

General Surgery Educational Goals & Objectives

General surgeons are specialists in the evaluation and treatment of patients with injuries, deformities, or medical illnesses that require operative intervention. They may diagnose and treat acute and chronic disorders of the breast, endocrine system, gastrointestinal tract, and skin and soft tissue and may go on to further training in a particular area, including such specialties as bariatrics, cardiothoracic surgery, colorectal surgery, oncology, pediatrics, surgical critical care, transplant, trauma, and vascular surgery. Our General Surgery Residency at Community Memorial Hospital will provide the resident with a strong foundation in basic science, including anatomy, biology, immunology, pathology, and physiology, with special expertise in the clinical care of patients in the community. The goal of the residency is to provide exposure to a broad base of surgical interventions and to encourage critical thinking, such that graduates can provide compassionate care at the forefront of knowledge in General Surgery. Residents spend the majority of their initial time in General Surgery, with additional rotations in Anesthesia and Critical Care to develop foundational skills upon which to base further training. Subsequent rotations in General Surgery and its subspecialties hone technical skills and promote dedicated study of General Surgery in both the inpatient and outpatient settings. Focus will be on learning normal and abnormal anatomy, understanding the natural history of surgical disease (untreated, treated medically, and treated surgically), and gaining expertise in multiple procedural skills. Comprehensive experience in pre-and post-operative care as well as exceptional operative training ensures that our residents achieve excellence in the diagnosis and management of surgical disease.

Faculty will facilitate learning in the 6 core competencies as follows:

Patient Care and Procedural Skills

- I. All residents must be able to provide compassionate, culturally-sensitive, and appropriate care for patients with surgical disease, from pediatrics through geriatrics.
 - PGY2s should also seek directed and appropriate medical consultation when necessary to further patient care.
 - PGY3s should facilitate seamless transitions of care between the patient's primary care physician and the surgeon and between inpatient and outpatient care.
 - PGY4 should seek timely subspecialty surgical consultation as appropriate to further patient care.
 - PGY5s should be able to independently provide care throughout a patient encounter.

- II. Residents will demonstrate the ability to take a pertinent history and perform a systematic physical exam, with emphasis on the abdominal, breast, rectal, thyroid and vascular exams. PGY1s should be able to differentiate between stable and unstable patients and elicit the following historical details:
 - Timing, intensity, and impact on functional status of a patient's symptoms.
 - Associated systemic symptoms, such as fatigue, fever, poor sleep, sweats, or weight loss
 - History of antecedent events
 - Factors that increase perioperative risk, including age, comorbidities, immune status, metabolic disorders, pregnancy, and substance abuse
 - Nutritional status
 - Prior surgeries

PGY2s should be able to

- identify the mechanism of injury in trauma
- recognize criteria that warrant referral to a burn unit
- recognize more fully the impact of medication noncompliance and comorbidities, particularly immunosuppression, on a patient's symptoms, operative risk, and risk for postoperative complications
- competently take an interim history when a patient has a change in condition postoperatively

PGY3s should be able to

- independently obtain the above details for patients with complex past medical or surgical histories
- perform an appropriately targeted history and physical prior to emergency surgery
- recognize patients that need medical co-management for operative intervention
- lead in providing operative care for procedures for which he/she has demonstrated mastery, mentor PGY1s in the OR, and assist chief residents in major cases

PGY4s should be able to demonstrate the above skills independently.

PGY5s should develop expertise in the perioperative evaluation and care of patients with complex surgical issues, such as victims of multiple traumas, patients with cancer, and transplant patients.

