

Surgical Critical Care Residency (Fellowship)

Overall Program Goals and Objectives

A. Medical knowledge

1. Learn in depth the following essential content areas of surgical critical care: cardiopulmonary systems and monitoring/medical instrumentation, fluids/electrolytes/renal systems, metabolism and nutrition, endocrine systems, infection/immune system, hematologic system, neurologic system, gastrointestinal/hepatobiliary systems, and administrative/ethical issues
 - a. The SCC resident must prepare for and participate in monthly trauma journal club by reading assigned journal articles and presenting their findings to the attendees. The date and time of journal club will vary based on call schedules.
 - b. The SCC resident must prepare for and participate in weekly critical care/EGS conference on Tuesday from 1200-1300.
 - c. The SCC resident must attend the weekly trauma QI/morbidity and mortality conference every Friday from 0700-0900, and be prepared to present and discuss all patients for whom he/she cared or cases which he/she performed.
 - d. While on specialty rotations (ie, those other than the Parkland SICU), the SCC resident will attend that service's core didactics and conferences.
2. Develop and demonstrate technical skills appropriate to level of training.
 - a. The SCC resident will demonstrate adequate proficiency in the SCC-based procedures of tracheostomy, percutaneous endoscopic gastrstomy (PEG), inferior vena cava filter placement with endovascular ultrasound, and pulmonary artery catheter placement.
 - b. While on the cardiothoracic service, the SCC resident will demonstrate adequate proficiency in open lung resection, video-assisted thoracoscopic surgery (VATS), and mediastinal exploration.
3. The SCC resident will participate in assessment of medical knowledge by taking the annual MCCAP.

B. Patient Care

1. The SCC resident should assume direct responsibility for the care of all patients on the surgical critical care service.
2. The SCC resident should assist in supervision of junior residents and all medical students in the delivery of care to patients on the service.
3. The SCC resident should see every admission to the service.
4. The SCC resident should have full knowledge of medical problems and progress of all patients.
5. The SCC resident should personally examine patients experiencing new problems.

6. The SCC resident should know every patient who is to undergo a surgical procedure on his/her service.
7. The SCC resident should be immediately available to come into the hospital on nights he/she is on backup call.

C. Interpersonal and Communication Skills

1. The SCC resident should ensure that the attending is aware of the progress of all patients on the service.
2. The SCC resident should clearly, accurately, and respectfully communicate with nurses and other hospital employees.
3. The SCC resident should clearly, accurately, and respectfully communicate with referring and consulting physicians, including residents.
4. The SCC resident should clearly, accurately, and respectfully communicate with patients and appropriate members of their families about identified disease processes (including complications), the expected courses, operative findings, and operative procedures.
5. The SCC resident should maintain clear, concise, accurate, and timely medical records including (but not limited to) consultation notes, progress notes, written and verbal orders, and operative notes.
6. The SCC resident should be able to clearly and accurately teach medical students and junior residents about the procedures performed on this rotation when qualified to do so by hospital and program policy.

D. Practice-Based Learning and Improvement

1. The SCC resident will write an accurate, detailed, and legible preoperative assessment and counseling note on all patients for which he/she serves as surgeon of record.
2. The SCC resident must enter all procedures and operative cases in which he/she is the surgeon of record into the system database within 24 hours of completing the procedure or operation.
3. The SCC resident must dictate an accurate and descriptive narration of the operative procedure in which he/she is the primary surgeon within 24 hours.
4. The SCC resident must be prepared to present cases at weekly Chief's Conference and complications at weekly Morbidity and Mortality Conference when rotating on the TASC service.

E. Systems-Based Practice

1. The SCC resident should be able to assess the risks and benefits of all options for treating patients with critical illness.

2. The SCC resident should be able to summarize the financial costs, potential complications, and long-term expectations for planned procedures and treatment strategies.
3. The SCC resident should be able to determine and convey to appropriate individuals the instruments and other materials necessary for all procedures.

F. Professionalism

1. The SCC resident must be honest with all individuals at all times in conveying issues of patient care.
2. The SCC resident should place the needs of the patient above all the needs or desires of him/herself.
3. The SCC resident should maintain high ethical behavior in all professional activities.
4. The SCC resident should remain compliant with all required training designated by the institution.
5. The SCC resident must demonstrate a commitment to the continuity of patient care through carrying out personal responsibilities or through assuring that those responsibilities are fully and accurately conveyed to others acting in his/her stead.
6. The SCC resident must understand the institutional policy on duty hours and remain compliant with all duty hour regulations. Residents must enter the number of hours spent in the hospital into the tracking system within four days of duty.
7. The SCC resident should be properly and professionally attired at all times while engaged in patient care.
8. The SCC resident should be properly and professionally groomed at all times when engaged in patient care.
9. The SCC resident should demonstrate sensitivity to issues of age, race, gender, and religion with patients, families, and members of the health care team.
10. The SCC resident should at all times treat patients, families, and all members of the health care team with respect.
11. The SCC resident should reliably be present in pre-arranged places at pre-arranged times except when actively engaged in the treatment of a medical or surgical emergency. The resident must notify the appropriate supervisor if he or she will be unable to be present.
12. The SCC resident will attend the following mandatory conferences:
 - EGS/Critical Care Lecture, Tuesdays, 1:00 pm*
 - Trauma QI/M and M, Fridays, 7:00 am*
 - Trauma Journal Club, monthly at 6:30 pm, times TBD monthly as per the call schedule*

