

Parkland SICU and Parkland MICU Skills and Assessments

The program is designed to give the Fellow in-depth instruction in the many aspects of surgical critical care. The multi-disciplinary nature of the Fellowship with rotations in Burn Surgery, Neurosurgery and Pediatric Surgery allows application of knowledge and skills across multiple disciplines. This is further ensured through the delivery of critical care to a large volume of patients.

I. Cardiopulmonary Systems/Monitoring and Medical Instrumentation

Knowledge	Skills	Assessment
1. Understand pathophysiology associated with different causes of hemodynamic instability. <i>Examples include types of shock, cardiac arrest.</i>	Insert pulmonary artery, central venous and arterial lines and obtain hemodynamic data; interpret data and initiate therapy. Instruct junior residents in insertion of invasive monitors and interpretation of data. Resuscitate patients from shock and cardiac arrest.	Faculty observation during rounds, skills courses (PA Catheter, ICU Ultrasound) and resuscitation as documented on evaluations.
2. Know and apply treatments for arrhythmias, congestive heart failure, acute ischemia and pulmonary edema.	Recognize and treat ischemia and arrhythmia on ECG. Utilize correct class of anti-arrhythmic, vasodilators and diuretics as they pertain to cardiac disease. Be able to interpret and instruct current ACLS guidelines.	Observation during rounds, MCCKAP as noted on evaluation.
3. Understand factors associated with assessment of preoperative surgical risk. <i>Examples include evaluation of the high risk cardiac patient undergoing non-cardiac surgery.</i>	Ability to assess preoperative risk based on history, physical exam, laboratory and radiographic data. Correctly interpret data and optimize the high-risk cardiopulmonary patient for surgery.	Observation during rounds, MCCKAP as noted on evaluation.
4. Understand pathophysiology associated with respiratory failure.	Proficiency and ability to instruct in endotracheal intubation and tracheostomy through multiple routes. Interpret arterial blood gas analysis and chest radiography and institute appropriate therapy. Use of diagnostic and therapeutic bronchoscopy.	Direct observation; case logs.
5. Understand pathophysiology, indications for, and complications associated with various modes of mechanical ventilation. <i>Examples include ventilator management of ALI, ARDS and thoracic trauma, as well as weaning from ventilatory support.</i>	Ventilator management in common surgical disease. Ability to set up initial and advanced ventilator settings including salvage modes. Ability to treat common complications of mechanical ventilation including tube thoracostomy. Ability to wean from ventilatory support.	Faculty observation during rounds, skills courses (basic and advanced mechanical ventilation) as noted on evaluation; MCCKAP performance.
6. Understand adjuncts to the analysis of respiratory mechanics and gas exchange. <i>Examples include work of breathing, rapid shallow breathing index, single breath CO₂ analysis and dead space measurements.</i>	Appropriately use adjuncts to assist in the management of ventilated patients. Interpretation of work of breathing, dead space measurements and institute therapy based on determination. Use of pressure/volume curves and other	Faculty observation during rounds, skills courses (basic and advanced mechanical ventilation) as noted on evaluation; MCCKAP performance.

	computer graphics.	
II. Fluids/Electrolytes/Renal Systems		
Knowledge	Skills	Assessment
1. Understand fluid and electrolyte as well as acid/base abnormalities associated with complex surgical procedures and complications. <i>Examples include massive fluid shifts associated with trauma, shock and resuscitation, high output fistulas and renal failure.</i>	Correctly evaluate patient's volume status, interpret electrolyte and arterial blood gas analysis in the context of the underlying surgical disease or complication and initiate appropriate fluid therapy based on results. Instruct junior residents in the above.	Faculty observation during rounds.
2. Understand the pathophysiology of oliguria, anuria and acute renal failure. Understand the indications for and different modes of dialysis.	Correctly interpret volume and electrolyte status and determine cause of oliguria. Initiate appropriate pharmacological mode of dialysis when indicated.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
III. Metabolic/Nutrition/Endocrine Systems		
Knowledge	Skills	Assessment
1. Understand the role of hormones and cytokines in the graded metabolic response to injury, surgery and infection.	Correctly determine the protein, caloric, electrolyte, fat and vitamin needs of surgical patients, taking into account their underlying disease process. Instruct junior residents in fluid and electrolyte disorders in the ICU.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
2. Understand the indications, routes and complications of administration of parenteral and enteral forms of nutrition.	Initiate appropriate nutritional support through the most optimal route. Manage complications of nutritional support. <i>Examples include hyperglycemia.</i> Perform and instruct junior residents in performance of bedside percutaneous gastrostomy.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
3. Understand the pathophysiology associated with endocrine emergencies in the ICU. <i>Examples include thyroid storm, hyper, hypoparathyroid states and adrenal insufficiency.</i>	Correctly interpret physiologic and laboratory data associated with endocrine emergencies and initiate therapy.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
IV. Infection/Immune System		
Knowledge	Skills	Assessment