III. PGY1s should be able to perform a primary survey of a trauma patient and in addition, appreciate and characterize the following physical findings:

- Abdominal distention
- Abdominal mass or aneurysm
- Acute abdomen
- Anatomic landmarks for bedside procedures
- Breast mass
- Fracture
- Gangrene
- Goiter
- Hematoma
- Hemorrhoids
- Hernia
- Murmur
- Peripheral pulses and signs of arterial insufficiency
- Signs indicative of volume status
- Signs of wound infection
- Thyroid nodule
- Ulcers

PGY2s should also be able to

- monitor vital signs and use changes as a guide to change in patient status
- perform a secondary trauma survey and use multiple trauma evaluation and scoring scales
- characterize burns relative to total body surface area

PGY3s should be skilled in the above physical exam objectives as well as recognizing

- normal pediatric growth and development and common findings indicative of surgical disease and of child abuse
- possible hidden injuries during secondary survey in trauma
- anatomic landmarks of the head and neck, particularly those related to airway management

PGY4s should be able to identify physical exam findings that are

- indicative of complications of surgical intervention

PGY5s should be able to identify physical exam findings that are

- characteristic of complex or subtle conditions seen in specialized surgical practices, including cardiothoracic surgery, oncology, and transplant

IV. With regard to procedures, residents should become fluent in the pertinent anatomy and in explaining procedure indications, contraindications, complications, and limitations, a process that should precede competence in independent procedure execution.

- Residents should learn the surgical approach and operative exposures for all patients for which they provide care.
- As residents master new skills and demonstrate competence, they should be prepared to transition to increasing levels of independence in the performance of procedures.

V. PGY1s will become skilled in the following procedures:

- Abscess incision and drainage
- Arterial blood gas and arterial line placement
- BLS, ACLS, and ATLS
- Central venous line placement and removal
- Dressing change for sterile and contaminated wounds
- Endotracheal tube placement
- Enucleation and excision of external thrombotic hemorrhoid
- Excisional and punch biopsy
- Gastric or jejunal feeding tube removal
- Irrigation and debridement of wounds, skin, subcutaneous tissue, muscle, and fascia
- Knot tying
- Local anesthesia
- Nasal tube insertion
- Suturing and stapling of lacerations
- Suture, staple, and drain removal
- Thoracentesis
- Thoracostomy tube placement and removal
- Urinary catheter insertion and care

- Use of Doppler instruments to assess peripheral blood flow
- Venipuncture and insertion of peripheral intravenous catheters

VI. PGY2s and PGY3s will develop progressive independence in performing the following procedures, depending on their individual skill levels and their exposure through the scheduling of rotations.

- Abdominal compartment pressure monitoring
- Advanced knot tying
- Anastomoses: advanced, hand sewn bowel, stapled, vascular
- Bronchoscopy
- Chest tube management
- Conscious sedation
- Debridement of open fractures and wounds
- Difficult airway management
- Escharotomy
- FAST exam
- Fine needle aspiration and core biopsy
- Pericardiocentesis
- Suprapubic tube
- Venous cutdown

VII. PGY4s will perform the above procedures skillfully and independently and focus on more complex GI/endocrine/oncology cases.

VIII. PGY5s will become accomplished team leaders, providing direction particularly in managing procedural complications and traumas. They will supervise juniors and emphasize technical expertise in laparoscopy, robotics, and complex liver and pancreatic cases.

IX. Residents will perform under supervision a *minimum* of 850 major surgical cases during their training. During the resident's final or Chief year, he/she must perform a *minimum* of 200 major surgical procedures, and 25 Teaching Assistant cases. Case distribution should include a *minimum* number of major cases involving the following systems:

- 25 major cases involving conditions affecting skin and soft tissue
- 40 major breast cases
- 25 major head and neck cases
- 180 major cases involving the alimentary tract
- 250 abdominal cases, including major cases of the liver (5) and pancreas (5)
- 50 major vascular cases
- 15 major endocrine cases
- 10 major cases of operative trauma
- 40 major cases of non-operative trauma
- 20 major thoracic cases
- 20 major cases of pediatric surgical care
- 10 major plastics cases
- 40 major cases of surgical critical care
- 100 cases of basic laparoscopy
- 85 endoscopies, including 35 upper endoscopies, 50 colonoscopies, and a variety of other endoscopic

experiences, including bronchoscopy
m. 75 cases of complex laparoscopy

X. In addition, operative experience must include a sufficient volume and breadth of complex cases. In the course of developing their technical skills and achieving competence in the above case mix, residents will perform general surgical procedures with gradually increasing independence, including but not limited to the operative procedures listed below. Subspecialty rotations will provide further detail regarding specific procedures for those rotations.