Surgical Critical Care Residency (Fellowship)
Goals and Objectives
Surgical and Medical Intensive Care Unit Rotations

A. Medical Knowledge.

1. The resident should have an in depth understanding of the basic science related to problems commonly seen in the intensive care unit setting. *Examples include sepsis, respiratory failure, coronary ischemia, shock, malnutrition, stress ulceration, nonocclusive intestinal ischemia, antibiotic-associated colitis, antibiotic resistance, jaundice, and renal insufficiency.*
2. The resident should understand the pathophysiology of hemodynamic instability. *Examples include types of shock, cardiac arrest.*
3. The resident should know and apply treatments for arrhythmias, congestive heart failure, acute ischemia and pulmonary edema.
4. The resident should understand adjuncts to the analysis of respiratory mechanics and gas exchange. *Examples include work of breathing, rapid shallow breathing index, single breath CO₂ analysis and dead space measurements.*
5. The resident should understand fluid and electrolyte as well as acid/base abnormalities associated with complex surgical procedures and complications. *Examples include massive fluid shifts associated with trauma, shock and resuscitation, high output fistulas and renal failure.*
6. The resident should understand the pathophysiology associated with endocrine emergencies in the ICU. *Examples include thyroid storm, hyper, hypoparathyroid states and adrenal insufficiency.*
7. The resident should be able to discuss the mechanism of action as well as the spectrum of antimicrobial activity of the different antibiotic classes. *Examples include carbapenams, extended spectrum penicillins and fluoroquinolones.*
8. The resident should understand the risk factors that result in multiply resistant organisms. *Examples include antibiotic dosing, antibiotic synergy and transmission patterns.*
9. The resident should be able to discuss the factors that result in an immunocompromised state. *Examples include malignancy, major trauma and steroids.*
10. The resident should understand the factors associated with bleeding disorders. *Examples include DIC, ITP, hemophilia, coagulopathy associated with shock and hypothermia.*
11. The resident should understand the pathophysiology of traumatic brain injury and neural disease. *Examples include knowledge of intracranial pressure monitoring and maneuvers to normalize ICP.*
12. The resident should be able to discuss the pathophysiology, presentation, and causes of hepatic failure.

B. Patient Care

1. Under appropriate supervision, the resident should assist the junior residents with placement of central venous lines, pulmonary artery catheters, placement of PEG tubes, and other invasive procedures.
2. The resident should be able to identify and minimize factors associated with nosocomial infections and be able to utilize appropriate adjunctive measures to diagnose and treat nosocomial infection. *Examples include bronchoscopy to aid in the diagnosis of ventilator associated pneumonia.*
3. The resident should be able to utilize pharmacokinetics and drug levels to adjust antibiotic dosing, utilize appropriate combinations of antibiotics to achieve synergy, and appropriately utilize isolation precautions.
4. The resident should be able to appropriately use intracranial pressure monitoring, including interpretation of hemodynamic and ICP data.
5. The resident should be able to initiate therapy to maintain cerebral perfusion pressure and minimize secondary brain injury.
6. The resident should be able to initiate and maintain salvage modes of ventilation such as airway pressure release, oscillatory and vibratory ventilation.

C. Interpersonal and Communications Skills

1. The resident should ensure that the attending is aware of the progress of all patients on the service.
2. The resident should clearly, accurately, and respectfully communicate with nurses and other hospital employees.
3. The resident should clearly, accurately, and respectfully communicate with referring and consulting physicians, including residents.
4. The resident should clearly, accurately, and respectfully communicate with patients and appropriate members of their families about identified disease processes (including complications), the expected courses, operative findings, and operative procedures.
5. The resident should maintain clear, concise, accurate, and timely medical records including (but not limited to) consultation notes, progress notes, written and verbal orders, operative notes, and discharge summaries.
6. The resident should be able to clearly and accurately teach medical students and junior residents about the procedures performed on this rotation when qualified to do so by hospital and program policy.

D. Practice-Based Learning and Improvement

1. The resident should use books, journal articles, internet access, anatomy videotapes, and other tools available to learn about topics related to critical care.

2. For the SUCU rotation, the resident must view the ICU Core Curriculum. This is a series of 16 Power Point slide lectures available 24 hours per day on dedicated computers in the SICU at Parkland Hospital and formally presented three times per week. .

3. The resident must prepare for and attend daily ICU attending rounds.

4. The resident must attend the Tuesday didactic seminars which rotate between surgical critical care and emergency general surgery.

