General Surgery Rotations (PGY 1)
(including Night/Emergency/Trauma and General Surgery core rotations at both MUSC and VA)

Patient Care

1. Develop a thorough grounding in the pre and post operative care of surgical patients and be able to:
   a. Succinctly write a focused history and physical examination with a complete preoperative assessment of the patient and establish a surgical diagnosis.
   b. Understand appropriate routine preoperative diagnostic studies and special laboratory or imaging studies required depending on the clinical indication.
   c. Understand and manage the wide variety of complex medical issues and co-morbidities that relate to surgical disease. These include cardiac dysfunction, congestive heart failure, arrhythmia; renal insufficiency, both acute and chronic; hepatic insufficiency; pulmonary dysfunction, including acute pulmonary failure, COPD and asthma; hematology including anemia, coagulation and bleeding disorders; and the perioperative management of diabetes mellitus and endocrine abnormalities.
   d. Assess co-morbidities and determine their impact on surgical risk and selection of procedure.
   e. Be comfortable in perioperative patient management and the optimization of their pre- and postoperative conditions.
   f. Manage fluid electrolyte acid based problems and nutritional issues.
   g. Have a thorough knowledge of common and uncommon perioperative complications related to surgical procedures in general.
   h. Be fully competent in wound care and wound management.
   i. Be competent in airway management, tracheostomy, ventilator management, and critical care and surgical emergencies.

2. The resident will master surgical skills by:
   a. Learning proper use of appropriate surgical instruments, sutures, the capability of differing suture techniques and 1 and 2 handed surgical ties.
   b. Performing procedures of increasingly complex nature commensurate with their ability in a step-wise, progressive fashion, under appropriate supervision, throughout the surgical training paradigm.

3. Demonstrate proficiency in simple laparoscopic procedures.
   a. laparoscopic cholecystectomy
   b. laparoscopic exploration
   c. laparoscopic bowel resection.
4. Manage common general surgery problems
   a. bowel obstruction
   b. pancreatitis
   c. acute abdomen
   d. post-operative complications, including urinary tract infection, pneumonia, bleeding, wound infection
Medical Knowledge

1. The resident will acquire a thorough prerequisite knowledge and understanding of the basic fundamental pathophysiology of a broad range of surgical diseases, specifically those of the GI tract, lungs, heart, vascular system, muscle and extremities, and those related to trauma.
2. The resident will supplement this knowledge with periodic literature reviews and presentations at required conferences.
3. The resident will develop a firm commitment to life-long learning and self-assessment.
4. Learn anatomy of the abdominal and pelvic structures and the pathology and presentation of complex and simple diseases of the abdomen that may relate to vascular surgery.
5. Learn endocrine disease (thyroid, parathyroid and adrenal)
6. Diagnosis and management of intraabdominal and pelvic abscess, small bowel obstruction, peptic ulcer disease, colonic obstruction, Ogilvie’s syndrome, portal hypertension, acute pancreatitis, and acute gall stone disease.
7. Understand the principles of shock management, assessment and treatment of hypovolemia including fluid resuscitation.
8. Understand the indication for transfusion of blood and blood products and their complications.

Interpersonal and Communication Skills

1. The resident will learn, through role modeling and via mentorship and teaching experiences in outpatient clinic and hospital inpatient settings, how to communicate with patients and their families regarding the medical status of the patient, proposed surgical procedures, and outcomes in a culturally sensitive way.
2. Our program is unique in having a significant African-American population which offer opportunities for tremendous experience in interacting with patients of differing cultural and socio-economic status.
3. The resident will learn how to actively participate in the process of obtaining informed consent.
4. The resident will actively participate in the education of junior residents, medical students, and other personnel.
5. The resident will actively participate in departmental conferences related to presentation skills and develop skills in preparing and organizing presentations.
Professionalism

1. The resident will have, maintain and further develop a strong work ethic, personal integrity, and above all, commitment to always placing the patient first.
2. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity.
3. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel, and will specifically learn to work with nurses, ancillary care providers, vascular lab personnel, medical students and rotating residents.
4. The resident will learn the importance of timely and accurate completion of administrative responsibilities, including timing and dating of orders, daily progress notes, operative and discharge summaries.

