



DEPARTMENT OF SURGERY

DIVISION OF ACUTE CARE SURGERY

BURN SURGERY ROTATION (WITHIN SA2 SERVICE)

University Hospital

House Officer III

Curriculum/Rotation Goals and Objectives for
Surgery Residents

Acute Care Surgery

House Officer III (Burn Resident Role)

Goal: The goal of the HO III Burn Surgery rotation within the ACS service is to develop specialized knowledge and skills necessary to care for critically and non-critically burned patients. This applies mostly to the educational goals of the general surgery and plastic surgery residents and the surgical critical care fellows (from SJMH hospital). The learner will employ evidenced-based best practices, perform basic ICU procedures with supervision, and communicate accurately and effectively on rounds and with patients, staff, and consulting services. The learner will also devote significant efforts to the outpatient assessment and care of acute and chronic burn issues.

Learning Objectives:

Patient Care:

By the end of the Burn Surgery rotation, the HO III/SCC will be able to:

1. Demonstrate accurate presentation of current and overnight events, vitals, labs, physical exam, radiographs, and consultant recommendations in a systematic fashion during daily burn rounds.
2. Identify common post-burn complications, such as compartment syndrome, burn progression, wound infections, respiratory distress, and organ failure.
3. Demonstrate safe and effective performance of basic ICU procedures with indirect supervision such as:
 - a. Arterial Access
 - b. Central Venous Access
 - c. Escharotomy
 - d. Bronchoscopy
 - e. Dressing Changes
4. Recognize many burn-related surgical conditions and describe the appropriate management for them.
5. Recognize common post-burn problems such as fever, hypotension, hypoxia, confusion, oliguria.
6. Demonstrate proficiency in the handling of most commonly used surgical instruments during procedures such as escharotomy, tracheostomy, feeding tube placement, burn debridement, skin grafting, contracture release, laser treatment, etc.
7. Diagnose all common and most uncommon burn-related conditions and initiate the appropriate management for them:
 - a. Adult burns
 - b. Pediatric burns
 - c. Inhalation injuries
 - d. Electrical injuries
 - e. Frostbite injuries
8. Recognize and appropriately treat most complex post-burn and post-operative problems with minimal supervision:
 - a. Deep venous thrombosis
 - b. Hemorrhage
 - c. Pulmonary Embolism
 - d. Stroke
 - e. Acute myocardial infarction
 - f. Arrhythmia
 - g. Infections

- h. Sepsis
- i. Systemic Inflammatory Response Syndrome
- j. Shock
- k. Hypo/hyperglycemia
- l. Pneumothorax
- m. Multisystem organ failure

Medical Knowledge:

By the end of the Burn Surgery rotation, the HO III/SCC will be able to:

1. Describe the physiologic changes of severely burned patients.
2. Calculate total body surface area burned accurately.
3. Initiate and maintain appropriate resuscitation of the massively burned patient via the modified Parkland Formula.
4. Recognize and differentiate different types of shock.
5. Interpret lab and blood gas abnormalities, fluid status, X-ray findings and mechanical ventilator settings.
6. Recognize and initiate management for many broad and some focused diseases/conditions in the SCORE curriculum in Trauma, Burn, and Emergency General Surgery:
 - a. Smoke inhalation injury
 - b. Estimating TBSA Burns
 - c. Compromised airway
 - d. All forms of shock
 - e. Necrotizing soft tissue infections
7. Describe the operative steps, peri-operative care and post-operative complications for many of the essential operations in the SCORE curriculum:
 - a. Burn debridement and grafting
 - b. Burn escharotomy
8. Recognize and initiate management for acute decompensation of burn patients in the ED and ICU.
 - a. Hypotension
 - b. Shock
 - c. Compartment syndrome
 - d. Respiratory failure
 - e. Mental status changes
 - f. Seizures
9. Exhibit comprehensive knowledge of most broad and some focused diseases in the SCORE curriculum in Trauma, Burn and Emergency General Surgery:
 - a. Adult and pediatric burns and inhalation injuries

Systems-Based Practice:

By the end of the Burn Surgery rotation, the HO III/SCC will be able to:

1. Identify ancillary staff resources available to assist with care of the critically ill burn patients.
2. Explain how protocolized care can reduce medical errors and complications in trauma and burn patients.
3. Choose and apply appropriate hospital, trauma, burn and ICU protocols and recognize protocol limitations
4. Investigate system issues and suggest and or assist with quality improvement projects
5. Demonstrate effective leadership of the team during burn resuscitations, codes, and rounds
6. Coordinate the activities of the residents, nurses, social workers, and other health care professionals to provide optimal care for the burn patient

Practice-Based Learning and Improvement:

By the end of the Burn Surgery rotation, the HO III/SCC will be able to:

1. Demonstrate excellent teaching of medical students and ancillary service students on service
2. Participate actively in Acute Care Surgery Conferences (e.g. Trauma Conference, Surgical Critical Care Conference, Critical Care Practical Series Conference, and others)
3. Present accurately and succinctly in patient case conferences (e.g. Trauma Conference)
4. Apply appropriate evidence-based practices and demonstrate active reading of current literature
5. Incorporate QI concepts and initiatives into patient presentations
6. Apply evidence to support patient care treatment plans
7. Evaluate his or her own surgical results and medical care outcomes in a systematic way and identify areas for improvement
8. Identify probable cause for complications and suggest strategies for improvement
9. Teach residents, students, and staff with an interactive and engaging teaching style that fosters educational dialogue within the team

Professionalism:

By the end of the Burn Surgery rotation, the HO III/SCC will be able to:

1. Document accurate history, physical and patient care plan in the medical record in a timely fashion
2. Communicate respectfully to colleagues, patients, and staff
3. Comply with duty hour regulations
4. Demonstrate composure in stressful situations. (e.g. burn resuscitations, codes, and during patient decompensation)
5. Exhibit compassion and empathy towards patients and families
6. Acknowledge limitations and request assistance when needed
7. Respond promptly to consult requests
8. Execute patient care responsibilities consistently and maintain continuity of care
9. Promote the health and well-being of the patient care team by setting an example of appropriate personal health issues, fatigue, and stress
10. Manage others under his or her supervision to respond appropriately to responsibilities in a timely fashion
11. Lead the team on rounds in burn resuscitations and in sign-out to ensure patient care responsibilities are performed and continuity of care is maintained
12. Set an example for promptness and attendance at conferences
13. Promote ethical behavior and professionalism in the team by modeling proper behavior and setting expectations for the team

Interpersonal and Communication Skills:

By the end of the Burn Surgery rotation, the HO III/SCC will be able to:

1. Communicate patient care plans accurately and respectfully to patients and families
2. Communicate patient care plans accurately and timely with SA2 service and consulting services
3. Discuss patient care plans with staff and nurses respectfully
4. Report changes in patient's condition accurately and timely to supervising residents/fellows/staff
5. Demonstrate proficiency and accuracy in obtaining informed consent for basic surgical procedures
6. Demonstrate compassion and cultural sensitivity when relaying bad news to patients and families
7. Demonstrate effective conflict management among patients and their families
8. Demonstrate effective conflict management among care providers
9. Execute clear and accurate handoffs at transitions of care
10. Establish clear leadership when faced with unexpected events in the operating room or rapid patient deterioration