PGY2s and PGY3s will develop operative skills, including performing basic surgical exposures of open procedures, handling of graft material including mesh, establishing pneumoperitoneum, handling the laparoscopic camera and instruments, closing the surgical wound, and applying the dressing. Specific procedures include:

- PGY2
 - o appendectomy (open and laparoscopic)
 - o cholecystectomy (laparoscopic and open)
 - o colostomy
 - o common bile duct exploration (laparoscopic)
 - o debridement for necrotizing infections
 - o diagnostic and exploratory laparotomy
 - o duodenal perforation repair
 - o enterectomy
 - o enterolysis
 - o gastrotomy (open, laparoscopic, and percutaneous)
 - o hemorrhoidectomy
 - o herniorrhaphy, including incarcerated or strangulated hernias
 - o ileostomy
 - o intraoperative upper endoscopy
 - o lumpectomy
 - o muscle and lymph node biopsies, and sentinel lymph node biopsy
 - o open drainage of abdominal abscess
 - o pancreatic debridement
 - o partial and subtotal colectomy
 - o partial gastrectomy
 - o pseudocyst drainage procedures
 - o tracheostomy (open and percutaneous)
 - o vascular access procedures
- PGY3
 - o axillary lymph node dissection
 - o colon and small bowel resection (laparoscopic and open)
 - o endoscopy (EGD, flexible sigmoidoscopy, colonoscopy with intervention)
 - o gastric bypass (laparoscopic, first assist)
 - o gastric resection
 - o initial surgical approach to adrenalectomy, thyroid and parathyroid procedures
 - o jejunostomy
 - o lateral internal sphincterotomy

- o mobilization of splenic flexure
 - o partial and total mastectomy
 - o reconstructive breast surgery
 - o skin and composite tissue transplantation and reconstruction
 - o surgical management of abscess/fistula disease related to IBD
- PGY4
 - o abdominal aortic aneurysm repair
 - o abdominal peritoneal resection
 - o adrenalectomy
 - o anti-reflux procedures
 - o carotid endarterectomy
 - o celiotomy
 - o distal pancreatic resections
 - o donor hepatectomy, hepatic resection, and liver transplantation
 - o esophagectomy
 - o gastrectomy
 - o local excision, wedge resection, and lobectomy
 - o low anterior resection
 - o lower extremity bypass
 - o mediastinoscopy
 - o mediastinotomy
 - o pancreatico-duodenectomy
 - o portosystemic shunt
 - o renal transplant
 - o resection of retroperitoneal tumors
 - o right, left or total abdominal colectomy
 - o splenectomy
 - o thoracoscopy
 - o trauma laparotomy
 - PGY5s will focus on further developing advanced skills in the performance of complex general and subspecialty cases with an emphasis on teaching junior residents.

Medical Knowledge

I. PGY1s will develop an approach to the evaluation of patients presenting initially or postoperatively with common symptoms, such as abdominal distention, abdominal pain, altered mental status, biliary colic, bleeding, chest pain, dyspnea, fever, jaundice, nausea or vomiting, rectal bleeding, and uncontrolled pain. Upper level residents should recognize subtle symptoms of common conditions and appreciate their importance in diagnosis.

PGY1s also will learn basic pathophysiology, usual clinical presentation, and initial treatment for the following conditions:

- Acute abdomen
- Acute alcohol intoxication

- Adrenal insufficiency
- Airway compromise
- Alcohol or drug withdrawal syndromes
- Atelectasis
- Aspiration and aspiration pneumonia
- Bowel obstruction
- Burns
- Cardiopulmonary arrest
- Chronic venous insufficiency
- Coagulopathy
- Compartment syndrome
- Congestive heart failure
- Constipation
- Deep venous thrombosis
- Diabetic ketoacidosis
- End stage liver disease
- Fat embolus
- Fecal impaction
- Fracture
- Gastroesophageal reflux
- GI bleeding
- Hemorrhage- external and internal
- Hyperosmolar coma
- Hypertension
- Ileus
- Mesenteric ischemia
- Myocardial infarction
- Necrotizing fasciitis
- Oliguria
- Pericardial tamponade
- Pneumonia
- Pneumothorax, tension pneumothorax, and hemothorax
- Pulmonary embolus
- Pulseless extremity
- Renal failure
- Respiratory failure
- Seizure
- Superficial phlebitis
- Systemic inflammatory response syndrome and shock
- Transfusion reaction
- Transient ischemic attack and stroke
- Urinary retention
- Wound dehiscence, infection, hematoma, or seroma

