Education Goals and Objectives for the General Surgery Residency Program

THE SIX CORE COMPETENCIES IN GENERAL SURGERY

The Accreditation Council for Graduate Medical Education (ACGME), including the Residency Review Committee (RRC) for surgery, has adopted a set of general competencies for all physicians who complete higher training programs. It is expected that during the course of their training, surgery residents will become competent in these six areas:

1) Patient Care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Surgical residents must demonstrate manual dexterity appropriate for their training level and be able to develop and execute patient care plans.

Patient care is learned through such activities as operative experience supervised by faculty and/or senior residents, pre- and postoperative patient management on the hospital wards, ICU rotations, and outpatient management in the surgery clinics. Competence in patient care is assessed on an ongoing basis though maintenance of the resident's operative log, departmental/ hospital performance improvement meetings, trauma multi-departmental peer review & PI meetings, monthly faculty evaluations, and biannual faculty evaluations. (See SCORE Patient Care Curriculum outline below.)

2) Medical Knowledge about established and evolving biomedical, clinical, and cognate (e.g., epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Surgical residents are expected to critically evaluate and demonstrate knowledge of pertinent scientific information.

Medical knowledge is acquired through participation in Thursday didactic conferences, grand rounds presentations, individual reading and self-study using printed texts, journals, and online resources including the SCORE surgical curriculum portal, and attendance at state and national meetings. Learning is assessed through monthly and biannual faculty evaluations and the yearly American Board of Surgery In-training examination. During the PGY-4 and -5 years, general surgical knowledge is also examined by way of yearly mock oral board examinations.

3) Practice-Based Learning and Improvement that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care. Surgical residents are expected to critique personal practice outcomes and demonstrate recognition of the importance of lifelong learning in surgical practice.

Exercises in practice-base learning and improvement include participation in weekly morbidity & mortality conference, monthly trauma morbidity and mortality

conference, journal club, computer access to Medline, TTUHSC library online journals, and the SCCM Resident ICU course. Departmental/ hospital performance improvement meetings, and trauma multi-departmental peer review and performance improvement conference also play a role.

4) Interpersonal and Communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals. Surgical residents are expected to communicate effectively with other health care professionals, counsel and educate patients and families, and effectively document practice activities.

Competence in interpersonal and communication skills is acquired through interaction with patients and their families, colleagues, and via scholarly presentations during conferences and at regional and national meetings. Other activities such as the clinical teaching of medical students, case based teaching, standardized communication around handoff in morning report, and writing and presenting abstracts and papers similarly promotes competence in communication and personal interaction. For didactic purposes, residents also benefit from the Surgical Professionalism and Interpersonal Communication Education Program (SPICE). As to assessment, interpersonal and communication skills are evaluated by the faculty and clinic and hospital staff in the context of periodic resident evaluations and 360^{o} evaluations.

5) Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Surgical residents are expected to maintain high standards of ethical behavior, demonstrate a commitment to continuity of patient care, and demonstrate sensitivity to age, gender and culture of patients and other health care professionals.

Professionalism is inculcated by the example of seniors residents and faculty and assessed by faculty and clinic and hospital staff in the context of periodic resident evaluations and 360^{o} evaluations. For didactic purposes, residents also benefit from the Surgical Professionalism and Interpersonal Communication Education Program (SPICE).

6) Systems-Based Practice, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Surgical residents are expected to practice high quality, cost effective patient care, demonstrate a knowledge of risk-benefit analysis, and demonstrate an understanding of the role of different specialists and other health care professionals in overall patient management.

Exposure to concepts of systems-based practice occurs through departmental/ hospital performance improvement review, trauma multi-departmental peer review and performance improvement conference, hospital multi-disciplinary patient care

meetings, monthly trauma morbidity and mortality conference, perioperative grand rounds, and invited speakers on practice management and other health care issues. PGY-3 residents have access to MDContent's modular online course, The Business of Healthcare, which includes self-assessment quizzes.

GENERAL TENETS OF SURGICAL RESIDENCY TRAINING

The principal educational goal of the General Surgery Residency Training Program is to produce a board certified surgeon capable of independently practicing first rate general surgery. On completion of the program, the surgeon should have general knowledge, clinical judgment, basic technical skills, and personality attributes that enable him or her to be assessed as competent in the six general areas as outlined under the core competencies. These attributes will be acquired over at least a five-year training period by acquiring pertinent knowledge through clinical experience, the study of current literature and major textbooks, bedside rounds and conferences, and preparation of reports for presentation and publication. Knowledge of the clinical course of patient disease will be acquired by managing surgical patients both as in- and outpatients, including management of the critically ill surgical patient. Most importantly, technical skill to perform operations and intra-operative decision-making will be acquired through observation and performance of a variety of surgical procedures within the realm of general surgery over the course of the training period. The residents will record each operation performed or assisted in an operative experience log maintained on the web-site provided by the Residency Review Committee (RRC) for Surgery. Each resident is responsible for his/her own resident data collection during the course of his/her training. The ability to describe patients' clinical progress will be developed by case presentations during ward rounds and conferences. The ability to interact appropriately and effectively with referring/consulting physicians will be acquired by periodic communication with such physicians throughout the training period.

With respect to specific educational goals and objectives, the Department of Surgery is adopting the curriculum currently being developed by the Surgical Council on Resident Education (SCORE). Every resident receives his/her own Username and Password for the online SCORE portal at http://portal.surgicalcore.org/. Weekly study assignments at the portal are made by the chief residents and/or program director. The complete SCORE Patient Care Curriculum Outline 2009-2010 can be downloaded in pdf format at http://www.surgicalcore.org/patientcareoutline.html. For the descriptive purposes of this document, an abbreviated version of the SCORE Patient Care Outline is printed below:

Abbreviated SCORE Patient Care Curriculum Outline: 2009-2010

CATEGORY 1: ABDOMEN – GENERAL

Diseases/Conditions

BROAD

- Acute abdominal pain
- Intra-abdominal abscess
- Rectus sheath hematoma
- Mesenteric cyst

FOCUSED

- Chronic abdominal pain
- Carcinomatosis
- Pseudomyxoma peritoneii
- Spontaneous bacterial peritonitis
- Desmoid tumors
- Chylous ascites
- Retroperitoneal fibrosis

Operations/Procedures

ESSENTIAL – COMMON

- Insertion peritoneal dialysis catheter
- Laparoscopic exploratory laparotomy
- Open exploratory laparotomy

ESSENTIAL – UNCOMMON

- Open drainage abdominal abscess

COMPLEX

- Open retroperitoneal lymph node dissection
- Laparoscopic retroperitoneal lymph node dissection
- Operation for pseudomyxoma

CATEGORY 2: ABDOMEN – HERNIA

Diseases/Conditions

BROAD

- Inguinal hernia
- Femoral hernia
- Ventral hernia
- Miscellaneous hernias

Operations/Procedures

ESSENTIAL – COMMON

- Open repair of inguinal and femoral hernia
- Laparoscopic repair of inguinal and femoral hernia
- Open repair of ventral hernia
- Laparoscopic repair of ventral hernia