Practice Based Learning and Improvement

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
2. The resident will actively participate and attend all required conferences. While on general surgical or core surgical rotations, the resident will be required to attend Core surgery conferences during those 24 months. During the 36 months of vascular rotations, the resident will be required to attend the vascular conferences that are outlined in the attachments.

Systems-Based Practice

1. The resident will understand and practice cost effective patient care and will understand basic metrics used to measure cost effectiveness, including quality of life adjusted years (QALY).
2. The resident will learn about risk / benefit analysis.
3. The resident will learn to participate in a root cause analysis for problems related to patient care in the hospital. Rather than trying to find fault in a specific episode of care, he/she will look for opportunities to improve the system of care.
4. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly and receive appropriate reimbursement.
General Surgery Rotations (PGY 2)
(including Night/Emergency/Trauma and General Surgery core rotations at both MUSC and VA)

Patient Care

1. Develop a thorough grounding in the pre and post operative care of surgical patients and be able to:
   a. Succinctly write a focused history and physical examination with a complete preoperative assessment of the patient and establish a surgical diagnosis.
   b. Understand appropriate routine preoperative diagnostic studies and special laboratory or imaging studies required depending on the clinical indication.
   c. Understand and manage the wide variety of complex medical issues and comorbidities that relate to surgical disease. These include cardiac dysfunction, congestive heart failure, arrhythmia; renal insufficiency, both acute and chronic; hepatic insufficiency; pulmonary dysfunction, including acute pulmonary failure, COPD and asthma; hematology including anemia, coagulation and bleeding disorders; and the perioperative management of diabetes mellitus and endocrine abnormalities.
   d. Assess comorbidities and determine their impact on surgical risk and selection of procedure.
   e. Be comfortable in perioperative patient management and the optimization of their pre- and postoperative conditions.
   f. Manage fluid electrolyte acid based problems and nutritional issues.
   g. Have a thorough knowledge of common and uncommon perioperative complications related to surgical procedures in general.
   h. Be fully competent in wound care and wound management.
   i. Be competent in airway management, tracheostomy, ventilator management, and critical care and surgical emergencies.

3. The resident will master these surgical skills by:
   a. Learning proper use of appropriate surgical instruments, sutures, the capability of differing suture techniques and 1 and 2 handed surgical ties.
   b. Performing procedures of increasingly complex nature commensurate with their ability in a step-wise, progressive fashion, under appropriate supervision, throughout the surgical training paradigm.

3. Demonstrate proficiency in simple laparoscopic procedures.
   a. laparoscopic cholecystectomy
   b. laparoscopic exploration
   c. laparoscopic bowel resection.
4. Manage common general surgery problems
   a. bowel obstruction
   b. pancreatitis
   c. acute abdomen
   d. post-operative complications, including urinary tract infection, pneumonia, bleeding, wound infection

**Medical Knowledge**

9. The resident will acquire a thorough prerequisite knowledge and understanding of the basic fundamental pathophysiology of a broad range of surgical diseases, specifically those of the GI tract, lungs, heart, vascular system, muscle and extremities, and those related to trauma.
10. The resident will supplement this knowledge with periodic literature reviews and presentations at required conferences.
11. The resident will develop a firm commitment to life-long learning and self-assessment.
12. Learn anatomy of the abdominal and pelvic structures and the pathology and presentation of complex and simple diseases of the abdomen that may relate to vascular surgery.
13. Learn endocrine disease (thyroid, parathyroid and adrenal)
14. Diagnosis and management of intraabdominal and pelvic abscess, small bowel obstruction, peptic ulcer disease, colonic obstruction, Ogilvie’s syndrome, portal hypertension, acute pancreatitis, and acute gall stone disease.

