General Surgery Residency  
Loma Linda University  

Arrowhead Regional Medical Center (ARMC) SICU/ Burn Unit Goals and Objectives  

PGY 2  
* - indicates additional Fellow requirements  

Goals:  
ARMC will provide a learning environment for the care and management of the critically ill patient requiring intensive care. Surgical basic science, including fluids and electrolytes, wound healing, and nutrition will be emphasized. Clinically, residents will assess the critically ill patient, develop clinical judgment on managing these issues, and become proficient in managing and weaning off ventilation support. Careful postoperative care and follow up will be emphasized. Residents will develop cognitive and technical skills in dealing with complex critically ill patients.  

Objectives:  

Medical Knowledge  
Summarize basic critical care management principles.  
Consistently apply basic science principles to common clinical situations.  
Demonstrate ability to interpret radiographic findings, EKGs, laboratory data, and intravascular and intra-cranial monitoring systems.  
Fundamentals of surgical nutrition including nutrition evaluation as well as routes of access, TPN, eternal nutrition, and nutritional supplements  
Understand the pathophysiology of abdominal compartment syndrome  
Describe the management of glucose in the critically ill.  
Describe the different ventilatory modalities and weaning process.  
*Demonstrate ability to teach this to junior residents and medical students  
Understand different modalities for invasive hemodynamic monitoring.  
Define ARDS and how it is diagnosed and treated, including necessary ventilatory adjustments.
Define and contrast: SEPSIS, SIRS, and MODS.

Have an understanding of and be able to write TPN orders, as well as enteral nutrition orders.

Become familiar with the different enteral nutrition formulas and be able to choose appropriate formulas for each particular patient.
*Understand the physiology of immune enhancing formulas

Become familiar with the indications and technique for tracheostomy.

Become familiar with indications and technique for PEG, gastrostomy and jejunostomy tubes.

Be able to describe the mechanism of action of different vasopressors including: dopamine, dobutamine, vasopressin, norepinephrine, epinephrine, neosynephrine and their particular indications.

Define abdominal compartment syndrome and how to diagnose it.

Become proficient in the placement and management of thoracostomy tubes.

Develop proficiency with the different sedation and analgesic protocols including: PCA, epidurals, conscious sedation, paralysis and have an understanding on the indications of each one of these modalities and rationale for daily interruptions.

Become proficient with the use of antibiotics and treatment of multi-drug resistant organisms.
*Become proficient with antifungals and treatment of resistant fungus strains.

Describe the difference between first-, second-, third- and fourth-degree burns.

Describe the techniques for estimating burn size.

Describe the protocols for estimating and resuscitating burn patients.

Describe the indications and timing for burn excision and grafting.

Describe the role for partial- and full-thickness skin grafting.

Describe different skin substitutes for temporary grafting of burns.

Become familiar with the workup and management of the burn patient.

**Patient Care**
Establish basic proficiency in providing pre-operative and post-operative care (writes appropriate pre-op and post-op orders for floor patients, handles nursing calls appropriately, and manages most routine post-operative care with minimal intervention by supervisor).

*Demonstrate effective triage for ICU census control.

Develop a proficiency in evaluation and interpretation of the different diagnostic modalities including: X-rays, ultrasounds, CT scans, Contrast studies and MRIs.

Identify mixed acid base problems

Understand each component of SICU Daily Goals
*Show effective teaching of daily goals.

Analyze data and develop a comprehensive treatment plan for critically ill patients.

Learn how to troubleshoot patient-ventilator asynchrony.
*Demonstrate effective management of ventilator asynchrony.

Demonstrate proficiency in interpreting invasive and non-invasive monitoring devices. with regard to resuscitation.
*Interpret parameters from PA catheters and arterial wave form analysis.

Discuss and use various drugs for the support and treatment of critically ill patients in relationship to shock and adrenal insufficiency.

Appraise the nutritional needs of critically ill patients.

Manage hyperglycemia and hypoglycemia in the critically ill.

Manage a patient with intracranial hypertension.

Perform consultation for percutaneous tracheostomy and gastrostomy
*Know how to place PEGs and tracheostomies at bedside.

**Professionalism**

Demonstrate effective leadership skills in instilling confidence and trust with ICU ancillary staff.

The resident should be receptive to feedback on performance, attentive to ethical issues and be involved in end-of-life discussions and decisions.
Treat each patient, regardless of social or other circumstances, with the same degree of respect you would afford to your own family members.

Complete all assigned patient care tasks for which you are responsible or provide complete sign out to the on-call resident.

Assist with families of critically injured/ill patients and guidance of families towards or through difficult decisions.

*Demonstrate mentoring and positive role-modeling skills

**Systems-Based Practice**

Understand the cost implications of medical decision-making

Partner with health care management to facilitate resource efficient utilization of the hospital’s resources.

Describe in general terms the benefits of clinical pathway implementation
*Understand, review, and contribute to the refinement of clinical pathways

Develop an appreciation for the benefits of a multi-disciplinary approach to management of critically ill surgical patients.
*Lead multi-disciplinary discussions

**Practice-Based Learning & Improvement**

Demonstrate the ability to:
  * *Evaluate published literature in critically acclaimed journals and texts
  * Apply clinical trials data to patient management
  * Participate in academic and clinical discussions

*Facilitate learning of medical students and physician assistant students on the team.

Use the LLUMC and ARMC library and databases on on-line resources to obtain up to date information and review recent advances in the care of the surgical patient.

Demonstrate knowledge in using the healthcare matrix, during morbidity and mortality presentations, in identifying areas of practice improvement and implementation.

**Interpersonal & Communication Skills**

Work as effective team members

Cultivate a culture of mutual respect with members of nursing and support staff
Develop patterns of frequent and accurate communication with team members and attending staff including appropriate hand-off procedure.

Gain an appreciation for both verbal and non-verbal communication from patients and staff.

Demonstrate sensitivity and thoughtfulness to patients' and ancillary staffs' concerns, and anxieties.

The resident will demonstrate the ability to provide and request appropriate consultation from other medical specialists.