ESSENTIAL – UNCOMMON

- Repair miscellaneous hernias

COMPLEX

- Component separation abdominal wall

reconstruction

CATEGORY 3: ABDOMEN – BILIARY

Diseases/Conditions

BROAD

- Jaundice
- Cholangitis
- Acute cholecystitis
- Chronic cholecystitis
- Choledocholithiasis
- Biliary pancreatitis
- Acalculous cholecystitis and biliary dyskinesia
- Iatrogenic bile duct injury
- Gallstone ileus
- Gallbladder polyps
- Gallbladder cancer (incidental)

FOCUSED

- Gallbladder cancer
- Cancer of the bile ducts
- Choledochal cyst
- Sclerosing cholangitis
- Ampullary stenosis/sphincter of Oddi dysfunction

Operations/Procedures

ESSENTIAL – COMMON

- Open cholecystectomy with or without cholangiography
- Laparoscopic cholecystectomy with or with out cholangiography

ESSENTIAL – UNCOMMON

- Cholecystostomy
- Open common bile duct exploration
- Choledochoscopy
- Choledochoenteric anastomosis
- Operation for gallbladder cancer (when found incidentally)
- Repair acute common bile duct injury

COMPLEX

- Laparoscopic common bile duct exploration
- Operation for gallbladder cancer (planned)
- Operation for bile duct cancer
- Excision choledochal cyst
- Transduodenal sphincteroplasty

CATEGORY 4: ABDOMEN – LIVER

Diseases/Conditions

BROAD

- Liver mass – evaluation
- Hepatic abscess

FOCUSED

- Hepatic adenoma
- Focal nodular hyperplasia
- Hemangioma

- Hepatocellular carcinoma
- Cholangiocarcinoma
- Metastatic tumors
- Miscellaneous hepatic neoplasms
- Ascites
- Bleeding esophageal varices
- Hepatic failure and encephalopathy
- Hepatorenal syndrome
- Viral hepatitis (occupational risk)

Operations/Procedures

ESSENTIAL – COMMON

- Open liver biopsy
- Laparoscopic liver biopsy

ESSENTIAL – UNCOMMON

- Drainage liver abscess

COMPLEX

- Open segmentectomy/lobectomy
- Laparoscopic segmentectomy/lobectomy
- Intraoperative ultrasound of liver
- Portal-systemic shunt

CATEGORY 5: ABDOMEN – PANCREAS

Diseases/Conditions

BROAD

- Pancreatic abscess and infected necrosis
- Pancreatic pseudocyst

FOCUSED

- Autoimmune pancreatitis
- Chronic pancreatitis, including hereditary pancreatitis
- Pancreatic insufficiency
- Ductal adenocarcinoma
- Acinar cell carcinoma
- Cystic neoplasms
- Intraductal papillary mucinous neoplasms
- Other periampullary neoplasms
- Gastrinoma and Z-E syndrome
- Insulinoma
- VIPoma
- Glucagonoma
- Somatostatinoma
- Nonfunctional endocrine tumors
- Lymphoma of pancreas

Operations/Procedures

COMPLEX

- Laparoscopic/endoscopic pancreatic debridement for necrosis
- Pancreaticoduodenectomy
- Total pancreatectomy
- Ampullary resection for tumor
- Distal pancreatectomy
- Longitudinal pancreaticojejunostomy

- Frey procedure
- Beger procedure
- Intraoperative pancreatic ultrasound
- Open pancreatic debridement for necrosis
- Drainage pancreatic pseudocyst

Category 6: Abdomen – Spleen

Diseases/Conditions

BROAD

- Postsplenectomy sepsis

FOCUSED

- Hemolytic anemias
- Idiopathic thrombocytopenic purpura
- Secondary hypersplenism and splenomegaly
- Neoplasms of spleen
- Splenic cysts

Operations/Procedures

ESSENTIAL – COMMON

- Open splenectomy
- Laparoscopic splenectomy

ESSENTIAL – UNCOMMON

- Partial splenectomy/splenorrhaphy

Category 7: Alimentary Tract – Esophagus

Diseases/Conditions

BROAD

- Gastroesophageal reflux and Barrett's esophagus
- Hiatal hernia
- Dysphagia
- Spontaneous esophageal perforation
- Iatrogenic esophageal perforation
- Mallory-Weiss syndrome

FOCUSED

- Achalasia
- Zenker's diverticulum
- Epiphrenic diverticulum
- Foreign bodies
- Schatzki's ring
- Chemical burns
- Benign neoplasms
- Adenocarcinoma
- Squamous cell carcinoma
- Diffuse esophageal spasm
- Nutcracker esophagus
- Presbyesophagus
- Scleroderma connective tissue disorders

Operations/Procedures

ESSENTIAL – COMMON

- Laparoscopic antireflux procedure

ESSENTIAL – UNCOMMON

- Open antireflux procedure
- Open repair of paraesophageal hernia
- Laparoscopic repair of paraesophageal hernia
- Repair/resection of perforated esophagus

COMPLEX

- Total esophagectomy
- Esophagogastrectomy
- Cricopharyngeal myotomy with excision Zenker's diverticulum
- Open Heller myotomy
- Laparoscopic Heller myotomy
- Collis gastroplasty

CATEGORY 8: ALIMENTARY TRACT – STOMACH

Diseases/Conditions

BROAD

- Upper gastrointestinal bleeding
- Gastric carcinoma
- Duodenal ulcer
- Gastric ulcer
- Peptic ulcer disease with bleeding
- Peptic ulcer disease with perforation
- Peptic ulcer disease with obstruction
- Gastric polyps
- Gastric lymphoma
- Gastric carcinoid tumor
- Stress gastritis

FOCUSED

- Morbid obesity
- Bezoars and foreign bodies
- Gastroparesis
- Postgastrectomy syndromes

Operations/Procedures

ESSENTIAL – COMMON

- Percutaneous endoscopic gastrostomy
- Open gastrostomy

ESSENTIAL – UNCOMMON

- Partial/total gastrectomy
- Repair duodenal perforation
- Truncal vagotomy and drainage

COMPLEX

- Open operation for morbid obesity
- Laparoscopic operation for morbid obesity
- Laparoscopic gastric resection
- Proximal gastric vagotomy
- Revisional procedures for postgastrectomy syndromes

CATEGORY 9: ALIMENTARY TRACT – SMALL INTESTINE

Diseases/Conditions

BROAD

- Small bowel obstruction and ileus
- Emergent management of Crohn's disease of small intestine
- Acute mesenteric ischemia: arterial, venous, and nonocclusive
- Meckel's diverticulum
- Radiation enteritis
- Small intestinal polyps
- Small intestinal adenocarcinoma
- Small intestinal lymphoma
- Small intestinal carcinoid tumor
- Small intestinal GISTs
- Intussusception
- Pneumatosis cystoides intestinalis

FOCUSED

- Short bowel syndrome
- Enteric infections and blind loop syndrome

Operations/Procedures

ESSENTIAL – COMMON

- Open small bowel resection
- Open adhesiolysis
- Laparoscopic adhesiolysis
- Ileostomy
- Ileostomy closure
- Open feeding jejunostomy
- Laparoscopic feeding jejunostomy