**Interpersonal and Communication Skills**

6. The resident will learn, through role modeling and via mentorship and teaching experiences in outpatient clinic and hospital inpatient settings, how to communicate with patients and their families regarding the medical status of the patient, proposed surgical procedures, and outcomes in a culturally sensitive way.
7. Our program is unique in having a significant African- American population which offer opportunities for tremendous experience in interacting with patients of differing cultural and socio-economic status.
8. The resident will learn how to actively participate in the process of obtaining informed consent.
9. The resident will actively participate in the education of junior residents, medical students, and other personnel.
10. The resident will actively participate in departmental conferences related to presentation skills and develop skills in preparing and organizing presentations.
**Professionalism**

1. The resident will have, maintain and further develop a strong work ethic, personal integrity, and above all, commitment to always placing the patient first.
2. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity.
3. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel, and will specifically learn to work with nurses, ancillary care providers, vascular lab personnel, medical students and rotating residents.

**Practice Based Learning and Improvement**

3. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
4. The resident will actively participate and attend all required conferences. While on general surgical or core surgical rotations, the resident will be required to attend Core surgery conferences during those 24 months. During the 36 months of vascular rotations, the resident will be required to attend the vascular conferences that are outlined in the attachments.

**Systems-Based Practice**

1. The resident will understand and practice cost effective patient care and will understand basic metrics used to measure cost effectiveness, including quality of life adjusted years (QALY).
2. The resident will learn about risk / benefit analysis.
3. The resident will learn to participate in a root cause analysis for problems related to patient care in the hospital. Rather than trying to find fault in a specific episode of care, he/she will look for opportunities to improve the system of care.
4. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly and receive appropriate reimbursement.
Rotation-specific Educational Goals and Objectives

Surgical Oncology (PGY 1)

**Patient Care**

1. Learn about the major intra-abdominal and head and neck malignancies that may affect patients with vascular disease, particularly those with risk factors that overlap vascular disease risk factors, such as smoking and diet.
2. Manage common surgery problems
   a. opening and closing abdominal incisions and doing routine intraabdominal explorations
   b. bowel obstruction
   c. pancreatitis
   d. evisceration, fasciitis, and dehiscence
   e. post operative complications, including urinary tract infection, pneumonia, bleeding, wound infection

**Medical Knowledge**

1. Learn anatomy of the abdominal and pelvic structures and the pathology and presentation of complex and simple diseases of the abdomen that may relate to vascular surgery.
2. Learn endocrine disease (thyroid, parathyroid and adrenal)
3. Gain knowledge of the anatomy of the head and neck, specifically the thyroid and parathyroid, lymphatic drainage, and know how to do a proper physical examination of the head and neck.
4. Diagnosis and management of intra-abdominal and pelvic abscess, small bowel obstruction, peptic ulcer disease, colonic obstruction
5. Learn to interpret common diagnostic tests, including blood tests and scans to evaluate both acute and chronic intra-abdominal problems
6. Understand the perioperative management of patients with functional endocrine tumors, such as pheochromocytoma, and their relationship to neuroendocrine origin glomus tumors in the neck
7. Understand the basic evaluation of head and neck masses.

**Interpersonal Communication Skills**

1. The resident will learn how to actively participate in the process of obtaining informed consent.
2. The resident will actively participate in the education of junior residents, medical students, and other personnel.
3. The resident will actively participate in departmental conferences
**Professionalism**

1. The resident will have, maintain and further develop a strong work ethic, personal integrity, and reinforce a commitment to always placing the patient first.
2. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity.
3. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel.

**Practice Based Learning and Improvement**

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
2. The resident will actively participate and attend all required conferences.