PGY1s will become familiar with principals of operative intervention, including:

- Pre-procedure patient preparation e.g. NPO, preparation for colonoscopy, medication management, etc.
- Universal precautions and sterile technique
- Basic patient positioning and preparation and draping of the operative patient
- Induction of anesthesia
- Knowledge of basic anatomy
- Classification of wounds
- Estimation of blood loss
- Intraoperative fluid replacement
- Function of and types of instruments, drains and dressings
- Wound closure
- Use of electrocautery
- Indications for use of minimally invasive and endoscopic techniques

II. PGY2s will develop a more complete understanding of the pathophysiology, clinical presentation, differential diagnosis, and therapy for the diagnoses listed in section II above as well as for the following conditions frequently cared for by general surgeons:

- Achalasia
- Appendicitis and appendiceal neoplasms
- Biliary disease, including bile duct injury, biliary dyskinesia, calculous and acalculous cholecystitis, cholangitis, choledocholithiasis, and cholelithiasis
- Breast cancer
- Burns
- Cervical lymphadenopathy
- Colitis
- Colon polyps and cancer
- Complete versus partial bowel obstruction
- Cutaneous malignancies, including basal and squamous cell cancers and melanoma
- Disease of the chest wall, pleura and mediastinum
- Diverticular disease
- Endocrine tumors
- Facial skeletal trauma
- Foreign body removal
- Gastritis
- Gastroesophageal reflux disease
- Head and neck tumors
- Hemorrhoids and fissures
- Hepatic abscess
- Hernias
- Incidental ovarian mass/cyst
- Intussusception

- Mallory-Weiss Syndrome
- Malrotation
- Meckel's Diverticulum
- Mesenteric cysts
- Oral cavity lesions
- Pancreatitis
- Peptic ulcer disease
- Peripheral vascular disease
- Peritonitis and intra-abdominal abscess
- Pneumatosis
- Skin abscesses and cysts
- Vascular graft failure and graft infection
- Volvulus
- Wounds: avulsion, bite, crush, laceration, penetrating, shear injury, vascular
- Ulcers: arterial, decubitus, venous stasis, and neuropathic

PGY2s will also understand the natural history of surgical disease and the expected outcome if a condition is observed, treated medically, or treated surgically. PGY2s will be familiar with randomized trial data for operative and non-operative treatments (and in the case of cancer, adjuvant and neo-adjuvant therapies), and prognosis. Finally, PGY2s will be aware of alternative and complementary therapies used by patients to treat disease.

PGY2s will develop an approach to the timely triage, evaluation, stabilization, and treatment of trauma patients, including:

- Basic management of intra-abdominal solid and hollow organ injury
- Basic management of genitourinary injury
- Nonoperative management of penetrating abdominal injuries, liver, and spleen injuries
- Special concerns with children, pregnant women, and the elderly
- Role of stomas
- Understanding the role of angiography with embolization

III. PGY3s will develop a comprehensive understanding of the pathophysiology, clinical presentation, and targeted therapy for the above conditions with attention to epidemiology, evidence-based prevention strategies, and patient safety.

PGY3s should recognize of lack of response to or complications of therapy, and identify possible causes and an alternate treatment plan.