1. Understand the mechanism of action as well as the spectrum of antimicrobial activity of the different antibiotic classes. <i>Examples include carbapenems, extended spectrum penicillins and fluoroquinolones.</i>	Consider the most likely microbial pathogen and select the correct empiric antibiotic. Interpret culture and sensitivity data when available and refine antibiotic choice.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
2. Understand the risk factors that result in multiply resistant organisms. <i>Examples include antibiotic dosing, antibiotic synergy and transmission patterns.</i>	Utilize pharmacokinetics and drug levels to adjust antibiotic dosing. Utilize appropriate combinations of antibiotics to achieve synergy. Appropriately utilize isolation precautions.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
3. Understand the risk factors and common pathogens that are associated with nosocomial infections.	Identify and minimize factors associated with nosocomial infections. Instruct junior residents in sterile techniques and application of maximum barrier precautions. Utilize appropriate adjunctive measures to diagnose and treat nosocomial infection. <i>Examples include bronchoscopy to aid in the diagnosis of ventilator-associated pneumonia.</i>	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
4. Understand the factors that result in an immunocompromised state. <i>Examples include malignancy, major trauma and steroids.</i>	Identify unique infections found in immunocompromised hosts and select appropriate antibiotic/antifungal therapy.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.

V. Hematologic System

Knowledge	Skills	Assessment
1. Understand the indications for, and complications of blood component therapy.	Correctly diagnose and treat anemia, and thrombocytopenia. Correctly diagnose and treat transfusion reactions. Appropriately use pharmacologic therapy to minimize the need for transfusion.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
2. Understand the factors associated with bleeding disorders. <i>Examples include DIC, ITP, hemophilia, coagulopathy associated with shock and hypothermia.</i>	Correctly diagnose and treat coagulopathy associated with either acquired or congenital disease.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.

VI. Neurologic System

Knowledge	Skills	Assessment
1. Understand the pathophysiology of traumatic brain injury. <i>Examples include knowledge of intracranial pressure monitoring and maneuvers to normalize ICP.</i>	Appropriately use intracranial pressure monitoring. Interpret hemodynamic ICP and cerebral metabolic data. Initiate therapy to maintain cerebral perfusion pressure and oxygenation and minimize secondary brain injury.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
2. Understand the factors associated	Correctly diagnose and treat	Faculty observation during

with altered mental status. <i>Examples include traumatic, septic, metabolic and pharmacologic causes.</i>	causes of altered mental status in the ICU.	rounds as documented on evaluation; MCCKAP performance.
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VII. Gastrointestinal/Hepatobiliary Systems

Knowledge	Skills	Assessment
1. Understand fluid compositions and the effect of the losses of such fluids as gastric, pancreatic and biliary from fistulas at various levels.	Correctly diagnose and treat complex fistulas arising from any place in the GI tract.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
2. Understand the risk factors associated with stress gastritis.	Correctly utilize prophylaxis for stress gastritis in high risk ICU patients.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
3. Understand the causes and treatment regimens for gastrointestinal bleeding. <i>Examples include bleeding from upper and lower GI sources.</i>	Correctly diagnose and treat gastrointestinal bleeding associated with ulcers, portal hypertension and lower GI sources. Perform rigid sigmoidoscopy when indicated.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
4. Understand the pathophysiology of hepatic failure.	Diagnose cause and appropriately alter treatment regimens to compensate for hepatic failure. <i>Examples include altering fluid, protein and drug regimens.</i> Performance of paracentesis with and without ultrasound guidance.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.