ESSENTIAL – UNCOMMON

- Superior mesenteric artery embolectomy/ thrombectomy

COMPLEX

- Stricturoplasty for Crohn's disease

CATEGORY 10: ALIMENTARY TRACT – LARGE INTESTINE

Diseases/Conditions

BROAD

- Lower gastrointestinal bleeding
- Large bowel obstruction
- Acute appendicitis
- Diverticulitis
- Diverticular bleeding
- Diverticular fistulae
- Colonic polyps
- Colonic cancer
- Emergent management of ulcerative colitis
- Emergent management of Crohn's disease of colon
- Volvulus
- Miscellaneous colonic neoplasms

• Appendiceal neoplasms
• Emergent management of indeterminate colitis
• Ischemic colitis
• Antibiotic-induced colitis

FOCUSED

• Endometriosis
• Irritable bowel syndrome
• Functional constipation
• Infectious colitis

Operations/Procedures

ESSENTIAL – COMMON

• Open appendectomy
• Laparoscopic appendectomy
• Open partial colectomy
• Laparoscopic partial colectomy
• Colostomy
• Colostomy closure

ESSENTIAL – UNCOMMON

• Subtotal colectomy with ileorectal anastomosis/ileostomy

COMPLEX

• Total proctocolectomy and ileoanal pullthrough

CATEGORY 11: ALIMENTARY TRACT – ANORECTAL

Diseases/Conditions

BROAD

• Hemorrhoids
• Anal fissure
• Anorectal abscess and fistulae
• Rectal cancer
• Anal cancer

FOCUSED

• Pelvic floor dysfunction
• Incontinence
• Anal dysplasia/sexually-transmitted disease
• Rectal prolapse

Operations/Procedures

ESSENTIAL – COMMON

• Banding for internal hemorrhoids
• Hemorrhoidectomy
• Subcutaneous lateral internal sphincterotomy
• Drainage anorectal abscess
• Anal fistulotomy/seton placement

ESSENTIAL – UNCOMMON

• Excision of anal cancer

COMPLEX

• Stapled hemorrhoidectomy
• Repair complex anorectal fistulae
• Operation for incontinence/constipation

• Open transabdominal operation for rectal prolapse
• Laparoscopic transabdominal operation for rectal prolapse
• Perineal operation for rectal prolapse
• Transanal resection for tumor
• Abdominoperineal resection
• Pelvic exenteration for rectal cancer
• Operation for anal cancer

CATEGORY 12: ENDOSCOPY

Operations/Procedures

ESSENTIAL – COMMON

• Esophagogastroduodenoscopy
• Proctoscopy
• Colonoscopy with or without biopsy/polypectomy
• Bronchoscopy
• Laryngoscopy

COMPLEX

• Mediastinoscopy
• Cystoscopy
• ERCP

CATEGORY 13: BREAST

Diseases/Conditions

BROAD

• Breast mass
• Nipple discharge
• Fibroadenoma
• Fibrocystic disease
• Intraductal papilloma
• Gynecomastia
• Invasive ductal carcinoma
• Ductal carcinoma in situ
• Invasive lobular carcinoma
• Lobular carcinoma in situ
• Fat necrosis
• Mastitis and abscess
• Galactocoele
• Mondor disease
• Inflammatory breast cancer
• Paget's disease of the nipple
• Cystosarcoma phyllodes
• Breast cancer during pregnancy and lactation
• Occult breast cancer with axillary metastasis
• Male breast cancer
• Atypical ductal hyperplasia
• Hereditary breast cancer
• Radial scar

Operations/Procedures

ESSENTIAL – COMMON

- Aspiration of breast cyst
- Duct excision
- Breast biopsy with or without needle localization
- Lumpectomy
- Simple mastectomy
- Axillary dissection
- Sentinel lymph node biopsy
- Modified radical mastectomy

ESSENTIAL – UNCOMMON

- Radical mastectomy

COMPLEX

- Stereotactic breast biopsy

CATEGORY 14: ENDOCRINE

Diseases/Conditions

BROAD

- Thyroid nodule(s)
- Papillary carcinoma
- Follicular carcinoma
- Primary hyperparathyroidism
- Hypothyroidism (postoperative)
- Hypercalcemia
- Hypocalcemia
- Addisonian crisis
- Hyperthyroidism

FOCUSED

- Thyroiditis
- Medullary carcinoma
- Hurthle cell tumors
- Anaplastic carcinoma
- Secondary hyperparathyroidism
- Tertiary hyperparathyroidism
- Recurrent or persistent hyperparathyroidism
- Parathyroid carcinoma
- Multiple endocrine neoplasia type I
- Multiple endocrine neoplasia type IIA
- Multiple endocrine neoplasia type IIB
- Incidental adrenal mass
- Pheochromocytoma
- Primary hyperaldosteronism
- Cushing's syndrome
- Cushing's disease
- Adrenocortical carcinoma

Operations/Procedures

ESSENTIAL – COMMON

- Partial or total thyroidectomy
- Parathyroidectomy

COMPLEX

- Open adrenalectomy
- Laparoscopic adrenalectomy

CATEGORY 15: SKIN AND SOFT TISSUE

Diseases/Conditions

BROAD

- Pilonidal cyst and sinus
- Nevi
- Melanoma
- Squamous cell carcinoma
- Basal cell carcinoma
- Evaluation of soft tissue masses
- Epidermal cyst
- Apocrine tumor
- Eccrine tumor
- Sebaceous tumor
- Merkel cell tumor
- Dermatofibrosarcoma
- Hidradenitis
- Cellulitis
- Necrotizing fasciitis
- Paronychia
- Felon
- Wound infection

FOCUSED

- Decubitus ulcer
- Extremity soft tissue sarcomas
- Retroperitoneal soft tissue sarcomas
- Lymphedema

Operations/Procedures

ESSENTIAL – COMMON

- Excisional and incisional biopsy of skin/soft tissue lesions
- Incision, drainage, debridement for soft tissue infections
- Pilonidal cystectomy

ESSENTIAL – UNCOMMON

- Wide local excision melanoma
- Sentinel lymph node biopsy for melanoma

COMPLEX

- Ilioinguinal – femoral lymphadenectomy
- Major resection for soft tissue sarcoma

CATEGORY 16: SURGICAL CRITICAL CARE

Diseases/Conditions

BROAD (NOT AS BROAD AS SPECIALIST)

- Hypovolemic shock
- Septic shock
- Cardiogenic shock
- Neurogenic shock
- Respiratory failure
- Cardiac failure
- Gastrointestinal failure
- Hepatic failure
- Renal failure
- Coagulopathy

- Neurologic dysfunction
- Endocrine dysfunction
- Derangements of electrolytes and acid-base
- Anaphylaxis
- Pneumonia – hospital acquired

Operations/Procedures

ESSENTIAL – COMMON

- Arterial line placement
- Central venous line placement
- Pulmonary artery catheter placement
- Endotracheal intubation
- Real-time ultrasound technique for vascular localization
- Administration of oxygen and administrative devices
- Airway management
- Thoracentesis
- Paracentesis
- Nasogastric tube placement
- Urinary catheterization
- Patient controlled analgesia and epidural analgesia
- Measurement of compartment pressures (abdomen, extremity)