**Systems-based Practice**

1. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly and receive appropriate reimbursement.
2. The resident will learn about risk benefit analysis
Orthopedics (PGY 1)

**Patient Care**
The resident will

1. Help manage common fractures and recognized risk for development of ischemic complications, primarily related to blunt trauma management.
2. The resident will learn about the basic principles and provide care of external fixation and immobilization of pelvic and limb fractures.
3. Recognize signs, symptoms, and physical findings associated with compartment syndrome and will be able to perform a complete extremity neurovascular assessment.

**Medical Knowledge**

1. Learn major muscle groups and limb anatomy, including compartmental anatomy.
2. Recognize major neurovascular supply of limbs and muscle groups.
3. Learn the severity of limb injury scale as relates to salvagability of functional limb, especially in partial traumatic amputations.

**Interpersonal Communication Skills**

1. The resident will learn how to actively participate in the process of obtaining informed consent.
2. The resident will actively participate in the education of junior residents, medical students, and other personnel.
3. The resident will actively participate in departmental conferences.

**Professionalism**

1. The resident will have, maintain and further develop a strong work ethic, personal integrity, and reinforce a commitment to always placing the patient first in the orthopedic setting.
2. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity in the orthopedic setting.
3. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel.
Practice Based Learning and Improvement

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.

2. The resident will actively participate and attend all required related conferences while on orthopedic rotation.

Systems-based Practice.

1. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly.

2. The resident will learn about risk benefit analysis in orthopedic setting.
Interventional Radiology (PGY 2)

Patient Care

The resident will
1. Assess patient for preoperative diagnostic and therapeutic intervention, including documentation of important and relevant physical and laboratory findings
2. The resident will learn about the basic principles of, and participate in, a wide variety of interventional procedures.
3. Recognize signs, symptoms, and physical findings associated with complications of access and intervention and will be able to perform a complete extremity neurovascular assessment
4. Provide initial interpretation and planning for findings on radiologic imaging
5. Provide vascular access for a variety of diagnostic and therapeutic procedures
6. Provide basic catheter and wire skills under direct supervision, and other more complex interventions as individual skills progress

Medical Knowledge

1. Learn basic catheter and wire skills by observation of experienced practitioners.
2. Become familiar with nomenclature and indications for a variety of different wires and catheters, including the indications and applications for each
3. Learn basics of how to interpret axial, coronal, and sagittal imaging for computerized tomographic scans, and how to manipulate images for optimal interpretation, including Terarecon.
4. Learn the angiographic anatomy of major vascular structures and interpretation of normal and abnormalities of blood flow, including ancillary techniques of assessment.

Interpersonal Communication Skills

1. The resident will learn how to actively participate in the process of obtaining informed consent for interventional procedures.
2. The resident will actively participate in the education of junior residents, medical students, and other personnel.
3. The resident will actively participate in departmental conferences
**Professionalism**

1. The resident will have, maintain and further develop a strong work ethic, personal integrity, and reinforce a commitment to always placing the patient first in the interventional radiology setting.
2. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity in the interventional setting.
3. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel.

**Practice Based Learning and Improvement**

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
2. The resident will actively participate and attend all required related conferences while on rotation.

**Systems-based Practice.**

1. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly and receive appropriate reimbursement for patients undergoing interventions.
2. The resident will learn the importance of accurate documentation through timely dictation of procedures.
3. The resident will learn about risk benefit analysis in interventional radiology setting.
Interventional Radiology (PGY 4)

Patient Care

The resident will

7. Assess patient for preoperative diagnostic and therapeutic intervention, including documentation of important and relevant physical and laboratory findings
8. The resident will learn about the basic principles of, and participate in, a wide variety of interventional procedures.
9. Recognize signs, symptoms, and physical findings associated with complications of access and intervention and will be able to perform a complete extremity neurovascular assessment
10. Provide initial interpretation and planning for findings on radiologic imaging
11. Provide vascular access for a variety of diagnostic and therapeutic procedures
12. Provide basic catheter and wire skills under direct supervision, and other more complex interventions as individual skills progress

Medical Knowledge

5. Learn basic catheter and wire skills by observation of experienced practitioners.
6. Become familiar with nomenclature and indications for a variety of different wires and catheters, including the indications and applications for each
7. Learn basics of how to interpret axial, coronal, and sagittal imaging for computerized tomographic scans, and how to manipulate images for optimal interpretation, including Terarecon.
8. Learn the angiographic anatomy of major vascular structures and interpretation of normal and abnormalities of blood flow, including ancillary techniques of assessment.