VIII. Administrative/Ethical Issues

Knowledge	Skills	Assessment
1. Understand end of life and legal and ethical issues. <i>Examples include organ donation and withdrawal of support.</i>	Work with family to respect patient's end of life wishes, including withdrawal of care in a dignified manner. Work with the organ bank and trainees to coordinate care for organ donation.	Faculty and 360° evaluation. Pass Texas Jurisprudence Exam.
2. Understand the role of surgeons in the ICU as well as the role of consultants.	Appropriately use consultants when indicated.	Also fulfills systems based practice competency.
3. Understand rationale for admission and discharge criteria in the ICU and cost implications of ICU care.	Appropriately admit and discharge critically ill and injured patients as indicated.	Also fulfills systems based practice competency.
4. Understand the mechanism and need for performance improvement.	Take part in, and address performance improvement issues.	Also fulfills systems based practice competency.

IX. Special Patient Populations

Knowledge	Skills	Assessment
1. Understand physiology of Obstetric and Gynecologic patient requiring ICU care including those with postpartum hemorrhage, pregnancy induced	Collaboration with specialty residents to interpret fetal monitoring. Use of advanced hemodynamic monitoring in	Faculty observation during rounds as documented on evaluation; MCCKAP performance.

hypotension and obstetric conditions resulting in ARDS.	obstetric patients.	
2. Understand diagnostic modalities used in workup of the adult injured patient	Resuscitation of injured patients operative management under graded supervision.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
3. Understanding thermal, electrical, inhalation and immersion injuries.	See BICU Goals and Objectives See PICU Goals and Objectives	Faculty observation during rounds as documented on evaluation; MCCKAP performance.
4. Understanding injuries in and pathophysiology of multiply injured adolescent and pediatric patients.	Resuscitation of injured patients operative management under graded supervision.	Faculty observation during rounds as documented on evaluation; MCCKAP performance.

X. Miscellaneous

Knowledge	Skills	Assessment
1. Understand descriptive and computational biostatistics and principles of experimental design and evidence based therapy.	Critique articles at monthly journal club. Encourage participation in biweekly divisional research meeting and participation in research endeavors.	Program director evaluation.
2. Understand principles of pharmacokinetics and pharmacodynamics.	In collaboration with SICU pharmacist prescribe medication dosed appropriately for organ function status.	Also includes systems based practice competency.
3. Understand the use of specialty beds and device applications.	Employ prone therapy as salvage modality in ARDS. Apply pelvic binder for hemorrhagic control.	Faculty evaluation.

Conferences for the Fellow include:

1. Trauma QI and Morbidity and Mortality Conferences
2. Biweekly SICU advanced lecture series
3. Monthly trauma journal club

Parkland BICU Skills and Assessments

Knowledge	Skills	Assessment
1. Understand the resuscitation of patients with thermal burns with and without associated traumatic injury.	Application of burn resuscitation formulas to patients with thermal burns and instruction of junior residents in same.	Faculty observation during rounds as documented on evaluation.
2. Recognition of smoke inhalation injury by physical exam and use of ancillary diagnostic tools.	Use bronchoscopy to diagnose inhalation injury and apply standard and nonconventional ventilatory methods.	Faculty observation during rounds as documented on evaluation.
3. Understand principles of burn wound care, use of topical antibiotics and specialty wound care products. Understand care of patients with electrical burns, chemical burns and toxic epidermal necrolysis.	Supervise junior residents in performance of escharotomies, fasciotomies and burn wound excision and grafting.	Faculty observation during rounds as documented on evaluation.
4. Appreciate the ancillary care of the burn patient including nutritional support, infection control and glucose management.	Order and supervise ordering of appropriate enteral and parental nutrition, antibiotics and strict glycemic control.	Faculty observation during rounds as documented on evaluation.

Children's Medical Center PICU Skills and Assessments

The elective rotation at Children's Medical Center of Dallas focuses on evaluation and management of critically ill and injured infants and children. The SCC resident will be under the direct supervision of the Division Chair and Rotation coordinator but will work with the entire Pediatric Surgery Staff, Pediatric Emergency Medicine and Pediatric Critical Care services. The goal of the rotation will be to provide exposure to the physiologic and pathologic differences of infants, children and adolescents as well as strategies for management of these patients while in the intensive care unit. The SCC resident will participate in the evaluation and management of injured children in the Emergency Department and will be responsible for patient care in the 5A ICU. The SCC resident will participate in scheduled lectures/conferences during the rotation that are pertinent to pediatric surgical critical care.