E. Systems-Based Practice

1. The resident should function as a member of the ICU team and act as a liaison with each patient's home service to communicate patient progress and plans for care by the ICU team.

2. The resident should relate concerns and advice from the patient's home team to the ICU service.

3. The resident should be able to communicate with referring physicians from outside the medical system about patients in the ICU.

4. The resident should be able to discuss the role of surgeons in the ICU as well as the role of consultants.

5. The resident should be able to discuss the mechanism and need for performance improvement in the ICU.

F. Professionalism

1. The resident must be honest with all individuals at all times in conveying issues of patient care.

2. The resident should place the needs of the patient above all the needs or desires of him/herself.

3. The resident should maintain high ethical behavior in all professional activities.

4. The resident should remain compliant with all required training designated by the institution.

5. The resident must demonstrate a commitment to the continuity of patient care through carrying out personal responsibilities or through assuring that those responsibilities are fully and accurately conveyed to others acting in his/her stead.

6. The resident must understand the institutional policy on duty hours and remain compliant with all duty hour regulations. Residents must enter the number of hours spent in the hospital into the tracking system (EValue) within four days of duty.

7. The resident should be properly and professionally attired at all times while engaged in patient care.

8. The resident should be properly and professionally groomed at all times when engaged in patient care.

9. The resident should demonstrate sensitivity to issues of age, race, gender, and religion with patients, families, and members of the health care team.

10. The resident should at all times treat patients, families, and all members of the health care team with respect.

11. The resident should reliably be present in pre-arranged places at pre-arranged times except when actively engaged in the treatment of a medical or surgical emergency. The resident must notify the appropriate supervisor if he or she will be unable to be present.

12. The resident will attend the following mandatory conferences:

Trauma QI/Morbidity and Mortality (Fridays from 0700-0900)

Trauma Journal Club (monthly)

Critical Care/EGS Conference (Tuesdays from 1200-1300)

Surgical Critical Care Residency (Fellowship) Goals and Objectives Burn Intensive Care Unit Rotation

A. Medical Knowledge

1. The resident should be able to demonstrate knowledge about managing burns of all types. *Examples include acute and chronic care of flame injury, chemical burns, electrical burns, and radiation injury.*
2. The resident should be able to discuss the long-term management of patients with burns, including scar revision, psychiatric counseling, avoidance of sun exposure, and long-term surveillance for burn-related malignancy.
3. The resident should be able to recognize and treat burn-related malignancy.
4. The resident should understand the management of extreme radiation exposure, including decontamination procedures, evaluation, acute treatment, and long-term surveillance. The resident should understand the long term prognosis of radiation injury, based on the calculated dose of radiation received.

B. Patient Care

1. The resident should assume responsibility for the overall care of all patients on the service and should assume responsibility for supervising the junior residents as they provide direct care for the patients.
2. The resident must see every new admission and know the progress and medical problems of all patients on the service.
3. The resident must personally examine all patients who develop new problems.
4. The resident should be proficient with the use of the Humby knife and power driven dermatomes. The resident should understand appropriate selection of meshed graft options.

5. Under appropriate supervision, the resident should be able to perform reconstructive procedures such as:

Emergency evaluation and performance of escharotomies and fasciotomies

Planning and layout reconstructive procedures

Burn wound excision Skin grafting

C. Interpersonal and Communications Skills

1. The resident should ensure that the attending is aware of the progress of all patients on the service.
2. The resident should clearly, accurately, and respectfully communicate with nurses and other hospital employees.
3. The resident should clearly, accurately, and respectfully communicate with referring and consulting physicians, including residents.
4. The resident should clearly, accurately, and respectfully communicate with patients and appropriate members of their families about identified disease processes (including complications), the expected courses, operative findings, and operative procedures.
5. The resident should maintain clear, concise, accurate, and timely medical records including (but not limited to) consultation notes, progress notes, written and verbal orders, operative notes, and discharge summaries.
6. The resident should be able to clearly and accurately teach medical students and junior residents about the procedures performed on this rotation when qualified to do so by hospital and program policy.

D. Practice-Based Learning and Improvement

1. The resident should use textbooks, journal articles, internet access, and other tools available to learn about treatment of surgical problems in burn patients.
2. The resident must attend all service-specific conferences, including scheduled daily lectures from attending faculty.
3. The resident must attend all service-specific clinics.

E. Systems-Based Practice

1. The resident should understand the principles of disaster management and should be aware of the specific role he or she would play in event of a medical disaster.

F. Professionalism

1. The resident must be honest with all individuals at all times in conveying issues of patient care.
2. The resident should place the needs of the patient above all the needs or desires of him/herself.
3. The resident should maintain high ethical behavior in all professional activities.