COMPLEX

- Cardiac pacing (external and transvenous)
- Defibrillation and cardioversion

CATEGORY 17: TRAUMA

Diseases/Conditions

BROAD

- Injuries of the spleen
- Injuries of the liver
- Injuries of the small intestine
- Injuries of the colon and rectum
- Blunt trauma
- Penetrating trauma
- Vascular injuries of the neck
- Injuries of the trachea and larynx
- Injuries of the pharynx and cervical esophagus
- Nerve injuries of the neck
- Rib fractures
- Sternal fractures
- Flail chest
- Pneumothorax
- Hemothorax
- Pulmonary contusion
- Pulmonary laceration
- Myocardial contusion
- Cardiac tamponade
- Esophageal injury
- Injuries of the diaphragm

- Injuries of the stomach
- Injuries of the duodenum
- Injuries of the pancreas
- Retroperitoneal hematoma
- Pelvic fractures
- Injuries of the kidney
- Injuries of the bladder
- Injuries of the ureter
- Vascular injuries of the thorax
- Vascular injuries of the abdomen
- Vascular injuries of the extremities
- Pediatric trauma
- Geriatric trauma
- Trauma in pregnancy

CATEGORY 17: TRAUMA

FOCUSED

- Closed head injury
- Penetrating head injury
- Tracheobronchial injuries
- Aortic Injuries
- Urethral injuries
- Spine fracture
- Pelvic fracture
- Extremity fractures
- Dislocations
- Sprains and strains
- Mangle and traumatic amputation
- Snake bites
- Spider bites
- Bee and wasp stings
- Scorpion bites
- Animal and human bites
- Hypothermia
- Frostbite
- Flame burns
- Scald burns
- Electrical burns
- Chemical burns
- Smoke inhalation injury
- Carbon monoxide poisoning

Operations/Procedures

ESSENTIAL – UNCOMMON

- Management of esophageal trauma
- Management of gastric trauma
- Management of duodenal trauma
- Management of small bowel trauma
- Management of colon trauma
- Neck exploration for trauma
- Open exploratory thoracotomy
- Open exploratory laparotomy

- Laparoscopic exploratory laparotomy
- Splenectomy/splenorrhaphy

Category 17: Trauma

ESSENTIAL – UNCOMMON

- Repair hepatic lacerations
- Drainage pancreatic injury
- Debride/suture major wounds
- Repair/resection for kidney trauma
- Repair ureteral injury
- Repair bladder injury
- Repair of carotid artery injury
- Repair of abdominal aorta or vena cava injury
- Repair peripheral vessels
- Fasciotomy for injury
- Repair cardiac injury
- Focused assessment with sonography (FAST scan)

COMPLEX

- Burn debridement or grafting
- Placement of intracranial pressure monitor
- Reduction and stabilization of maxillofacial fracture
- Repair of tendon or nerve
- Hepatic resection for injury
- Resection for pancreatic injury
- Closed reduction of fracture
- Open reduction of open/closed fracture
- Debridement and reduction of open fracture
- Repair of thoracic aorta, innominate, subclavian injury

Category 18: Vascular – Arterial Disease

Diseases/Conditions

BROAD

- Acute limb ischemia
- Peripheral arterial emboli
- Acute arterial thrombosis
- Compartment syndromes
- Diabetic foot infections

FOCUSED

- Cerebrovascular occlusive disease
- Aortoiliac occlusive disease
- Chronic visceral occlusive disease
- Renal artery occlusive disease
- Femoropopliteal occlusive disease
- Infrapopliteal occlusive disease
- Upper extremity occlusive disease
- Buerger disease

- Fibromuscular dysplasia
- Cystic medial necrosis
- Behcet disease
- Aortic aneurysms
- Visceral arterial aneurysms
- Peripheral arterial aneurysms
- Aortic dissection
- Claudication
- Hypercoagulable syndromes
- Carotid body tumors
- Vascular graft infections
- Aortic thrombosis
- Thoracic outlet syndrome

Operations/Procedures

ESSENTIAL – UNCOMMON

- Embolectomy/thrombectomy artery
- Above knee amputation
- Below knee amputation
- Toe amputation

COMPLEX

- Aorto-iliac/femoral bypass
- Ilio-iliac/femoral bypass
- Femoral-popliteal bypass
- Profunda endarterectomy
- Infrapopliteal bypass
- Other endarterectomy
- Composite leg bypass graft
- Revise/re-do lower extremity bypass
- Arm bypass, endarterectomy, repair
- Celiac/SMA endarterectomy/bypass
- Renal endarterectomy/bypass
- Femoral-femoral bypass
- Axillo-femoral bypass
- Axillo-popliteal-tibial bypass
- Transmetatarsal amputation
- Upper extremity amputation
- Disarticulation
- Elective repair infrarenal aortoiliac aneurysm
- Repair femoral aneurysm
- Repair popliteal aneurysm
- Repair suprarenal abdominal aortic aneurysm
- Repair thoracoabdominal aortic aneurysm
- Repair thoracic aorticaneurysm
- Carotid endarterectomy
- Reoperative carotid surgery
- Excise carotid body tumor
- Direct repair aortic arch branches for CNS symptoms
- Vertebral artery operation
- Vascular ultrasound
- Angioscopy

- Balloon angioplasty
- Transcatheter stent
- Other endovascular graft
- Endovascular repair aortic aneurysm
- Endovascular repair other aneurysm
- Endovascular thrombolysis
- Pseudoaneurysm repair/injection
- Explore post-op bleed, thrombosis, infection
- Graft thrombectomy/revision
- Excise infected vascular graft
- Repair graft-enteric fistula
- Sympathectomy
- Harvest arm vein
- Thoracic outlet decompression
- Repair ruptured aortic aneurysm

CATEGORY 19: VASCULAR – VENOUS

Diseases/Conditions

BROAD

- Venous thrombosis/embolism
- Thrombophlebitis, including suppurative
- Venous stasis and chronic venous insufficiency
- Varicose veins

Operations/Procedures

ESSENTIAL – COMMON

- Venous insufficiency and operation for varicose veins
- Sclerotherapy, peripheral vein
- Insertion vena caval filter

COMPLEX

- Venous embolectomy/thrombectomy
- Venous reconstruction
- Non-reconstructive venous ulcer operation
- Repair arteriovenous malformation

CATEGORY 20: VASCULAR – ACCESS

Diseases/Conditions

BROAD

- Percutaneous vascular access for dialysis

Operations/Procedures

ESSENTIAL – COMMON

- Percutaneous vascular access
- Arteriovenous graft/fistula
- Revision arteriovenous access

CATEGORY 21: TRANSPLANTATION

Diseases/Conditions

FOCUSED

- Immunosuppression

Operations/Procedures

COMPLEX

- Donor nephrectomy

- Donor hepatectomy
- Kidney transplant
- Kidney-pancreas transplant
- En bloc abdominal organ retrieval
- Liver transplant
- Pancreas transplant

CATEGORY 22: THORACIC SURGERY

Diseases/Conditions

BROAD

- Pneumothorax
- Hemothorax
- Pleural effusion/empyema

FOCUSED

- Mediastinitis
- Chylothorax
- Adenocarcinoma of the lung
- Undifferentiated lung carcinoma
- Small-cell carcinoma of the lung
- Large-cell carcinoma of the lung
- Soft tissue sarcomas of chest wall
- Thymoma
- Teratoma of the medisastinum
- Neurogenic tumor of the mediastinum
- Enteric cyst of the mediastinum
- Pericardial cyst
- Bronchgenic cyst
- Superior vena cava syndrome
- Tracheoinnominate fistula
- Tracheoesophageal fistula
- Valvular heart disease
- Congestive heart failure
- Endocarditis
- Coronary artery disease
- Ventricular aneurysms
- Cardiomyopathy
- Pericarditis