PGY3s will develop more fully knowledge integral to the appropriate surgical management/co-management of the following conditions:

- Anorectal disease
- Cancer, including colon, breast, and thyroid, with an understanding of the natural history, evaluation, staging, and treatment of disease

- Endocrinopathies, and electrolyte abnormalities associated with thyroid and parathyroid disease
- Enterocutaneous fistula
- GERD
- Inflammatory bowel disease
- Severe pancreatitis with abscess
- Transplant

PGY3s will understand general principles of care for children with surgical conditions, including critically ill children; be aware of differences in anatomy, physiology, and fluid, electrolyte, and nutritional management; and become familiar with conditions managed by pediatric surgeons, including appendicitis, branchial cleft and thyroglossal duct cysts, congenital diaphragmatic hernia and other congenital defects, esophageal arrests, foreign body in esophagus/airway, Hirschsprung's disease, intestinal atresia, intestinal obstruction, intussusception, nephroblastoma, neuroblastoma, and pyloric stenosis.

IV. PGY4s will

- Become familiar with the anatomy and physiology of the chest wall, pulmonary physiology, physiology of extracorporeal bypass, and the management of bullous lung disease, chest wall tumors, congenital abnormalities, foreign body of the airway, hemoptysis, lung infection/abscess, thoracic outlet syndrome, thoracic trauma, and other conditions managed by thoracic surgeons
- Understand the management of patients with common hepatobiliary diseases and end stage liver disease pre- and post-transplant
- Recognize surgical emergencies and organize and execute an appropriate, timely plan of care, including discussion of operative risk with the patient/family
- Recognize zones of injuries in the abdomen and retroperitoneum and treat complex consequences of trauma, including solid organ injuries, splenic injury, and retrohepatic cava and aortic injuries
- Perform emergency thoracotomy and manage life threatening thoracic and cardiac injury
- Recognize and treat vascular disorders, including aneurysmal arterial disease, chronic venous insufficiency and lymphatic obstruction, congenital vascular disease, obstructive arterial disease, portal hypertension, and thromboembolic disease

V. PGY5s will independently manage a volume and wide variety of complex surgical issues as listed above and will continue to develop teaching skills as they supervise junior residents in the performance of these skills.

VI. Residents will also develop an understanding of the following issues as they pertain to surgical care, with emphasis on more complex understanding of pathophysiology and management of life-threatening disorders with increased level of training:

- Acid-base disorders
- Blood groups and principles of transfusion
- Coagulation cascade, disorders of coagulation, and the effects of various medications on bleeding
- Classification of wounds, principles of wound healing and tetanus prophylaxis
- Principles of fluid management
 - o for resuscitation in medical illness, thermal injury, trauma, and peri-operatively
 - o for maintenance

- o initially and in response to change in patient status
- Principles of electrolyte management
- Pharmacology, appropriate use, and risks of commonly used drugs, including:
 - o local and general anesthetic agents
 - o analgesics, including NSAIDs and opioids
 - o antibiotics
 - o anticoagulants and antiplatelet agents
 - o antiemetics
 - o antihypertensives
 - o bowel preps
 - o corticosteroids
 - o diuretics
 - o H2 blockers and PPIs
 - o laxatives
 - o oral hypoglycemic agents and insulin
 - o sedatives

VII. Residents will become proficient in postoperative care, including appropriate use and duration of perioperative antibiotics, drain and suture removal, dressing changes, and indications for and duration of deep venous thrombosis prophylaxis. PGY3s and more senior level residents will become proficient in the management of open abdominal wounds, complex ostomies, and use of wound vac. Residents will learn to recognize and manage postoperative complications, including but not limited to

- Bleeding
- Compartment syndrome
- Complications related to patient positioning intra-operatively, including post-operative neurologic deficits
- Deep venous thrombosis and pulmonary embolus
- Delirium
- Epidural hematoma
- Hemorrhage - wound, intra-abdominal or gastrointestinal
- Ileus and severe constipation
- Superficial and deep wound infection
- Wound dehiscence
- Wound seroma or hematoma

VIII. Residents should appreciate the importance of nutrition in the treatment of surgical disease and be able to

- Discuss the nutritional requirements of healthy patients and how disease alters these requirements
- Assess current nutritional status
- Articulate the indications, risks, and benefits of enteral versus parenteral nutrition
- Calculate basal energy expenditure and total caloric requirements
- Be familiar with different TPN and enteral formulas and how to order them

IX. Residents should become fluent in social issues relevant to undergoing surgery, including understanding the concepts of informed consent and power of attorney, counseling about advanced directives and end of life issues, and organ donation.