4. The resident should remain compliant with all required training designated by the institution.
5. The resident must demonstrate a commitment to the continuity of patient care through carrying out personal responsibilities or through assuring that those responsibilities are fully and accurately conveyed to others acting in his/her stead.
6. The resident must understand the institutional policy on duty hours and remain compliant with all duty hour regulations. Residents must enter the number of hours spent in the hospital into the tracking system (EValue) within four days of duty.
7. The resident should be properly and professionally attired at all times while engaged in patient care.
8. The resident should be properly and professionally groomed at all times when engaged in patient care.
9. The resident should demonstrate sensitivity to issues of age, race, gender, and religion with patients, families, and members of the health care team.
10. The resident should at all times treat patients, families, and all members of the health care team with respect.
11. The resident should reliably be present in pre-arranged places at pre-arranged times except when actively engaged in the treatment of a medical or surgical emergency. The resident must notify the appropriate supervisor if he or she will be unable to be present.
12. The resident will attend the following mandatory conferences:
 - Trauma QI/Morbidity and Mortality (Fridays from 0700-0900)
 - Trauma Journal Club (monthly)
 - Burn Didactics Lecture (Thursdays from 0700-0800)
 - Burn ICU Morbidity and Mortality Conference (monthly)
 - Critical Care/EGS Conference (Tuesdays from 1200-1300)

Surgical Critical Care Residency (Fellowship)
Goals and Objectives
Pediatric Intensive Care Unit Rotation

A. Medical Knowledge

1. The resident should learn in depth the fundamentals of basic and embryologic science as applied to congenital anomalies cared for by the Pediatric Intensivist. *Examples include embryologic development of the peritoneal cavity, normal rotation and fixation of the abdominal viscera, the physiologic changes of birth, fluid and electrolyte requirements by weight, normal physiologic parameters in newborns and children, VACTERL association, imperforate anus, congenital diaphragmatic hernia, intestinal atresia, tracheoesophageal fistula and major physiologic and anatomic differences of babies and children compared to adults.*

2. The resident should be able to recognize, diagnose, and initiate treatment for complex surgical problems and emergencies unique to the neonatal pediatric surgical patient, including resuscitation, evaluation of coexistent abnormalities, diagnostic tests, and treatment options in premature newborns and infants. *Examples include biliary atresia, tracheoesophageal fistula, congenital diaphragmatic hernia, omphalocele, gastroschisis, imperforate anus, meconium ileus, Hirschsprung's disease, malrotation, mid-gut volvulus, intestinal atresias, necrotizing enterocolitis, intestinal obstruction, congenital abdominal masses, ovarian cyst, intestinal duplication, Meckel's diverticulum and non-accidental trauma.*

3. The resident should learn the assessment and management logistics of a multi-discipline pediatric trauma system in which patient care is delivered by Pediatric Surgery trauma teams, Pediatric Critical Care teams, Pediatric Emergency Medicine teams, numerous physician assistants and advanced trauma surgery nurse practitioners.

4. The resident should learn the appropriate adjuvant and surgical treatment for pediatric solid tumors. *Examples are hepatoblastoma, hepatic cell carcinoma, teratoma, germ cell tumors, Wilm's tumor, neuroblastoma, and rhabdo-myosarcoma.*

5. The resident should learn to assess and treat newborn, infants and children with problems requiring critical care. *Examples include venous and arterial access, feeding access, hemo- and peritoneal dialysis access, ECMO access and management, supplemental enteral and parenteral nutrition strategies, pediatric ventilator management modalities.*

B. Patient Care

1. The resident should assume responsibility for committed participation in a service management team consisting of Pediatric Critical Care faculty, Pediatric Surgeons and fellows, advanced surgical nurse practitioners and physician assistants for the care of all patients on the Pediatric ICU service.

2. The resident should assume shared responsibility for care of all Pediatric ICU and Neonatal ICU patients with a critical care management team consisting of PICU personnel, NICU personnel and Pediatric Surgery faculty, Fellows, surgery resident peers, advanced surgical nurse practitioners and physician assistants. Responsibilities include daily assessment, comprehensive documentation and orders, bedside operative procedures, and comprehensible and appropriate communication between surgical and non-surgical teams.

3. The resident should assume shared responsibility with the Pediatric Emergency Medicine personnel for directing the initial evaluation, need for and assessment of diagnostic studies and overall management of the critically injured child in the Emergency Department.

C. Interpersonal and Communications Skills

1. The resident should ensure that the attending is aware of the progress of all patients on the service.

2. The resident should clearly, accurately, and respectfully communicate with nurses and other hospital employees.

3. The resident should clearly, accurately, and respectfully communicate with referring and consulting physicians, including residents.

4. The resident should clearly, accurately, and respectfully communicate with patients and appropriate members of their families about identified disease processes (including complications), the expected courses, operative findings, and operative procedures.

5. The resident should maintain clear, concise, accurate, and timely medical records including (but not limited to) consultation notes, progress notes, written and verbal orders, operative notes, and discharge summaries.

6. The resident should be able to clearly and accurately teach medical students and junior residents about the procedures performed on this rotation when qualified to do so by hospital and program policy.

D. Practice-Based Learning and Improvement

1. The resident should use textbooks, journal articles, Internet access, and other available tools to learn about diseases of infants and children.