Knowledge	Skills	Assessment
Cardiovascular System - Understand the fetal circulatory system and developmental anomalies of the heart. Understand how these various anomalies shunt blood and what the physiologic consequences are. - Understand how to estimate circulating blood volume and how children manifest shock and cardiac failure. - Understand the indication and action of pharmacologic agents for cardiac support - Understand the indications and physiology for ECMO.	- Invasive and non-invasive monitoring techniques including central venous and arterial access. - Calculate circulating blood volume and fluid requirements.	Faculty observation during rounds as documented on evaluation.
Respiratory System - Understand the pathophysiology, indications for and complications associated with various modes of mechanical ventilation. - Understand the pathophysiology of various congenital abnormalities that affect ventilation.	- Correctly interpret Pediatric Chest X-rays. - Airway management including rigid bronchoscopy for diagnosis and treatment. - Demonstrate correct set-up of a pediatric ventilator.	Faculty observation during rounds as documented on evaluation.
Fluid/Electrolytes/Renal System - Understand calculations of circulating blood volume, fluid and electrolyte requirements per weight and body surface area. - Understand glomerular filtration and renal concentrating ability of the kidney for children of various ages.	- Correctly estimate patients weights based on age and body habitus. - Demonstrate proficiency in TPN management. - Evaluate renal function for patients of difference ages.	Faculty observation during rounds as documented on evaluation.
Metabolic/Nutrition/Endocrine System Understand metabolic (caloric, protein, lipid) needs for children	Correctly assess a child's nutritional status and	Faculty observation during rounds as documented on

- of various ages. - Understand the changes in metabolic demand with various forms of injury and stress. - Understand the common endocrine abnormalities seen with injury and stress in children.	- needs. - Correctly determine feasibility of enteral nutrition - Correctly monitor patients on parenteral nutrition.	evaluation.
Infection/Immunity - Understand the treatment of the most common types of infections in the pediatric patient. - Understand drug dosing in the pediatric population. - Understand how the relative immune deficiency of the infant and injured child contributes to the likelihood of infection. - Understand the role of immunizations in children.	- Classify infections and application of isolation techniques. - Demonstrate understanding of immunization schedules. - Correctly interpret culture data and use antibiotics appropriately.	Faculty observation during rounds as documented on evaluation.
Hematologic System - Understand the indication and administration of blood and blood products in children. - Understand the factors associated with abnormal bleeding in children. - Understand the more common hematologic diseases that affect bleeding in children.	- Appropriate use of component therapy for patients with abnormal bleeding. - Appropriate transfusion of blood. - Correctly estimate circulating blood volume. - Demonstrate correct treatment of common inherited bleeding disorders.	Faculty observation during rounds as documented on evaluation.
Neurologic System - Understand the physiology of brain injury in children. - Understand the management of increased intra-cranial pressure in children.	- Performance of a complete neurological examination in children of various ages. - Interpretation of EEG data - Interpretation and trouble-shooting of intra-cranial pressure monitoring.	Faculty observation during rounds as documented on evaluation.
Gastrointestinal/Hepatic System - Understand the most common sources of gastro-intestinal bleeding in children. - Understand the pathophysiology of short-gut syndrome in children. - Understand the management and evaluation of solid organ injury in children.	- Appropriate utilization of gastrointestinal intubation techniques including endoscopy. - Appropriate grading of solid organ injuries. - Management of stomas, fistula and percutaneous catheter devices.	Faculty observation during rounds as documented on evaluation.

Understand the management of suspected bowel injuries in children.		
Development/Abuse/Neglect - Understand the appropriate developmental milestones in children. - Develop age appropriate physical exam skills. - Understand the signs and symptoms of abuse/neglect. - Understand the work-up of suspected physical and sexual abuse.	- Accurately identify developmental milestones in children. - Accurately identify Tanner stages in children. - Complete the abuse assessment sheet and CPS affidavit. - Interpret a skeletal survey and retinal exam for hemorrhages.	Faculty observation during rounds as documented on evaluation.
Administration/Ethics - Understand the legalities of end-of-life issues including withdrawal of support, organ donation in children. - Understand the role of the surgeon in the Pediatric ICU. - Understand the criteria for admission and discharge from the ICU. - Understand the Performance Improvement process. - Understand the ACS guidelines for Pediatric Trauma Centers.	- Demonstrate a brain-death exam in a child. - Participate in a family care conference. - Participate in the Trauma PI program.	Faculty observation during rounds as documented on evaluation.