Interpersonal Communication Skills

4. The resident will learn how to actively participate in the process of obtaining informed consent for interventional procedures.
5. The resident will actively participate in the education of junior residents, medical students, and other personnel.
6. The resident will actively participate in departmental conferences
Professionalism

4. The resident will have, maintain and further develop a strong work ethic, personal integrity, and reinforce a commitment to always placing the patient first in the interventional radiology setting
5. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity in the interventional setting
6. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel.

Practice Based Learning and Improvement

3. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
4. The resident will actively participate and attend all required related conferences while on rotation.

Systems-based Practice

4. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly and receive appropriate reimbursement for patients undergoing interventions
5. The resident will learn the importance of accurate documentation through timely dictation of procedures
6. The resident will learn about risk benefit analysis in interventional radiology setting.
Cardiology (PGY2)

Patient Care

1. The resident will provide initial assessment and care for acute coronary syndromes, chest pain, arrhythmias, heart failure, and valvular disease.
2. Develop strategies for diagnostic assessment and imaging including cardiac catheterization, stress testing, and echocardiography and other cardiac imaging.
3. Interpret EKG and monitored rhythms.
4. Counsel patients on importance of smoking avoidance/cessation and advise on strategies.

Medical Knowledge

1. The resident will learn the anatomy and physiology as it relates to coronary artery disease.
2. The resident will learn the anatomy and physiology as it relates to valvular heart disease and relative value of open versus endovascular valve repairs.
3. The resident will learn the perioperative risk assessment for preoperative patients as it relates to coronary artery disease.
4. The resident will learn the pharmacology of intravenous and intra-arterial vasoactive drugs, medications for hypertension, lipid control, and diuretics.
5. The resident will learn the risk factors associated with coronary artery disease and methods to help modify them.

Interpersonal Communication Skills

1. The resident will learn how to interact and communicate with a wide variety of attending physicians, residents, fellows, as well as ancillary personnel, including nurses, respiratory therapists, physical therapists, radiology technicians, nurse practitioners, and social workers.
2. The resident will learn how to concisely present relevant history and physical findings as well as results of diagnostic and therapeutic interventions.
3. The resident will learn how to present alternative options in management of clinical problems.
**Professionalism**

1. The resident will maintain a professional atmosphere in his/her relationship to all attendings, fellows, other residents, and ancillary personnel.
2. The resident will learn the importance of timely response to consultations, prompt documentation of assessment in the written record, and communication with the primary physician or team.
3. The resident will learn the importance of timely and accurate completion of administrative responsibilities, including timing and dating of orders, daily progress notes, operative and discharge summaries.

**Practice Based Learning and Improvement**

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
2. The resident will actively participate and attend all required conferences.

**Systems-based Practice**

1. The resident will understand and practice cost effective patient care and will understand basic metrics used to measure cost effectiveness.
2. The resident will develop an appreciation for the complexities of both the economics and delivery of high quality medical care.
Pediatric Surgery (PGY 2)

**Patient Care**

1. Provide fluid management and weight based dosage of medications
2. Care for common surgical diseases that affect children, including traumatic conditions.
3. Manage common and uncommon vascular emergencies in children including trauma, vascular and venous access, umbilical artery catheterization problems, and thromboembolic disease.
4. Manage common pediatric surgery problems
   a. opening and closing abdominal incisions and doing routine intra-abdominal explorations and hernia repair
   b. bowel obstruction and necrotizing enterocolitis
   d. evisceration, fasciitis, and dehiscence
   e. post operative complications, including urinary tract infection, pneumonia, bleeding, wound infection