2. The resident must attend all service-specific conferences, as scheduled.

E. Systems-Based Practice

1. The resident should be able to communicate with families, referring physicians, and consultants, under the supervision and direction of the attending.

2. The resident should have an appreciation of pediatric conditions that warrant treatment in a medical setting that is designed to meet the special needs of infants and children.

3. The resident should understand the close interactions between pediatric intensivist and pediatric surgeon in the care of children and infants with surgical illness.

4. The resident should be able to discuss the problem of child abuse, including identifying injuries consistent with abuse, understanding the need to admit victims for protection, and knowing how to contact the appropriate authorities to report suspected cases of abuse.

F. Professionalism

1. The resident must be honest with all individuals at all times in conveying issues of patient care.

2. The resident should place the needs of the patient above all the needs or desires of him/herself.

3. The resident should maintain high ethical behavior in all professional activities.

4. The resident should remain compliant with all required training designated by the institution.

5. The resident must demonstrate a commitment to the continuity of patient care through carrying out personal responsibilities or through assuring that those responsibilities are fully and accurately conveyed to others acting in his/her stead.

6. The resident must understand the institutional policy on duty hours and remain compliant with all duty hour regulations. Residents must enter the number of hours spent in the hospital into the tracking system within four days of duty.

7. The resident should be properly and professionally attired at all times while engaged in patient care.
8. The resident should be properly and professionally groomed at all times when engaged in patient care.
9. The resident should demonstrate sensitivity to issues of age, race, gender, and religion with patients, families, and members of the health care team.
10. The resident should at all times treat patients, families, and all members of the health care team with respect.
11. The resident should reliably be present in pre-arranged places at pre-arranged times except when actively engaged in the treatment of a medical or surgical emergency. The resident must notify the appropriate supervisor if he or she will be unable to be present.

Surgical Critical Care Residency (Fellowship)
Goals and Objectives
VA Thoracic Intensive Care Unit Rotation

A. Medical Knowledge

1. The resident should understand advanced basic science as applied to cardiac, esophageal, and pulmonary physiology. *Examples include the pathophysiology of atherosclerosis, pathophysiology and natural history of pulmonary malignancy, pulmonary function abnormalities in chronic obstructive pulmonary disease, manometric abnormalities in esophageal disease, and frequency/death rates of thoracic malignancies.*
2. The resident should learn about the diagnosis and management of mediastinal tumors.
3. The resident should understand the indications and appropriate tests available for screening patients for thoracic disease. *The resident should be able to discuss risk factors for cardiac/pulmonary/esophageal disease, typical presenting symptoms, and patterns of coexistence such as COPD and coronary artery disease in smokers.*
4. The resident should be familiar with diagnostic tests available to detect and categorize cardiac disease. *Examples include the treadmill exercise test, dipyridamole thallium scintigraphy, adenosine echocardiography, MUGA scan, CT-based coronary calcification score, CT angiography, catheter-based coronary angiography.*
5. The resident should be able to perform advanced assessment of indications and risk/benefit for all interventions in patients with cardiovascular disease. *Examples include optimal medical management, endovascular procedures, coronary bypass, and heart transplantation.*

6. The resident should understand the stepwise evaluation and management of the patient with an asymptomatic lung lesion.
7. The resident should understand changes in pulmonary function after lung resection and be able to determine whether a lung lesion is resectable on the basis of baseline pulmonary function tests.
8. The resident should be familiar with valvular heart disease, including natural history, presentation, diagnosis, available therapeutic options, and postoperative management.
9. The resident should be familiar with the evaluation and management options for patients with esophageal disease, including functional disorders, traumatic injuries (perforation and caustic injuries), and neoplasms.

B. Patient Care

1. The resident should function as a member of the cardiothoracic team and assume responsibility for all care on his or her assigned patients. This includes daily evaluation of progress and detection of new problems; preoperative preparation; and discharge responsibilities.
2. The resident should be able to demonstrate ability to manage thoracic and cardiovascular surgery patients in the critical care setting including management of patients who may or may not require surgical intervention such as those with endocarditis, pleural effusion, empyema, thoracic trauma, and esophageal motility disorders.
3. Under appropriate supervision, the resident should be able to perform more advanced procedures such as:

Open and video-assisted decortication
Mediastinotomy and mediastinoscopy
Pulmonary wedge resection
Lobectomy and pneumonectomy
Thoracotomy Lung biopsy
Thymectomy Chest wall resection

C. Interpersonal and Communications Skills

1. The resident should ensure that the attending is aware of the progress of all patients on the service.
2. The resident should clearly, accurately, and respectfully communicate with nurses and other hospital employees.
3. The resident should clearly, accurately, and respectfully communicate with referring and consulting physicians, including residents.
4. The resident should clearly, accurately, and respectfully communicate with patients and appropriate members of their families about identified disease processes (including complications), the expected courses, operative findings, and operative procedures.

5. The resident should maintain clear, concise, accurate, and timely medical records including (but not limited to) consultation notes, progress notes, written and verbal orders, operative notes, and discharge summaries.