Conferences for the Fellow:

1. Mandatory conferences for the Department of Surgery and BTCC
2. Pediatric Trauma PI and M&M
3. ER/Pre-Hospital M&M

Dallas Veterans Administration TICU Skills and Assessments

Knowledge	Skills	Assessment
The SCC resident should be able to demonstrate knowledge of the basic science foundation behind the clinical practice of cardiac and thoracic surgery including anatomy of the heart and great vessels; cardiac physiology; pharmacology of inotropic and antiarrhythmic drugs; surgical anatomy of the chest, mediastinum, tracheobronchial tree, esophagus, and diaphragm; pulmonary physiology and ventilator management; pulmonary neoplasms (benign, malignant and metastatic); lung infections, diffuse interstitial lung disease, and tuberculosis; and pleural space problems (pneumothorax, pleural effusion and empyema).	-Bedside and intraoperative demonstration of knowledge of thoracic and mediastinal anatomy. -Bedside demonstration of knowledge of ventilator management -Bedside demonstration of knowledge of inotropic, chronotropic, and antiarrhythmic agents	Faculty observation during rounds as documented on evaluation.
The SCC resident should be able to correctly describe the pathophysiology of cardiac and general thoracic surgical conditions. Examples include the pathophysiology of the coronary circulation; acquired valvular disease, pericardial disease, and cardiac tumors; valvular prostheses and their complications; alternate conduits for coronary artery bypass grafting; cardiopulmonary bypass and myocardial protection.	-Bedside demonstration of knowledge of common cardiothoracic pathology and its management	Faculty observation during rounds as documented on evaluation.
The SCC resident should be able to demonstrate knowledge of the preoperative assessment, perioperative management and postoperative care of cardiothoracic patients. Examples include assessment of patient risk, identification and management of co-morbid conditions, and principles of postoperative pain management and wound care.	-Demonstration of preoperative risk assessment and stratification -Appropriate management and consultation strategies for postoperative pain management	Faculty observation during rounds as documented on evaluation.
The SCC resident should be able to efficiently utilize and interpret diagnostic laboratory testing. Examples include interpretation of arterial blood gas results, coagulation tests, pulmonary function testing, and	-Pulmonary function test interpretation -ABG interpretation -Coagulation profile interpretation -Coagulation disorder management	Faculty observation during rounds as documented on evaluation.

drug levels of antibiotics.	-Antibiotic selection/ utilization	
The SCC resident should be able to efficiently utilize and interpret diagnostic radiologic tests.	-CXR interpretation -CT chest interpretation -Echocardiogram interpretation	Faculty observation during rounds as documented on evaluation.
The SCC resident should learn in depth the basic science of surgery as it applies to problems encountered in the ICU setting. Examples include the pathophysiology of myocardial dysfunction and heart failure, respiratory failure, coagulation derangements, atrial and ventricular arrhythmias, and surgical infections.	-Management of acute coronary syndromes -Management of congestive heart failure -Arrhythmia management	Faculty observation during rounds as documented on evaluation.
The SCC resident should correctly use invasive monitoring to diagnose and treat cardiothoracic surgical conditions.	-EKG interpretation -PA catheter insertion and interpretation -arterial line insertion and interpretation -central venous catheter insertion	Faculty observation during rounds as documented on evaluation.
The SCC resident should learn basic operative techniques for thoracotomy, lung resection, chest wall management, and median sternotomy.	-Intraoperative demonstration of knowledge and proficiency with these technical skills.	

Conferences for the SCC resident:

1. Daily patient review (morning ICU rounds) - Weekdays at 7:00 am in VA TICU
2. CT Surgery Teaching Conference (includes M&M, didactics, journal club) - Wednesday, 7:00 am
3. The following conferences are elective but attendance is encouraged for resident rotating on this service:
Thoracic Surgery Case Reviews - Friday, 4:00 pm, Thoracic Malignancy Conference - Friday, 1:00 pm.