X. Residents will understand the indications for ordering, appropriate use, and interpretation of laboratory and imaging studies to triage patients with acute illness, further evaluate surgical patients, particularly when the diagnosis is unclear; and prepare for surgery.

PGY1s will be able to understand the indications for ordering, normal values, and common abnormal findings for the following laboratory values and diagnostic studies:

- Arterial blood gas
- CBC with peripheral smear
- Chemistries
- Coagulation studies
- Cortisol
- Cultures of blood, urine, other fluids
- EKG
- Imaging with plain films, CT, mammogram, MRI, and ultrasound
- Intact PTH
- Pathology
- Pleural or ascetic fluid analysis
- Sedimentation rate and c-reactive protein
- Thyroid function studies
- Urinalysis with microscopy

PGY2s will also understand the indications for ordering and interpretation of additional diagnostic studies, such as gastric emptying studies, esophageal motility and pH studies.

PGY3s will independently, appropriately order studies and be able to interpret results within the context of patient comorbidities and pretest probability of disease. PGY3s will develop a more advanced knowledge of cancer (breast, colon, and endocrine cancers) diagnostic studies, including tumor markers, hormonal analysis, imaging, and biopsy techniques. PGY3s will also be able to order and interpret specialized studies integral to the management of pediatric surgical disease.

PGY4s will develop a more sophisticated understanding of the utility of pre- and post-operative testing and be able to cogently use initial test results to appropriately order additional testing. PGY4s will know the indications, interpretation, and use of PFTs and V/Q scanning in pulmonary resection.

PGY5s will independently order and interpret laboratory and diagnostic tests appropriate in the pre-, intra-, and post-operative settings as well as under circumstances of rapid change in the condition of the patient.

Residents rotating on specialty electives may have additional medical knowledge objectives specifically relevant to that specialty

XI. Residents will take supplemental courses during their residency to ensure expertise in several

focused skill areas.

PGY1s will take the following courses:

- Advanced Cardiac Life Support (ACLS) – this course will be repeated throughout residency
- Advanced Trauma Life Support (ATLS)
- Fundamentals of Critical Care Support (FCCS)
- Point of Care Ultrasound (POCUS)
- Institute for Health Care Improvement (IHI)

PGY2-5s will take the following courses:

- Advanced Surgical Skills for Exposure in Trauma (ASSET)
- Fundamentals of Endoscopic Surgery (FES) – PGY3 or 4
- Fundamentals of Laparoscopic Surgery (FLS) -- PGY3 or 4
- Mock oral exams

PGY3-5s also have the option of taking the Basic Endovascular Skills for Trauma (BEST) course, including training in the Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) procedure.

XII. All residents will be fully trained in treatment and infection control protocols and procedures (e.g. personal protective equipment [PPE]) and trained clinically to properly recognize and care for COVID-19 patients.

Practice-Based Learning and Improvement

I. All residents should be able to access current national guidelines to apply evidence-based strategies to patient care.

II. PGY2s and PGY3s should develop progressive independence in evaluating new studies in published literature, through Journal Club and independent study.

III. PGY4s should become familiar with an increasingly broad range of literature, with a focus on surgical subspecialties, such as oncology, pediatrics, transplant, trauma, and vascular. PGY4s will be involved with the workup and conference presentation of more complex outpatient problems, such as painless jaundice, undiagnosed abdominal pain, and advanced breast cancer.

IV. PGY5s should be comfortable using current literature to support decision-making and explaining this evidence to patients and more junior residents. All residents should participate in case-based therapeutic decision-making, involving the primary care provider, surgeon and, where appropriate, other specialists.

V. Residents should learn to coordinate patient care as part of a larger team, including the midlevel provider, nurse, pharmacist, dietician, physical therapist, and social worker to optimize patient care.

VI. All residents should respond with positive changes to feedback from members of the health care team.

VII. Residents should participate regularly in Morbidity and Mortality conference, with the goals of analyzing care in a systematic fashion, ensuring that daily practice is evidence-based, and addressing quality issues affecting care.