6. The resident should be able to clearly and accurately teach medical students and junior residents about the procedures performed on this rotation when qualified to do so by hospital and program policy.

D. Practice-Based Learning and Improvement

1. The resident should use textbooks, journal articles, internet access, and other tools to learn advanced concepts in cardiothoracic surgery.

2. The resident should enter all procedures that he or she has performed into the institutional database within 48 hours of the operation.

3. The resident must attend all service-specific conferences.

4. The resident must attend all service-specific clinics.

E. Systems-Based Practice

1. The resident should understand the interrelationship of the cardiothoracic surgeon, pulmonologist, cardiologist, medical oncologist, and rehabilitation specialist in the overall management of the patient with cardiothoracic disease.

2. The resident should be aware of community and VA programs for risk factor modification such as smoking cessation clinics.

3. The resident should be aware of community and VA screening programs such as cholesterol screening and vascular laboratory outreach programs.

F. Professionalism

1. The resident must be honest with all individuals at all times in conveying issues of patient care.

2. The resident should place the needs of the patient above all the needs or desires of him/herself.

3. The resident should maintain high ethical behavior in all professional activities.

4. The resident should remain compliant with all required training designated by the institution.

5. The resident must demonstrate a commitment to the continuity of patient care through carrying out personal responsibilities or through assuring that those responsibilities are fully and accurately conveyed to others acting in his/her stead.

6. The resident must understand the institutional policy on duty hours and remain compliant with all duty hour regulations. Residents must enter the number of hours spent in the hospital into the tracking system within four days of duty.

7. The resident should be properly and professionally attired at all times while engaged in patient care.

8. The resident should be properly and professionally groomed at all times when engaged in patient care.
9. The resident should demonstrate sensitivity to issues of age, race, gender, and religion with patients, families, and members of the health care team.
10. The resident should at all times treat patients, families, and all members of the health care team with respect.
11. The resident should reliably be present in pre-arranged places at pre-arranged times except when actively engaged in the treatment of a medical or surgical emergency. The resident must notify the appropriate supervisor if he or she will be unable to be present.

Surgical Critical Care Residency (Fellowship)
Goals and Objectives
Trauma and Acute Surgical Care (TASC) Service

Trauma Service

A. Medical Knowledge

1. 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.*
2. 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.*
3. 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.*

B. Patient Care

1. The SCC resident should be able to direct the entire team through the trauma resuscitation.
2. The SCC resident should be able to correctly triage the diagnostic evaluation of the patient with multiple injuries.
3. The SCC resident should be able to perform advanced surgical procedures to manage injuries in the neck, torso and extremities.
4. The SCC resident should be able to correctly utilize consultants, yet remain responsible for ultimate patient care issues.

5. The SCC resident should be able to manage patients with multiple injuries using operative and non-operative techniques correctly.

6. 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*

C. Interpersonal and Communications Skills

1. The resident should ensure that the attending is aware of the progress of all patients on the service.

2. The resident should clearly, accurately, and respectfully communicate with nurses and other hospital employees.

3. The resident should clearly, accurately, and respectfully communicate with referring and consulting physicians, including residents.

4. The resident should clearly, accurately, and respectfully communicate with patients and appropriate members of their families about identified disease processes (including complications), the expected courses, operative findings, and operative procedures.

5. The resident should maintain clear, concise, accurate, and timely medical records including (but not limited to) consultation notes, progress notes, written and verbal orders, operative notes, and discharge summaries.

6. The resident should be able to clearly and accurately teach medical students and junior residents about the procedures performed on this rotation when qualified to do so by hospital and program policy.

D. Practice-Based Learning and Improvement

1. The resident should use books, journal articles, internet access, anatomy videotapes, and other tools available to learn about diseases and treatment of the injured patient.

2. The resident must attend Trauma Conference, held weekly on Friday at 0700.

3. The resident must attend and participate in the weekly clinics for their service.

E. Systems-Based Practice

1. The SCC resident should be able to understand triage of mass casualties

2. The SCC resident should understand the multi-disciplinary approach to management of patients with multiple injuries.

3. The SCC resident should understand the concept of trauma systems and the need to transfer patients for the appropriate level of care.

F. Professionalism

1. The resident must be honest with all individuals at all times in conveying issues of patient care.
2. The resident should place the needs of the patient above all the needs or desires of him/herself.
3. The resident should maintain high ethical behavior in all professional activities.
4. The resident should remain compliant with all required training designated by the institution.
5. The resident must demonstrate a commitment to the continuity of patient care through carrying out personal responsibilities or through assuring that those responsibilities are fully and accurately conveyed to others acting in his/her stead.
6. The resident must understand the institutional policy on duty hours and remain compliant with all duty hour regulations. Residents must enter the number of hours spent in the hospital into the tracking system (EValue) within four days of duty.
7. The resident should be properly and professionally attired at all times while engaged in patient care.
8. The resident should be properly and professionally groomed at all times when engaged in patient care.
9. The resident should demonstrate sensitivity to issues of age, race, gender, and religion with patients, families, and members of the health care team.
10. The resident should at all times treat patients, families, and all members of the health care team with respect.
11. The resident should reliably be present in pre-arranged places at pre-arranged times except when actively engaged in the treatment of a medical or surgical emergency. The resident must notify the appropriate supervisor if he or she will be unable to be present.
12. The resident will attend the following mandatory conferences:
 - Trauma QI/Morbidity and Mortality (Fridays from 0700-0900)
 - Trauma Journal Club (monthly)
 - Critical Care/EGS Conference (Tuesdays from 1200-1300)