Operations/Procedures

ESSENTIAL – COMMON

- Chest tube placement

ESSENTIAL – UNCOMMON

- Exploratory thoracotomy
- Pericardial window for drainage

-COMPLEX

- Thoracoscopy with or without biopsy
- Thoracoscopic pleurodesis
- Thoracoscopic Heller myotomy
- Excision mediastinal tumor
- Transthoracic repair diaphragmatic hernia
- Open drainage of empyema
- Pneumonectomy
- Cardiac procedures

- Pericardiectomy
- Pacemaker insertion

CATEGORY 23: PEDIATRIC SURGERY

Diseases/Conditions

BROAD

- Hypertrophic pyloric stenosis
- Umbilical hernia
- Inguinal hernia
- Malrotation
- Intussusception
- Meckel's diverticulum

FOCUSED

- Gastroschisis
- Omphalocele
- Esophageal atresia
- Tracheoesophageal fistula
- Foreign bodies of the trachea/esophagus
- Congenital diaphragmatic hernia
- Duodenal atresia/stenosis
- Pancreas divisum
- Intestinal atresia and meconium ileus
- Imperforate anus
- Necrotizing enterocolitis
- Hirschsprung's disease
- Biliary atresia
- Choledochal cysts
- Cryptorchidism
- Wilms tumor
- Neuroblastoma

Operations/Procedures

ESSENTIAL – COMMON

- Inguinal herniorrhaphy in children
- Umbilical hernia repair in children

ESSENTIAL – UNCOMMON

- Pyloromyotomy
- Emergency operation for malrotation
- Emergency operation for intussusception

COMPLEX

- Excise branchial cleft anomaly
- Excise thyroglossal duct cyst
- Orchiopexy
- Open antireflux procedure
- Laparoscopic antireflux procedure
- Repair intestinal atresia/stenosis
- Repair diaphragmatic hernia
- Repair omphalocoele/gastroschisis
- Procedure for meconium ileus/necrotizing enterocolitis
- Excision Wilms tumor/neuroblastoma
- Operation for Hirschsprung's/imperforate anus

• Repair esophageal atresia/tracheoesophageal fistula
• Repair deformity chest wall

CATEGORY 24: PLASTIC SURGERY

Diseases/Conditions

FOCUSED

• Abdominoplasty
• Breast reduction and enlargement
• Postmastectomy reconstruction
• Abdominal wall reconstruction

Operations/Procedures

ESSENTIAL – COMMON

• Skin grafting

COMPLEX

• Revision of scars and resultant deformities
• Composite tissue transfer
• Major reconstructive procedures

CATEGORY 25: GENITOURINARY

Diseases/Conditions

FOCUSED

• Iatrogenic ureteral injury
• Neurogenic bladder
• Urinary incontinence
• Obstructive uropathy
• Impotence
• Neoplasms of the bladder
• Neoplasms of the ureter
• Neoplasms of the kidney
• Neoplasms of the prostate
• Neoplasms of the testicle
• Stone disease

Operations/Procedures

ESSENTIAL – UNCOMMON

• Hydrocelectomy
• Nephrectomy
• Orchiectomy
• Cystostomy
• Repair iatrogenic ureteral injury

COMPLEX

• Prostatectomy
• Ileal urinary conduit
• Cystectomy

CATEGORY 26: GYNECOLOGY

Diseases/Conditions

BROAD

• Ectopic pregnancy
• Pelvic inflammatory disease
• Incidental ovarian mass/cyst

FOCUSED

- Endometriosis
- Benign ovarian neoplasms
- Malignant ovarian neoplasms
- Benign uterine neoplasms
- Malignant uterine neoplasms
- Cystocoele
- Rectocoele

Operations/Procedures

ESSENTIAL – UNCOMMON

- Hysterectomy
- Salpingo-oophorectomy

COMPLEX

- Caesarian section
- Repair cystocoele
- Repair rectocoele

CATEGORY 27: HEAD AND NECK

Diseases/Conditions

BROAD

- Cervical lymphadenopathy
- Upper airway obstruction

FOCUSED

- Epistaxis
- Mucosal cancers of the oral cavity
- Mucosal cancers of the pharynx
- Mucosal cancers of the larynx
- Parotid gland tumors
- Submandibular gland tumors

Operations/Procedures

ESSENTIAL – COMMON

- Tracheostomy

ESSENTIAL – UNCOMMON

- Cricothyroidotomy

COMPLEX

- Resection of lip/tongue lesions
- Parotidectomy
- Modified radical neck dissection

CATEGORY 28: NERVOUS SYSTEM

Diseases/Conditions

BROAD

- Management of acute pain

FOCUSED

- Management of chronic pain

Operations/Procedures

ESSENTIAL – UNCOMMON

- Digital nerve block

COMPLEX

- Placement of indwelling epidural catheter
- Placement of nerve stimulator for chronic pain
- Celiac plexus blockade – percutaneous or

endoscopic
- Thoracic splanchnicectomy
- Peripheral nerve block(s) other than digital

Educational Objectives for Competency in Patient Care and Medical Knowledge by Year of Training

PGY-1 YEAR

During the PGY-1 year the resident will become familiar with the fundamentals of management and pre- and post-operative care of the surgical patient. This goal will be achieved by performance of initial patient assessment including history and physical and interpretation of routine laboratory tests and imaging studies. Additionally, assistance with or performance of certain operations will be carried out. The PGY-1 resident will also acquire knowledge of post-operative patient care by daily assessment of in-hospital post-operative patients on the floor and, as needed, in the Intensive Care Unit. Further knowledge of post-operative care will be learned by attending clinics and management of the patient in an ambulatory setting. Technical skills including basic instrument techniques, suturing, and retracting shall also be learned during the PG-1 year. PGY-1 residents should avail themselves of the opportunity to practice on the laparoscopic simulators. It is our goal that, with proper supervision, they act as surgeon for basic cases, including laparoscopic appendectomy and cholecystectomy. (See Table on page 41 for other Competency-based goals and objectives.)

PGY-2 YEAR

During the PGY-2 year the resident will further enhance his/her skills of perioperative and operative management by performing additional and more complex operations. These trainees have a primary role in the Intensive Care Unit and should be facile with all invasive procedures relevant to ICU care. Skills in surgical specialty services not acquired in the PG-1 year will be done in this year. PGY-2 residents will be responsible for presentation of patients during rounds and for formulating patient assessment and management plans. PGY-2 residents also assume a more central role in directing Level 1 trauma resuscitation and assessment in the ED. (See Table on page 41 for other Competency-based goals and objectives.)

PGY-3 Year

During the PGY-3 year, initial patient assessment skills in the outpatient clinics, the ED, and on the consult service will continue to be honed. The PGY-3 resident will acquire a full range of technical skills regarding intestinal surgery, laparotomy for trauma, and major resuscitation of the trauma patient. The PGY-3 resident is expected to exhibit qualities of team leadership and patient management that begin to approximate those of a chief resident. (See Table on page 41 for other Competency-based goals and objectives.)