Parkland Trauma and Acute Surgical Care (TASC) Service Skills and Assessments

I. Trauma care

Knowledge	Skills	Assessment
The SCC resident should be able to discuss in detail the management of complex traumatic injuries. This includes diagnosis, timing of intervention, and therapeutic options. Examples include traumatic disruption of the thoracic aorta, renovascular injuries, injuries of the portal triad, retrohepatic caval injuries, complex cervical spine fractures, facial fractures, and complex pelvis fractures.	The SCC resident should be able to direct the entire team through the trauma resuscitation. Further, under appropriate supervision the SCC resident should perform advanced procedures such as: liver resection for injury, placement of Shrock shunt; repair of abdominal, chest, or pelvic vascular injury; pancreatic resection for trauma; duodenal diverticularization; nephrectomy for trauma; repair of ureteral injury.	Faculty observation during rounds as documented on evaluation.
The SCC resident should be able to explain in detail advanced surgical procedures for management of injuries in the neck, torso and extremities. Examples include management of tracheal injuries, stabilization and management of Le Fort fractures of the face, management of flail chest, management of the mangled extremity.	Under appropriate supervision, the SCC resident should be able to perform advanced surgical procedures to manage injuries in the neck, torso and extremities.	Faculty observation during rounds as documented on evaluation.
The SCC resident should be able to summarize areas of trauma surgery in which patient management is controversial and areas in which change is taking place. Examples include management of penetrating neck injuries, management of colon injuries, and management of minimal vascular injuries.	Under appropriate supervision, the SCC resident should be able to manage patients with multiple injuries using operative and non-operative techniques correctly.	Faculty observation during rounds as documented on evaluation.
The SCC resident should understand the multi-disciplinary approach to management of patients with multiple injuries.	The SCC resident should be able to correctly triage the diagnostic evaluation of the patient with multiple injuries and correctly utilize consultants while remaining responsible for ultimate patient care.	Faculty observation during rounds as documented on evaluation.
The SCC resident should understand the concept of trauma systems and the need to transfer patients for the appropriate level of care.	The SCC resident will provide support for incoming transfer requests to the junior residents manning the transfer hotline.	Faculty observation during rounds as documented on evaluation.

II. Emergency General Surgery

Knowledge	Skills	Assessment		
The SCC resident should be able to correctly explain the operative approaches for acute surgical conditions of the abdominal cavity and retroperitoneal organs.	The SCC resident should assume the overall responsibility for all patients on the service, including supervision of the residents assuming direct care responsibilities. While being appropriately supervised, he/she should also serve as teaching assistant for PGY 1-3 residents as they perform operations appropriate to their level.	Faculty observation during rounds as documented on evaluation.		
The SCC resident should be able to accurately explain the physiologic rationale for vagotomy, pyloroplasty, gastric resection and reconstructive techniques for ulcer disease, and stoma formation.	Under appropriate supervision, the SCC resident should demonstrate the ability to perform these advanced operative procedures.	Faculty observation during rounds as documented on evaluation.		
The SCC resident should be able to correctly explain the indications and contraindications for diagnostic and therapeutic endoscopy in the acute setting.	The SCC resident should be able to correctly utilize consultants while remaining responsible for ultimate patient care.	Faculty observation during rounds as documented on evaluation.		
The SCC resident should be able to discuss the management alternatives for common bile duct stones.	Under appropriate supervision, the SCC resident should demonstrate the ability to perform these advanced operative procedures or order endoscopic consultation appropriately.	Faculty observation during rounds as documented on evaluation.		
The SCC resident should learn the pathophysiology, presentation, and specific treatment options for hepatic cirrhosis and portal hypertension.	The SCC resident will demonstrate the ability to resuscitate and coordinate the care of patients with portal hypertension.	Faculty observation during rounds as documented on evaluation.		
The SCC resident should be able to describe in detail the diagnosis and management of variceal hemorrhage. Examples include correct use of the Sengstaken-Blakemore tube, selective portacaval shunts, nonselective portacaval shunts, and TIPS.	The SCC resident should be able to correctly utilize consultants while remaining responsible for ultimate patient care.	Faculty observation during rounds as documented on evaluation.		
The SCC resident should have an understanding about the resources of the county medical system, including the satellite outpatient clinics, hospital based outpatient clinics, and the number of available hospital beds for inpatients.	The resident should be able to discuss the impact of the Health Insurance Portability and Accountability Act (HIPAA) on the resources of the county medical system.	Faculty observation during rounds as documented on evaluation.		
Conferences for the Fellow include: 1. Trauma QI and Morbidity and Mortality Conference				