Interpersonal and Communication Skills

I. PGY1s must demonstrate concise, organized, and articulate written (electronic) and verbal communication skills that build rapport with patients and families, convey information to other health care professionals, and provide timely documentation in the chart.

II. PGY1s must be able to write admission, preoperative and postoperative orders and to ensure a smooth transition of patient care during sign out.

III. PGY1s must develop an approach to discussing medical errors with patients and families.

IV. PGY2s must also develop interpersonal skills that facilitate collaboration with patients and their families as well as other health professionals. PGY2s must be able to navigate complex discussions on sensitive topics with patients and their families.

V. PGY3s should demonstrate leadership skills to build consensus and coordinate a multidisciplinary approach to patient care.

VI. PGY4s must be able to cogently present complex information to more junior residents as well as to colleagues, both at attending rounds at the bedside and in teaching conferences.

VII. PGY5s should assume responsibility for coordinating OR cases. PGY5s will also present Grand Rounds, organize and run teaching rounds, and supervise junior residents in their case presentations.

VIII. PGY5s should lead the surgical team and ensure good communication regarding anesthesia, anticipated need for antibiotics, blood products, and equipment, and the performance of a “time-out.” PGY5s will independently counsel patients and families.

Professionalism

I. All residents must demonstrate strong commitment to carrying out professional responsibilities as reflected in their conduct, ethical behavior, attire, interactions with colleagues and community, and devotion to patient care.

II. PGY1s should be able to

- educate patients and their families in a manner respectful of gender, age, culture, race, religion, disabilities, national origin, socioeconomic status, and sexual orientation on choices regarding their care
- obtain informed consent
- model discretion when communicating on patient matters in public
- understand their limitations in medical knowledge and technical skills when caring for patients and seek help when needed
- accept feedback and change their behavior accordingly

III. PGY2s should also be able to counsel patients and families on diagnostic and treatment decisions and use time efficiently in the clinic to see patients and chart information.

IV. PGY2s and higher level residents should be able to receive constructive criticism and PGY3s should be able to provide constructive feedback to more junior members of the team.

V. PGY4s should act as role models for more junior residents in appearance and in collaboration with nursing, ancillary staff, and patients and their families.

VI. PGY5s will supervise and help educate more junior residents and assume primary responsibility for all actions of the team.

VII. All residents must model a commitment to ethical care, respecting patient autonomy, confidentiality, the need for informed consent, and decisions regarding withholding care.

VIII. All residents shall at all times conduct themselves in accord with the CMHS Code of Ethics.

Systems-Based Practice

I. PGY1s must

- develop a basic understanding that their diagnostic and treatment decisions involve cost and risk and affect quality of care.
- become familiar with principles of patient safety and practices in place in our institution to protect patients
- comply with HIPAA regulations
- become familiar with billing and coding and how this process affects reimbursement for the patient and the institution.

II. PGY2s must demonstrate an awareness of alternative therapies and their costs, risks, and benefits.

III. PGY3s must be aware of increasing public attention to the quality and value of surgical procedures and maintain a focus on evidence based medicine. PGY3s must ensure thorough discharge planning and coordination of follow-up care.

IV. PGY4s must be able to articulate current quality concerns in general surgery and be aware of programs designed to identify and reduce preventable complications, such as the American College of Surgeons National Surgical Quality Improvement Program.

V. PGY5s must develop an understanding of current issues regarding access to care, reimbursement for specialty care, increased emphasis on accountability, disclosure of relationships with industry, and tracking surgical outcomes. PGY5s must supervise junior residents as they navigate patients through the health care system.

Teaching Methods

I. Supervised patient care in the inpatient and outpatient setting and in the operating room.

- Residents will initially be directly observed with patients to facilitate the acquisition of excellent history taking and physical exam skills.
- As residents become more proficient, they will interact independently with patients and present cases to faculty.
 - Initial emphasis will be on diagnosis and basic management.
 - When residents have mastered these skills, focus will be on medical decision-making and technical skills, and residents will work with supervising physicians to finalize a care plan.
- Residents will spend supervised time in the operating room, with increasing responsibility as appropriate to their skill level.