PGY-4 Year

The PGY-4 resident should acquire the knowledge, skill and personal attributes to be a chief resident. This year is mainly allocated to rotations with our private practice attending faculty and provides the resident with an opportunity, under the direction of the private faculty, to function somewhat more on his/her own rather than as a member of a ward team. It is also during the PGY-4 year that residents have an opportunity to do elective rotations at other institutions, such as UT Houston or UT Southwestern, as well as the required transplant rotation in San Antonio. PGY-4 residents should be able to perform most complicated operations by the end of this year. (See Table on page 41 for other Competency-based goals and objectives.)

PGY-5 Year

The overall educational goal for the PGY-5 year is to prepare the chief resident to assume independent responsibility for total care of the surgical patient. This will be accomplished by the chief assuming the role of the team leader of the particular rotation. The chief residents will be responsible for supervising all in-hospital patient care and for supervising outpatient care in the clinics. The chief resident will be responsible for preparing the morbidity and mortality reports presented at the morbidity and mortality conferences pertaining to their own patients. The chief resident will develop clinical decision-making skills by interacting directly with the attending surgeon for critically ill patients and those undergoing operation. The chief resident will supervise and assist the junior residents in critical patient care, as well as in performing certain operations. (See Table on page 41 for other Competency-based goals and objectives.)

Educational Objectives for Rotations on Cardiothoracic Surgery

UMC, Sierra, Providence, Del Sol, & Las Palmas Hospitals

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
Educational Goals for All Residents	At the conclusion of this rotation, each resident should understand the pathogenesis, methods of diagnosis and principles of patient management of all common and many less common cardiothoracic disorders including acquired and congenital heart disease, pulmonary dysfunctions, and benign and malignant esophageal disease.	Become competent in: I. Evaluating and treating patients with CT disease, especially postoperative patients in the ICU 2. The diagnosis/treatment of complications often seen post-operatively, e.g. low cardiac output, arrhythmias 3. The use of inotropic drugs and the intra-aortic balloon pump 4. The management of chest drainage systems	Participate in the outpatient cardiothoracic clinic.	1. Central line and Swan-Ganz catheter placements 2. Performance of the thoracotomy and median sternotomy 3. Harvesting of veins for coronary artery bypasses 4. 2nd assistant in major cardiac surgical procedures 5. Surgeon (or first assistant) in pacemaker placements 6. Surgeon (or first assistant) in pulmonary procedures, e.g. wedge and lobar resections
PGY-4	See above	Demonstrate knowledge of: 1. H & P abnormalities found in common congenital and acquired CT diseases 2. Acquisition/ interpretation/ utilization of catheterization data in planning cardiac surgery 3. The principles of successful cardiopulmonary bypass. 4. The timing/selection of CT surgical interventions 5. The essential pre-and post-operative orders for CT surgical patients 6. The principles of follow-up and prognoses of CT surgical patients 7. Patient and device selection for pacemaker implantation the indications for the techniques of thoracic endoscopy		See above

Educational Objectives for Rotations on Surgical Critical Care Medicine

University Medical Center (UMC)

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
PGY-1, -2, & -3	At the conclusion of the rotation, the resident should have an understanding of the pathophysiology of the hemodynamic, pulmonary, renal, immunologic, and nutritional aspects of the management of a critically ill surgical patient. The resident should understand the use of and limitations of monitoring equipment commonly used in the SICU. The resident should have an understanding of fluid and electrolytes, renal physiology, microbiology and the use of antibiotics.	The resident will have currency with a variety of disease processes having altered physiology in the SICU. Through day to day contact with the SICU attending, the resident will: 1) Learn how to utilize ventilators to optimize pulmonary function 2) Interpret data from hemodynamic monitors and utilize the appropriate fluid management, inotropes and pressors to optimize hemodynamic status 3) Study altered physiologies in fluid and electrolytes and renal function to provide optimal fluid and electrolyte management to patients with impending and acute renal failure 4) Interpret the results of bacteria culture and determine appropriate antibiotics usage 5) Interpret results of nutritional analysis to formulate appropriate strategies for nutritional repletion 6) Understand the principles of intensive neuromonitoring and manage states of decreased level of consciousness and increased intracranial pressure 7) Determine the relationship between treatment of surgical disease through operation intervention and the impact of this on organ physiology	Outpatient clinic follow-up	The resident will become facile in the insertion of central venous catheters, pulmonary artery catheter arterial lines, jugular veno monitoring, endotracheal intubation, percutaneous tracheostomy, percutaneo endoscopic gastrostomy, a tube thoracostomies

Educational Objectives for Rotations on General Surgery & Trauma

UMC, Sierra, Providence, Del Sol, & Las Palmas Hospitals

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
Goals for all residents	For General Surgery, residents should be knowledgeable in the principles of pre-op assessment, operative intervention, and post-op care and follow-up in patients presenting with a wide variety of surgical diseases. This knowledge base should include the etiologic and pathologic basis of the disease process as well as the physiologic basis of fluid and electrolytes, wound healing, nutrition, and organ function (cardiac, pulmonary, renal, gastrointestinal and endocrine) that is important for post-op care.	Residents will have an understanding of the evaluation of surgical disease with attention to various diagnostic tests and modalities that are used to define the type and extent of the pathology, which will determine the need for surgical intervention. Surgical decision making will be learned along with the various phases of management skills through interaction with surgical faculty. For trauma, the principles of resuscitation and rapid diagnosis will be emphasized in the trauma room. Rapid interpretation of clinical findings, laboratory values, and radiologic results will be stressed as important aspects of trauma management. The "team concept" of trauma care will also be emphasized on this rotation.	Residents will be expected to routinely attend the various outpatient clinics attached to their service in order to gain a longitudinal experience of patient care. Responsibilities will include evaluation of new patients with surgical and non-surgical disease, preoperative assessment of surgical patients, follow-up of post-op General Surgery and Trauma patients, and the performance of minor out-patient procedures that are frequently done in the clinic setting.	Residents will participate in th performance of surgical operations with attending supervision. The type of case a level of responsibility in each case will be determined by a level of experience of the residents. Attendings will be present in the operating room during the critical portion of th case for all procedures.

Educational Objectives for Rotations on General Surgery & Trauma *(continued)*

UMC, Sierra, Providence, Del Sol, & Las Palmas Hospitals

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
PGY-1	The PGY-1 resident will primarily become knowledgeable in the physiology of pre- and post-op care, including fluid and electrolytes, nutrition, and wound healing. PGY-1s will be required to successfully complete an ATLS provider course.	The PGY-1 resident will participate in the evaluation of less complicated problems found in surgery patients. Post-op care and the management of physiologic problems in the general surgery patients will be the primary focus of experience for this resident. For trauma management, this resident will participate in all of the trauma resuscitations and will be given graded responsibilities to help improve the skills needed for early resuscitation.	The responsibilities appropriate for the PGY-1 level of training will be given at each clinic. These include history and physical examination of surgical consultations and pre-op patients. An understanding of pathophysiology and associated physical and radiologic findings will be stressed. Post-op assessment and understanding of anticipated healing and recovery will be emphasized.	The PGY-1 resident should focus his/her efforts on the acquisitio technical skills including basic instrument techniques, suturing and retracting. PGY-1s should a themselves of the opportunity t practice on the laparoscopic simulators. By the end of the firs year, these residents should be gaining proficiency in both laparoscopic appendectomy and cholecystectomy.