Acute Surgical Care (aka Emergency General Surgery, EGS)

A. Medical Knowledge

1. The SCC resident should be able to correctly explain the operative approaches for acute surgical conditions of the abdominal cavity and retroperitoneal organs.
2. 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.

3. The SCC resident should be able to correctly explain the indications and contraindications for diagnostic and therapeutic endoscopy in the acute setting.
4. The SCC resident should be able to discuss the management alternatives for common bile duct stones.
5. The SCC resident should learn the pathophysiology, presentation, and specific treatment options for hepatic cirrhosis and portal hypertension
6. 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.*
7. The SCC resident should be able to describe the operative details of portacaval shunts.

B. Patient Care

1. The SCC resident should assume the overall responsibility for all patients on the service, including supervision of the residents assuming direct care responsibilities.
2. The SCC resident should serve as teaching assistant for PGY 1-3 residents as they perform operations appropriate to their level.
3. The SCC resident must attend weekly outpatient clinics.
4. Under appropriate supervision, the SCC resident should perform advanced operative procedures such as

Subtotal gastrectomy Highly selective vagotomy
Total gastrectomy Pancreatectomy
Austin-Jones sphincteroplasty Hepaticojejunostomy
Peustow procedure

C. Interpersonal and Communications Skills

1. The resident should ensure that the attending is aware of the progress of all patients on the service.
2. The resident should clearly, accurately, and respectfully communicate with nurses and other hospital employees.
3. The resident should clearly, accurately, and respectfully communicate with referring and consulting physicians, including residents.
4. The resident should clearly, accurately, and respectfully communicate with patients and appropriate members of their families about identified disease processes (including complications), the expected courses, operative findings, and operative procedures.
5. The resident should maintain clear, concise, accurate, and timely medical records including (but not limited to) consultation notes, progress notes, written and verbal orders, operative notes, and discharge summaries.

6. The resident should be able to clearly and accurately teach medical students and junior residents about the procedures performed on this rotation when qualified to do so by hospital and program policy.

D. Practice-Based Learning and Improvement

1. The resident should use books, journal articles, internet access, and other tools available to learn about diseases and treatment of patients with acute surgical illness.

2. The residents should attend the A, C, St. Paul general surgery and Transplant Conference every Wednesday at 0700 as well as Trauma Conference, held weekly on Fridays at 0700.

3. The residents must attend and participate in the weekly clinics for their service.

E. Systems-Based Practice

1. The 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.

2. 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.

3. The resident should understand the rules for transfer of patients to the hospital under the HIPAA regulations.

F. Professionalism

1. The resident must be honest with all individuals at all times in conveying issues of patient care.

2. The resident should place the needs of the patient above all the needs or desires of him/herself.

3. The resident should maintain high ethical behavior in all professional activities.

4. The resident should remain compliant with all required training designated by the institution.

5. The resident must demonstrate a commitment to the continuity of patient care through carrying out personal responsibilities or through assuring that those responsibilities are fully and accurately conveyed to others acting in his/her stead.

6. The resident must understand the institutional policy on duty hours and remain compliant with all duty hour regulations. Residents must enter the number of hours spent in the hospital into the tracking system (EValue) within four days of duty.

7. The resident should be properly and professionally attired at all times while engaged in patient care.

8. The resident should be properly and professionally groomed at all times when engaged in patient care.

9. The resident should demonstrate sensitivity to issues of age, race, gender, and religion with patients, families, and members of the health care team.

10. The resident should at all times treat patients, families, and all members of the health care team with respect.

11. The resident should reliably be present in pre-arranged places at pre-arranged times except when actively engaged in the treatment of a medical or surgical emergency. The resident must notify the appropriate supervisor if he or she will be unable to be present.

12. The resident will attend the following mandatory conferences:

Trauma QI/Morbidity and Mortality (Fridays from 0700-0900)

Trauma Journal Club (monthly)

Critical Care/EGS Conference (Tuesdays from 1200-1300)

Surgical Critical Care Residency (Fellowship)

Goals and Objectives

Neurocritical Care Rotation

A. Medical Knowledge

- 1) Become familiar with brain resuscitation and cardiopulmonary care of critically ill neurological and neurosurgical patients.
- 2) Learn to detect acute neurological changes and interpret test results, CT/MRI scan.
- 3) Learn critical care management skills and bedside procedures (arterial & central lines, endotracheal intubation, lumbar puncture and lumbar drains).
- 4) Develop proficiency with advanced life support techniques; different modes of mechanical ventilation, hemodynamic support with all pharmacologic agents, management of electrolyte disturbance, renal failure, arrhythmia, coagulopathy infection, shock and GI bleed.
- 5) Understand the roles of ventriculostomy, ICP monitoring, ventilation support, hypertonic saline, vasoactive medications, fluid resuscitation, and blood products in brain protection.
- 6) Become proficient at timely management of ischemic and hemorrhagic stroke, traumatic brain injury, increased ICP, hydrocephalus, seizure, hypertension, and vasospasm.
- 7) To integrate general medical management with neurological, neurosurgical, and endovascular interventions.
- 8) 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.