II. Additional Conferences, Courses, and Certifications

- ABS Flexible Endoscopy Curriculum <http://www.absurgery.org/xfer/abs-fec.pdf>
- Anatomy review, including a cadaver lab
- Board review course (once in year 4 or 5)
- California Fluoroscopy Supervisor and Operator Permit
- Da Vinci Robotic training
- General Surgery didactics
- Grand Rounds
- Journal club
- Medical Spanish
- Morbidity and Mortality conference
- Simulation labs
- Suture skills lab

III. Research

- Residents may use their elective time to do a 1-month research elective at another accredited institution.
- Residents participate in scholarly activity under the supervision of the Program Director or a faculty mentor.
 - Projects may encompass clinical research, community-based efforts such as quality improvement, education, or service; medical education; lab research, or practice improvement outcomes.
 - Publication and/or presentation at a local, regional, or national conference is encouraged.

IV. Independent study

- SCORE (<http://surgicalcore.org>) – in addition to a structured didactic curriculum, residents should use SCORE to prepare for cases, conferences, exams, and other learning activities. (TWIS)
- ABSITE (<http://absite.org>) – provides review material and practice exams to prepare residents for the In-training exam
- Journal and Textbook reading

- *Annals of Surgery*
- *American Journal of Surgery*
- *Greenfield's Surgery: Scientific Principles and Practice*
- *Journal of the American College of Surgery*
- *Sabiston Textbook of Surgery*, 20th Ed.
- *Schwartz Principles of Surgery*, 10th Ed.
- Online educational resources
 - American College of Osteopathic Surgeons <http://www.facos.org/>
 - American Board of Surgery www.absurgery.org
 - Pain management and addiction: <https://www.facs.org/education/opioids>
 - Clinical Key
 - Cochrane Reviews <http://www.cochranelibrary.com>
 - Centers for Disease Control and Prevention www.CDC.gov
 - COVID-19: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/index.html>
 - World Health Organization: How to put on and remove personal protective equipment (PPE) <https://openwho.org/courses/IPC-PPE-EN>
 - Up to Date

Evaluation

I. Logs and Documentation

- ACGME Surgical Operative Log
- Review of chart completion and clinical and educational work hour compliance
- Successful participation in and completion of above required conferences, courses, and certifications

II. Focused clinical performance assessments

- Mini-CEX and CAMEO (minimum 6 during residency)
- Operative performance assessments (minimum 6 during residency)

III. Exams

- General Surgery In-service Exam annually
- Practice oral examination yearly for PGY-4s and PGY-5s

V. Rotation and Staff Evaluations

- Verbal mid-rotation individual feedback from faculty
- Attending written evaluation of resident at the end of the rotation based on faculty observations and chart review
- 360 Evaluation biannually by non-physician staff

VII. Summative evaluations

- Program Director Evaluation semiannual evaluations and summative evaluation at program completion
- Clinical Competency Committee review biannually

Schedule

I. Residents should contact the designated attending for a given rotation the day prior to determine start time and location.

II. Residents should divide their time between the hospital, the operating room, and the clinic as appropriate to achieve the above educational goals.

- Residents on hospital surgery rotations will have rounding responsibilities each day as specified by the Chief resident and/or attending physician. Residents on the inpatient surgical services will perform postoperative checks on the day of surgery for all patients undergoing surgery. Residents will be involved in surgical procedures with increasing independence as appropriate to their level of training.
- Residents in clinic will have scheduled patients and be involved in discussion of patient presentation, differential diagnosis, decision for or against surgical intervention, and patient follow up.
- When possible, residents should follow their patients from preoperative clinic through surgery and subsequently for postoperative care.
- Case-based learning is most effective. Nightly reading/study should prepare residents for upcoming cases and serve as a review of daily patient care during the rotation.
- Residents may be asked to do focused literature searches or presentations during the course of a rotation.
- When doing consults at the request of colleagues, residents should clarify the question being asked and provide a concise answer.

III. Call and weekend responsibilities TBD by the attending physician.

- Hours worked must be consistent with ACGME requirements and are subject to approval by the Program Director.

IV. Residents have scheduled conferences and should be excused in a timely fashion to attend.