Educational Objectives for Rotations on General Surgery & Trauma *(continued)*

UMC, Sierra, Providence, Del Sol, & Las Palmas Hospitals

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
PGY-2 , -3, & -4	These residents will be developing a knowledge base in surgical disease with emphasis in the endocrine system, hepatobiliary system, GI tract, pancreas, and head/neck tumors (ENT).	This resident will become familiar with the diagnostic evaluation and management of general surgery patients with a wide variety of disease processes, particularly endocrine, GI and hepatobiliary. The resident will be exposed to comprehensive but cost effective strategies for patient evaluation and will gain experience in surgical and decision making in both the pre-op and post-op phase of care. For trauma, this resident will be given greater responsibilities for management of resuscitation and evaluation of the trauma patient, including the critical care phase. By the end of the rotation, this resident will have the skills to be the "team leader" for trauma resuscitation.	Greater responsibilities for level of training will be given at each clinic.	Residents will participate in performance of surgical operations with attending supervision. The type of case and level of responsibility in each case will be determined a level of experience of the residents. Attendings will be present in the operating room during the critical portion of case for all procedures.

Educational Objectives for Rotations on General Surgery & Trauma *(continued)*

UMC, Sierra, Providence, Del Sol, & Las Palmas Hospitals

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
PGY-5	Chief residents will develop a knowledge base in trauma and general surgery sufficient to teach the other residents and students on the service. Additionally, there will be much attention paid to the inculcation of a knowledge base concerning complex trauma and general surgery procedures as well as physiology of surgical complications that might be referred to a tertiary center.	With the attending, this resident will ultimately be responsible for all of the clinical decision making on the GS and Trauma services. This resident will administratively manage the service, provide an educational environment for the junior residents, and be prepared to make decisions about patients with complex surgical problems or complications.	The Chief resident will take on more responsibility at each clinic session and, with the attending, will ultimately determine appropriate evaluation strategies and follow-up plans for the General Surgery and Trauma patients.	The chief resident is expected to achieve and display proficiency with a essential common general surgical operative procedures and with man essential uncommon procedures (See the Abbreviated SCORE Patie Care Curriculum Outline beginning on page 4) Chie will also assist and train junior residents in operati procedures appropriate tc the junior's skill and level experience.

Educational Objectives for Rotations in General Surgery Clinics

Texas Tech University Health Sciences Center - El Paso

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
Goals for all residents	At the completion of these rotations, each resident will have learned the pathogenesis, diagnostic methodology, and principles of surgical management of most common and some unusual disease processes falling within the scope of general surgical practice.	Develop skills in interpreting imaging studies employed in general surgery (nuclear medicine scans, radiographic contrast studies and CT, ultrasonography and angiography of the abdomen and pelvis).	All residents are required to attend clinic weekly, in which they will evaluate and longitudinally manage, with the responsible attending surgeon, patients pre- and post-hospital (or who undergo ambulatory surgical or office procedures).	Develop excellent technica skills in performing minor surgical procedures.
PGY-1 & -2	See above	Demonstrate the ability to interpret diagnostic studies employed in the evaluation of general surgery patients; demonstrate confidence and ability in formulating and management plans.	See above	
PGY-4	See above	Demonstrate expertise in performing consultations. Integrate the preoperative evaluation, intra-operative treatment and postoperative management of a variety of patients typically encountered in general surgery. Demonstrate leadership and teaching of the junior resident.	See above	

Educational Objectives for Rotations in GI Endoscopy

Texas Tech University Health Sciences Center - El Paso

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
Goals for all residents	Develop an in-depth fund of knowledge of the more common gastrointestinal disorders likely to be encountered by the general surgeon.	Develop the ability to delineate a meaningful differential diagnosis and appropriate diagnostic plan for the efficient, effective evaluation of common gastrointestinal disorders.	Develop a working knowledge of the common gastrointestinal disorders encountered and managed in the outpatient setting.	Develop competence in performing flexible sigmoidoscopy, colonoscopy and EGD. Develop a sound knowledg of the indications and contraindications for various endoscopic procedures.
PGY-2 & -3	The goal will be accomplished by the study of the literature, attendance and participation in lectures, conferences, and attending rounds.	The resident will perform in-patient consultations, at least one per day, which are to be reviewed with the attending gastroenterologist.	The resident will participate in the outpatient clinic (one/week) where the resident will typically see 5-7 patients. Each case will be reviewed with a gastroenterologist.	During the four week rotation the resident is expected to perform at least 10-15 flexible sigmoidoscopies 10-15 colonoscopies, and 20 upper G endoscopies in a supervised setting. The resident is also expected to observe and become familiar with th techniques of endoscopic retrograde cholangiopancreatography, and othe diagnostic and interventional methodologies employed in GI practice (e.g. esophageal pH and manometric monitoring, PEG, etc.)

Educational Objectives for Rotations in Pediatric Surgery

UMC, Sierra, Providence, Del Sol, & Las Palmas Hospitals

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
Goals for all residents	Understand the pathogenesis, diagnosis and principles of surgical management of most common and some unusual disease processes falling within the scope of general and thoracic pediatric surgical practice.	The resident should possess a working knowledge of the application of various imaging modalities to the diagnosis of surgical disease in infants and children, particularly as they might differ from their application in adult patients. Proficiency in the physical examination of the uncomfortable, frightened child should be developed.	Residents must participate in the pre- and post-operative management of all pediatric surgical patients.	Residents participate as surgeon in a graded operative experience commensurate with their level of training and experience. They also participate as first assistant in more complex procedure.
PGY-4	See above	The resident should demonstrate effectiveness in planning the diagnostic and therapeutic management of children with severe surgical illness and in providing consultation to pediatricians. Under the supervision of the attending, the PGY IV resident should assume management of the inpatient pediatric surgical service and direct the activities of and participate in the teaching of junior residents assigned to the service.	See above	The resident should become proficie in all pediatric surgical procedures commonly part of general surgical practice. The resident will also perform more complex pediatric surgical procedures, i.e. bowel resections, neck and thoracic procedures, and abdominal tumor resections. The resident will have an understanding of the approach to TE fistulas, kidney tumors, and malignancies of the neuroendocrine system.

