremity fractures, reduction and immobilization of joint dislocations, extensor tendon repair, vessel ligation, local wound exploration, repair of complex lacerations. *Competencies: MK, PC*

Accreditation Council for Graduate Medical Education (ACGME) Core Competency Key:

PC = Patient Care; MK = Medical Knowledge; PBLI = Practice-Based Learning and Improvement; IC = Interpersonal and Communication Skills; P = Professionalism; SBP = Systems-Based Practice

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14. Calculate the Glasgow Coma Score and discuss its role in the evaluation and treatment of head injured patients. *Competencies: MK, PC*
15. Learn to arrange appropriate consultation and disposition of trauma patients. *Competencies: PC, SBP, IC, P*
16. Learn to use spine immobilization techniques in trauma victims. *Competencies: MK, PC*
17. Learn to diagnose and manage trauma victims with extremity fractures, dislocations and subluxations. *Competencies: MK, PC*
18. Learn to manage soft tissue injuries including lacerations, avulsions and high-pressure injection injuries. *Competencies: MK, PC*
19. Learn to diagnose and manage compartment syndromes. *Competencies: MK, PC*
20. Learn to diagnose and manage urogenital injuries. *Competencies: MK, PC*
21. Acquire the ability to coordinate consultants involved in the care of multiple trauma patients. *Competencies: PC, IC, P, SBP*
22. Acquire the ability to use and interpret imaging modalities in the evaluation of trauma patients. *Competencies: MK, PC, SBP*
23. Acquire the ability to arrange appropriate consultation on and disposition of trauma patients. *Competencies: PC, SBP, IC, P*
24. Learn to evaluate and manage spinal cord injuries. *Competencies: MK, PC*
25. Acquire the ability to diagnose and manage tendon injuries. *Competencies: MK, PC*
26. Acquire the ability to manage amputation injuries and discuss the potential for re-implantation. *Competencies: MK, PC, IC, P*
27. Learn to diagnose and treat smoke inhalation. *Competencies: MK, PC*
28. Learn to assess and manage facial trauma. *Competencies: MK, PC*
29. Learn to evaluate and manage anterior neck injuries. *Competencies: MK, PC*
30. Learn to assess and manage penetrating and blunt chest trauma. *Competencies: MK, PC*
31. Learn to evaluate and manage blunt and penetrating abdominal trauma. *Competencies: MK, PC*
32. Learn to diagnose and treat pelvic fractures. *Competencies: MK, PC*

**DESCRIPTION OF CLINICAL EXPERIENCE:**

Pediatric Emergency Medicine fellows rotate on the Trauma Burn Service for one month during their first year. UMHS is a level 1 Trauma center serving as a referral center for much of south-central Michigan. The majority of patients on this service are involved in blunt trauma. The PEM fellow focuses on the care of general surgical, trauma, and burn patients in the ED and in the Trauma Burn ICU. The service follows trauma patients from the moment that they arrive in the ED through all stages of their care. Pediatric Emergency Medicine fellows on this service team up with second year surgical residents as the Emergency Consult Residents (ECRs) and participate in all phases of the care of trauma/burn/surgical patients including the ED evaluation, the operating room management, the inpatient wards and ICU, and follow-up in the outpatient clinics. The PEM fellow works as a regular member of the trauma team with the exception of reduced OR responsibilities. PEM fellows share patient care responsibilities equally with a second year surgical resident, alternating roles as team leader and assistant team leader for the ED

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evaluation and resuscitation of all Class I/II trauma patients. The PEM fellows and surgical residents also share responsibility for the initial evaluation and management of some non-trauma surgical emergencies in the ED and hospital. All the residents function under the close supervision of General Surgery senior residents and Trauma Surgery faculty. Fellows take in house call with the TBE team 10 days per month, every third night. Fellows are scheduled off one weekend/month and at least two 24 hours periods off during this rotation.

**DESCRIPTION OF DIDACTIC EXPERIENCE:**

The Trauma Burn Service holds multidisciplinary Trauma rounds every Monday, Morbidity and Mortality conference every Tuesday, Surgical Grand Rounds every Thursday, and Wound rounds on Wednesday and Friday. There are noon lectures on general principles of surgical ICU patient management given by the faculty 2-3 days per week. PEM fellows participate in an emergency procedure lab (animal) at the start of their fellowship which is repeated 2-3X's annually; trauma procedural skill is also assessed at annual simulation lab sessions. Fellows must be ATLS certified during their training. Fellows are provided a handbook of reading materials specific to trauma and burn management at the start of their rotation.

**EVALUATION PROCESS:**

Fellows are evaluated using tools based on the six core competencies completed in writing by pediatric emergency medicine faculty after every rotation in the PED at UMHS via the UMHS MedHub online evaluation system. Fellows are also evaluated by medical students, house staff, nursing personnel and patients during these rotations. Fellows likewise evaluate their experiences after each rotation as well. Evaluations are forwarded to the Program Director and made available in aggregate to individual fellows via the MedHub system at all times. Formal review of fellow evaluations occurs at quarterly PD/Fellow meetings.

**FEEDBACK MECHANISMS:**

Specific problems or notations of excellence identified through verbal or written communication to the Program Director regarding the fellow are immediately brought to the attention of the involved fellow. Fellows receiving an overall poor performance grade (less than satisfactory evaluation for rotation) are notified immediately and meet with the PD. Fellows who receive notation for improvement in some areas (but pass the overall rotation) are given a work plan for educational intervention with specific timeline for completion and reevaluation. Fellows who do not pass this overall rotation will meet with the PD for remediation work plan, including timetable for reevaluation and UMHS notifications as required by GME. Monthly evaluations are placed in the fellow's file and are available for review at any time by the fellow, but are also reviewed during quarterly meetings with the PD. Fellows are encouraged to review their MedHub files at least monthly.

Reviewed		11/2006		06/30/2009		
Revised	06/2005		11/2008		07/05/2011	
Initial(s)	MN	MN	MN	MN	sb	

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