**Medical Knowledge**

1. Learn anatomy of the abdominal and inguinal structures and the pathology and presentation of complex and simple diseases of the abdomen and inguinal canal that may relate to vascular surgery.
2. Gain knowledge of how to do a proper physical examination in the pediatric patient.
3. Diagnosis and management of intra-abdominal and pelvic congenital anomalies, etiologies of large and small bowel obstruction, neonatal and childhood tumors, especially as they relate to abdominal vasculature
4. Learn to interpret common diagnostic tests in children
5. Understand the peri-operative management of pediatric patients

**Interpersonal Communication Skills**

1. The resident will learn how to actively participate in the process of obtaining informed consent from parents and surrogate decision makers
2. The resident will actively participate in the discussions about patient care plans with nursing, social workers, parents and ancillary personnel. The resident will learn about the importance of communication with referring physicians.
3. The resident will actively participate in departmental conferences.
Professionalism

4. The resident will have, maintain and further develop a strong work ethic, personal integrity, and reinforce a commitment to always placing the patient first.
5. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity.
6. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel.

Practice Based Learning and Improvement

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
2. The resident will actively participate and attend all required conferences.

Systems-based Practice

1. The resident will be trained to perform a root cause analysis for problems related to patient care in the hospital. Rather than trying to find fault in a specific episode of care, he/she will look for opportunities to improve the system of care.
2. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly and receive appropriate reimbursement.
3. The resident will learn about risk benefit analysis in pediatric surgery population.
Cardiovascular and Surgical Intensive Care Unit (PGY 2)

**Patient Care**

The resident will

1. become familiar with the management of acutely ill surgical patients, including, but not limited to:
   a. Basic critical care participation involving the management of shock, nutrition, and ventilator care and resuscitation
   b. Assessment and management of hypoxia, hypercarbia, acidosis, perioperative hyper and hypotension, EKG interpretation, perioperative pain management, management of acute bleeding and clotting disorders, and the management and prevention DVT and pulmonary embolization.
   c. Placing arterial and central venous lines, understanding their indications, potential complications and use of ultrasound guided access.
2. treat patients with multiple trauma injuries, airway problems, acute GI bleeding, bowel obstruction, bowel infarction, incarcerated hernias, sepsis and sepsis-inflammatory syndromes, as well as end stage organ failure, including liver and kidney.
3. perform routine intubation, emergency intubation, tracheostomy, cricothyroidotomy.

**Medical Knowledge**

The resident will

1. Become familiar the with principles of
   a. airway management
   b. ventilator management
   c. peri operative physiology and cardiopulmonary resuscitation
   d. fluid and electrolyte management, acid-base imbalance
   e. hemodynamics including pressure support, arrhythmia management, treatment of shock, including hypovolemic, cardiogenic and septic shock
   f. enteral and parenteral nutrition, both assessment and caring out the support
   g. pharmacology and pharmacokinetics of commonly used vasopressors and anti-arrhythmic drugs in surgical patients
2. Learn the management and prevention of
   a. peri operative hyper and hypotension
   b. perioperative pain
   c. acute bleeding and clotting disorders
   d. DVT and pulmonary embolization
   e. hypoxia, hypercarbia, acidosis
   f. EKG interpretation
Interpersonal Communication Skills

1. The resident will learn how to actively participate in the process of obtaining informed consent.
2. The resident will actively participate in the education of junior residents, medical students, and other personnel.
3. The resident will actively participate in departmental conferences
4. The resident will learn to how to interact with family members in stressful situations and settings of uncertainty.
5. The resident will learn how to interact and communicate with a wide variety of ancillary personnel, including nurses, respiratory therapists, physical therapists, radiology technicians, nurse practitioners, and social workers.