Educational Objectives for Rotations in Transplant Surgery

Texas Transplant Institute - San Antonio

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
Goals for all residents	Develop an understanding of the specific clinical problems encountered in recipients of organ transplant, especially of the kidney, through experience participating in their management and by review of pertinent medical literature. Become knowledgeable regarding the criteria of organ donation and social and ethical issues relating to organ supply and recipient designation and selection.	Understand the utilization of the clinical examination, as well as diagnostic biochemical and microbiological tests and radiological intervention, in the management of the immunocompromised patient.	Develop a detailed understanding of the longitudinal care of the (potential) recipient both before and after transplant.	Gain operative experience in judgmentally and technically demanding cases, that require hi levels of intellectual and manual skill.
PGY-4	Understand the pathophysiology and clinical manifestations of the more common diseases causing renal failure. Understanding the timing of referral for transplant evaluation based on the natural history and clinical manifestations of those diseases commonly resulting in the need for liver or kidney transplantation. Be cognizant of the various clinical problems specific to transplant patients.	Be familiar with the management of the following in the transplant patient: hyperkalemia, fluid balance, diabetes, fever of unknown origin, hypertension, sepsis, wound infection, and malnutrition. Learn the manifestations of transplant rejection. Understand the roles of renal nuclear scans, ultrasonography, arteriography and biopsy in the diagnosis of kidney graft dysfunction.	Develop expertise in formulating a comprehensive renal transplant consultation. Appreciate the complexities of planning and implementing living related or cadaveric renal transplantations. Become competent in the management of post-transplant renal patients.	Become thoroughly familiar with the anatomy of the retro-periton iliac arterial and venous area. Understand the technical variatic between arterial and venous anastomoses. Develop an understanding of the problems associated with performing vascular anastomoses in the deep restricted fields typically encountered in renal transplant.

Educational Objectives for Rotations in Vascular Surgery

UMC, Sierra, Providence, Del Sol, & Las Palmas Hospitals

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
Goals for all residents	At the completion of this rotation, each resident should understand the pathogenesis, methods of diagnosis, and principles of management of atherosclerosis, both occlusive and aneurysmal, and common disorders of the venous system. In particular, the resident must be knowledgeable in the diagnosis and management of peripheral vascular and carotid artery disease.	The resident should posses a working knowledge of vascular laboratory diagnostic procedures, including: ankle/ brachial indices, flow Doppler, and other diagnostic methodologies commonly employed.	Regular attendance in the outpatient vascular clinics; develop facility in the recognition, diagnosis, evaluation, and treatment of common arterial and venous disorders.	During his/her rotation, each resident must complete at least 4 major vascular cases and as many additional vascular cases as feasible.
PGY-4	See above	The resident should: 1) Understand the diagnostic criteria and pathophysiologies differentiating acute and chronic arterial and venous insufficiency. 2) Become competent in evaluating and instituting the therapy of patients with common vascular problems. 3) Demonstrate the ability to interpret vascular diagnostic procedures and provide vascular consultations. 4) Show competence in instituting management plans. 5) Demonstrate expertise in consultation for appropriate management of common vascular disorders. 6) Integrate preoperative evaluation, intra-operative	Attend on a regular basis, the outpatient clinics.	Operative experience in dialysis access and in placement is expected, as well as experience with amputations. Achieve operative experience with dialysi access, exposure of major vessels for repair and/or reconstruction and uncomplicated arterial repai of anastomoses. Acquire operativ experience in major arterial reconstructive surgery, including AAA repair, bypasses for occlusiv disease, carotid endarterectomy, and uncomplicated visceral arter bypasses.

		treatment, and post-operative management of patients with a variety of vascular disorders.		

Educational Objectives for Rotations in Anesthesiology

University Medical Center (UMC)

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
PGY-1				
	1) Gain a more thorough understanding of depolarizing (succinylcholine) and nondepolarizing (vecuronium, rocuronium, cis-atracurium, pancuronium,etc.) muscle relaxants. Additionally, explore potential risks and benefits of each drug in different clinical settings. 2) Understand the indications for and dosing of a pharmacologic pressor agent (epinephrine, phenylephrine, norepinephrine, dobutamine). 3) Understand the alternatives for and hemodynamic consequences of inhalational anesthetic agents (isoflurane, halothane, sevoflurane and nitrous oxide). 4) Review ACLS protocol for cardiac rhythm disturbances; local anesthetic pharmacology and dosing for use as a local, subarachnoid block (spinal anesthetic) or epidural use; regional anesthetics (spinal, epidural, Bier block, interscalene, axillary, etc.)	1) Principles and applications of noninvasive monitoring. 2) Consider alternatives, risks and indications for invasive hemodynamic monitoring. 3) Understand the alternatives, dosing and clinical indications for various intravenous anesthetic induction agents (Sodium thiopental, propofol etomidate, ketamine, midazolam, etc.) 4) Become more familiar with conscious sedation techniques. Explore alternatives in intra operative and postoperative pain management (intravenous agents, local anesthetics, NSAIDS, PCA, epidural). 5) Review the importance of positioning and risks of postoperative neurological deficits for the surgical patient.	Not applicable for this anesthesiology rotation	1) Improve technical skills for airway management including airway assessment and risk factors and approach for management of the difficult airway. 2) Learn the anesthetic machine checkout necessary prior to giving an anesthetic. 3) Improve technical skills for placing peripheral IVs central lines and arterial lines.

Educational Objectives for Rotations in Plastic Surgery

UMC, Sierra, Providence, Del Sol, & Las Palmas Hospitals

Resident	Medical Knowledge & Critical Thinking	Patient Care – Clinical Diagnosis & Management	Patient Care – Outpatient Experience	Patient Care – Operative Experience
Goals for all residents	After the completion of the rotation, the resident will know the process of normal wound healing and factors inhibiting the normal healing process. The residents should understand the pathology of skin and soft tissue diseases that require surgical intervention and will understand physiology associated with skin and myocutaneous transfers.	The resident should understand the indications for the plastic surgical management of hand, facial, and soft tissue problems requiring plastic surgical intervention. The resident will understand indications and treatment of lacerations including the principles of debridement where tissue excision is needed. The resident will be able to perform a comprehensive examination of the hand, assessing both motor and sensory components and will be able to assess the degree and extent of facial trauma. The resident will understand the principles, appropriate use, and limitations.	The resident will participate in the preoperative evaluation of the patient requiring plastic surgical intervention. The resident will understand the goals of reconstructive and cosmetic procedures and will be able to assess the success of these procedures in the postoperative period.	The resident will provide definiti care of lacerations and wounds including those on the face, will perform and assist in selective reconstructive procedures, will perform and assist in selected cosmetic procedures, and will perform or assist in facial reconstruction after trauma wide extirpation of malignancies.

ACGME Competency-based Educational Goals & Objectives

All Rotations & Venues

Resident	Patient Care	Medical Knowledge	Practice-based Learning & Improvement	Interpersonal & Communication Skills	Professionalism	Systems-based Practice
PGY-1, -2, -3, -4, -5	See Pages 1-26 & Tables above for goals by year, rotation, & training venue	See Pages 1-26 & Tables above for goals by year, rotation, & training venue	1. Analyze practice experience and perform practice-based improvement activities 2. Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems 3. Obtain and use information about the patient population and the larger population from which these patients are drawn 4. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness 5. Use information technology to manage information, access on-line medical information; and support the resident's own education 6. Facilitate the learning of students and other health care professionals	1. Create and sustain a therapeutic and ethically sound relationship with patients 2. Use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills 3. Work effectively with others as a member or leader of a health care team or other professional group	1. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development 2. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices 3. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities	1. Understand how their patient care an other professional practices affect othe health care professionals, the health care organization, and th larger society and h these elements of th system affect their own practice 2. Know how types c medical practice anc delivery systems dif from one another, including methods o controlling health ca costs and allocating resources 3. Practice cost-effective health care and resource allocation that does not compromise quality of care 4. Advocate for quali patient care and assi patients in dealing with system complexities 5. Know how to

						partner with health care managers and health care provider to assess, coordinate and improve health care and know how these activities can affect system performance