- 9) To be familiar with the epidemiology and risk factors for commonly encountered ICU conditions including ischemic stroke, ICH, SAH, TBI, and seizure.
- 10) Understand the systemic inflammatory response syndrome (SIRS), Sepsis and multi-organ dysfunction, common causes of shock and hemodynamic instability, Acute Lung Injury, ARDS, Acute Renal failure, Nosocomial infections, acute bleeding.
- 11) To obtain precise knowledge of Advanced Cardiac Life Support and ability to direct emergent/Code scenarios in a variety of clinical settings.
- 12) To know the signs, symptoms, clinical course, complications and treatment of common post-operative conditions for neurosurgical specialty operations.
- 13) To have a comprehensive understanding of the pharmacology of all commonly used medications in a neurological ICU and other monitored clinical settings including;
 - o Sedative, analgesic and muscular relaxant drugs.
 - o Hemodynamic support with vasoconstrictors, inotropic agents and antihypertensive agents.
 - o Other specialized medications that are commonly only used in monitored settings including insulin drips, thrombolytics, some anti-rejection induction agents, antiarrhythmic agents.
- 14) To understand the role, principles and limitations of Physiologic monitoring, Diagnostic laboratory & radiological tests commonly used in the neurocritical care setting.
- 15) To understand the indications, techniques for placement, complication recognition & management of invasive intravenous catheters including arterial lines, central lines, introducers, cavity drains and thoracostomy tubes
- 16) To gain skill with common brain radiographical interpretation.
- 17) To be familiar with current guidelines and standards of care developed by relevant medical organizations.

B. Patient Care

- 1) Resident will gather essential and accurate information by performing complete and clinically-relevant history and physical exams.
- 2) Resident will understand how to order and interpret appropriate diagnostic tests.
- 3) Resident will make informed diagnostic and treatment decisions by analyzing and synthesizing information.
- 4) Resident will understand the limits of their knowledge and expertise and will use consultants and referrals appropriately.
- 5) Resident will develop and carry out care plans as well as develop superb communication abilities.
- 6) Resident will learn to perform ICU procedures competently and manage complications resulting from these procedures.

7) Resident will routinely participate in conversations with family members to gather other clinical information, understand patient's and families wishes.

8) Resident will become competent in palliative care and end of life discussions

9) Resident will appropriately coordinate for the safe transport of critically ill patients within the medical center.

C. Interpersonal and Communications Skills

1) The resident should ensure that the attending is aware of the progress of all patients on the service.

2) The resident should clearly, accurately, and respectfully communicate with nurses and other hospital employees.

3) The resident should clearly, accurately, and respectfully communicate with referring and consulting physicians, including residents.

4) The resident should clearly, accurately, and respectfully communicate with patients and appropriate members of their families about identified disease processes (including complications), the expected courses, operative findings, and operative procedures.

5) The resident should maintain clear, concise, accurate, and timely medical records including (but not limited to) consultation notes, progress notes, written and verbal orders, operative notes, and discharge summaries.

6) The resident should be able to clearly and accurately teach medical students and junior residents about the procedures performed on this rotation when qualified to do so by hospital and program policy.

D. Practice-Based Learning and Improvement

1) To use current evidence-based practice guidelines, and to obtain supervision when existing guidelines require supplementation with experience-based practices for individual cases.

2) To keep logs of all major procedures including artery line, central line, LP, lumbar drain, ventriculostomy or intubation.

3) To access and use on-line medical information as pertains to patients' diagnosis and treatment in the form of reference texts, searches, electronic journals such as UpToDate, Web MD's e-Medicine and other networked resources.

4) To critically read and discuss the relevant scientific literature while seeking application to actual practice.

E. Systems-Based Practice

1) To understand the managed care of critically ill and post surgical patients, and how one tailors a patient's treatment to the resources available without compromising quality care.

- 2) To understand the quality improvement process and how to partner with health care managers and providers to assess, coordinate and improve care.
- 3) To develop awareness of cost-effectiveness issues with post-operative and/or clinically unstable patients, and how these are managed in different treatment settings such as a Neurological ICU, PACU, other ICU or step-down unit.
- 4) To act as a patient advocate for helping patients and families navigate through sometimes complex and bureaucratic systems related to their health-care needs, patient wishes and resources available.
- 5) To appreciate the necessity and rationale for various program policies and procedures.

F. Professionalism

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