Professionalism

1. The resident will have, maintain and further develop a strong work ethic, personal integrity, and reinforce a commitment to always placing the patient first.
2. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity.
3. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel.
4. The resident will further develop and understanding of and commitment to lifelong learning.

Practice Based Learning and Improvement

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
2. The resident will actively participate and attend all required conferences.

Systems-based Practice

1. The resident will be trained to perform a root cause analysis for problems related to patient care in the hospital. Rather than trying to find fault in a specific episode of care, he/she will look for opportunities to improve the system of care in critical care patients.
2. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly and receive appropriate reimbursement for critical care patients
3. The resident will learn about risk benefit analysis in the ICU setting.
Transplantation (PGY 3)

Patient Care

1. The resident will participate in the management of patients with complex liver disease, including the medical treatment and the surgical options, understand the physiology of portal hypertension, cirrhosis and ascites, and be able to initiate medical management of patients with these conditions.
2. The resident will participate in the management of patients with complex end stage renal disease, including the medical treatment of diabetes and immunosuppression.
3. The resident will participate in surgical options for management of renal disease, including vascular access for dialysis and be able to initiate medical management of patients with these conditions.
4. Develop advanced technical skills such as ureteral, renal vein and renal artery anastomosis, and participate in organ harvests

Medical Knowledge

1. Learn anatomy of the abdominal and pelvic structures and the pathology and presentation of complex and simple diseases of the abdomen that may relate to vascular surgery.
2. Learn principles of immune suppression, side effects, basic principles of cellular and humoral immunity, and cell receptor mechanisms, and infectious disease processes in immune suppressed patients.
3. Gain advanced knowledge of the anatomy of the abdomen and pelvis, especially liver anatomy as it relates to vasculature and vena cava, the visceral blood supply and techniques of exposure.
4. Learn to interpret common diagnostic tests, including blood tests and scans to evaluate the immuno-suppressed patient

Interpersonal Communication Skills

1. The resident will learn how to actively participate in the process of obtaining informed consent.
2. The resident will actively participate in the education of junior residents, medical students, and other personnel.
3. The resident will actively participate in departmental and division conferences.
4. The resident will learn how to interact and communicate with a wide variety of ancillary personnel, including nurses, respiratory therapists, physical therapists, radiology technicians, nurse practitioners, and social workers.
**Professionalism**

1. The resident will have, maintain and further develop a strong work ethic, personal integrity, and reinforce a commitment to always placing the patient first.
2. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity.
3. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel.
4. The resident will learn how to interact and communicate with a wide variety of ancillary personnel, including nurses, respiratory therapists, physical therapists, radiology technicians, nurse practitioners, and social workers.

**Practice Based Learning and Improvement**

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
2. The resident will actively participate and attend all required conferences.

**Systems-based Practice**

1. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly and receive appropriate reimbursement and the importance of accurate and timely documentation.
2. The resident will learn about risk benefit analysis in complicated patients with multiple co morbidities.
Cardio - Thoracic Surgery (PGY 4)

**Patient Care**

1. Help manage the major intrathoracic, cardiac, and great vessel disease that may also affect patients with vascular disease, particularly in regard to risk factors that overlap vascular disease risk factors.
2. Manage common cardio thoracic surgery problems
   a. opening and closing thoracic and mediastinal incisions and assisting on routine cardiac and thoracic surgeries
   b. pre and postoperative care and complications relevant to cardiothoracic surgery patients, including pneumonia, hemo- and pneumothorax, and bleeding
   c. chest and mediastinal tubes
   d. pharmacologic management of blood pressure and arrhythmias
   e. basics of balloon pump management and cardiac support devices

**Medical Knowledge**

1. Learn anatomy of the mediastinal and thoracic structures and the pathology and presentation of complex and simple diseases of the thorax that may relate to vascular surgery, especially aneurismal disease.
2. Learn to interpret common diagnostic tests, including blood tests, pulmonary function, basic echocardiography and cardiac stress imaging, catheterization, and CT imaging to evaluate perioperative risks and assess both acute and chronic intra thoracic problems
3. Understand the perioperative management of cardiothoracic surgery patients
4. Understand the basic evaluation of head and neck masses.