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| <ol style="list-style-type: none">2. Bimonthly SICU advanced lecture series3. Monthly trauma journal club4. Emergency General Surgery QI and Morbidity and Mortality Conference5. Bimonthly EGS lecture series | |
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Parkland Neurologic Critical Care elective Skills and Assessments

This service is devoted to the comprehensive multisystem care of the critically ill neurological or neurosurgical patient. It attends to the unique needs of the brain and various elements of ICU care that might otherwise be provided by multiple subspecialists (i.e. cardiology, pulmonary medicine, endocrinology, infectious disease, as well as neurology and neurosurgery) such as subarachnoid hemorrhage, intracerebral hemorrhage, ischemic stroke, brain tumor, traumatic brain and spinal cord injury, status epilepticus, neuromuscular diseases, and coma. While the core goals and objectives are identical to those of the SICU and MICU rotations, goals and objectives specific to the neurocritical care rotation will be as follows:

Knowledge	Skills	Assessment
Develop core neurocritical care skills such as review of CT/MRI scans and management of ischemic and hemorrhagic stroke, traumatic brain injury, increased ICP, hydrocephalus, seizure, hypertension, cerebral salt wasting and vasospasm.	Demonstrate proficiency at the bedside in the management of these conditions.	Faculty observation during rounds as documented on evaluation; MCKAP performance.
To be familiar with the epidemiology and risk factors for commonly encountered ICU conditions including ischemic stroke, ICH, SAH, TBI, and seizure.	Be able to verbalize same as they impact the management of NCC patients.	Faculty observation during rounds as documented on evaluation; MCKAP performance.
To know the signs, symptoms, clinical course, complications and treatment of common post-operative conditions for neurosurgical specialty operations.	Be able to verbalize same as they impact the management of NCC patients.	Faculty observation during rounds as documented on evaluation; MCKAP performance.
To have a comprehensive understanding of the <u>pharmacology</u> of all commonly used medications in an ICU and other monitored clinical settings including; -Sedative, analgesic and muscular relaxant drugs. -Hemodynamic support with vasoconstrictors, inotropic agents and antihypertensive agents. -Other specialized medications that are commonly only used in monitored settings including insulin drips, thrombolytics, some anti-rejection induction agents, antiarrhythmic agents.	Demonstrate proficiency at the bedside in the utilization of these interventions.	Faculty observation during rounds as documented on evaluation; MCKAP performance.
To be familiar with current guidelines and standards of care developed by relevant neurocritical care organizations.	Be able to recount the evidence-based recommendations for standards of care promulgated by leading organizations.	Faculty observation during rounds as documented on evaluation; MCKAP performance.
Become familiar with brain resuscitation	Demonstrate proficiency at the	Faculty observation

and cardiopulmonary care of critically ill neurological and neurosurgical patients.	bedside in the utilization of these techniques.	during rounds as documented on evaluation; MCCAP performance.	
Learn to detect acute neurological changes and interpret test results, CT/MRI scan.	Demonstrate proficiency in radiograph interpretation.	Faculty observation during rounds as documented on evaluation; MCCAP performance.	
Learn critical care management skills and bedside procedures (arterial & central lines, endotracheal intubation, lumbar puncture and lumbar drains).	Demonstrate proficiency at the bedside in common NCC procedure performance.	Faculty observation during rounds as documented on evaluation; MCCAP performance.	
Understand the roles of ventriculostomy, ICP monitoring, ventilation support, hypertonic saline, vasoactive medications, fluid resuscitation, and blood products in brain protection.	Be able to verbalize the importance of these modalities, and demonstrate proficiency in their enactment.	Faculty observation during rounds as documented on evaluation; MCCAP performance.	
Become proficient at timely management of ischemic and hemorrhagic stroke, traumatic brain injury, increased ICP, hydrocephalus, seizure, hypertension, and vasospasm.	Demonstrate proficiency in management of these conditions.	Faculty observation during rounds as documented on evaluation; MCCAP performance.	