**Interpersonal Communication Skills**

1. The resident will learn how to actively participate in the process of obtaining informed consent.
2. The resident will actively participate in the education of junior residents, medical students, and other personnel.
3. The resident will actively participate in departmental conferences

**Professionalism**

1. The resident will have, maintain and further develop a strong work ethic, personal integrity, and reinforce a commitment to always placing the patient first.
2. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity.
3. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel.
Practice Based Learning and Improvement

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
2. The resident will actively participate and attend all required conferences.

Systems-based Practice.

1. The resident will learn the basic relevant diagnostic and billing codes in order to bill ethically and honestly, and importance of accurate and timely documentation.
2. The resident will learn about risk benefit analysis using appropriate diagnostic testing and knowledge of the natural history of cardiac and thoracic diseases.
Trauma (PGY 4)

In addition to the goals for each of the competencies for this rotation expected during the PGY 1 year, the resident will achieve the following:

**Patient Care**

1. Provide initial assessment and early management and triage of major intra-abdominal, thoracic and extremity trauma, including airway, respiratory support, and resuscitation.
2. Manage common trauma surgery problems
   a. assessment and management of hemorrhagic shock
   b. assessment of head injury
   c. interpret imaging, including ultrasound and computed tomography
   d. assess and manage abdominal and extremity compartment syndrome
   e. post operative complications, including urinary tract infection, pneumonia, bleeding, wound infection
   f. recognize and manage adrenal insufficiency

**Medical Knowledge**

1. Learn anatomy of the abdominal and pelvic structures and the pathology and presentation of complex and simple blunt and penetrating traumatic injury of the chest and abdomen that may relate to vascular surgery.
2. Learn role of intracranial and cortical endocrine dysfunction in trauma.
3. Diagnosis and management of intra-abdominal and pelvic postoperative complications such as abscess, small bowel obstruction, and role for peptic ulcer disease stress prophylaxis, and antibiotic and antifungal prophylaxis
4. Learn to interpret common diagnostic tests, including blood tests and imaging scans to evaluate both acute intra-abdominal problems

**Interpersonal Communication Skills**

1. The resident will learn how to actively participate in the process of obtaining informed consent.
2. The resident will actively participate in the education of junior residents, medical students, and other personnel.
3. The resident will actively participate in departmental/division conferences
4. The resident will learn how to interact and communicate with a wide variety of ancillary personnel, including nurses, respiratory therapists, physical therapists, radiology technicians, nurse practitioners, and social workers.
Professionalism

1. The resident will have, maintain and further develop a strong work ethic, personal integrity, and reinforce a commitment to always placing the patient first.
2. The resident will be committed to providing equal quality care to all patients regardless of their ability to pay, their socioeconomic status, gender or ethnicity.
3. The resident will maintain a professional atmosphere in his/her relationship to all ancillary personnel.

Practice Based Learning and Improvement

1. The resident will learn to utilize a broad variety of educational resources, available both in traditional paper, as well as online access to improve their knowledge of disease processes, patient care practices and learn the fundamentals of evidence-based medicine.
2. The resident will actively participate and attend all required conferences.

Systems-based Practice

1. The resident will be trained to perform a root cause analysis for problems related to patient care in the hospital. Rather than trying to find fault in a specific episode of care, he/she will look for opportunities to improve the system of care.
2. The resident will learn the basic appropriate diagnostic and billing codes in order to bill ethically and honestly.
3. The resident will learn about risk benefit analysis and importance of multidisciplinary communication and interaction.