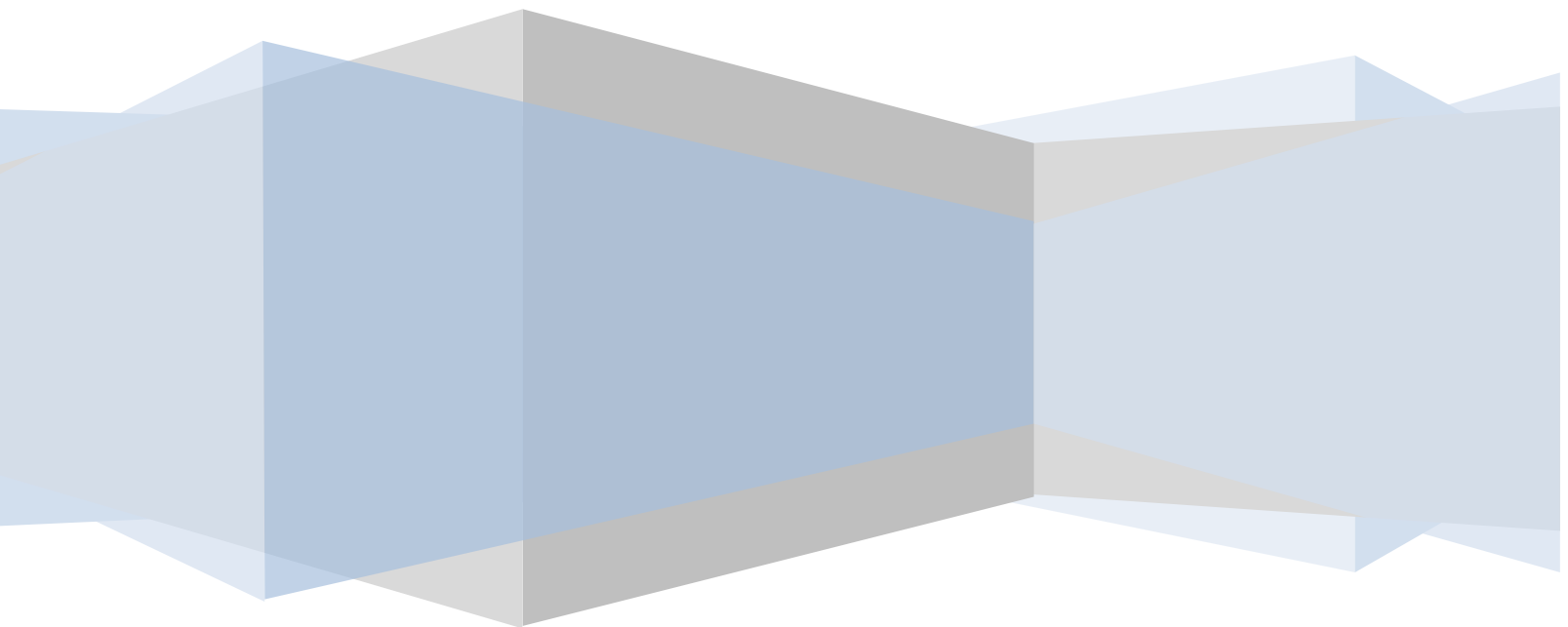


Community Memorial Hospital

Surgery Rotation Curriculum

Program Director: J. Romero MD FACS



Surgery Rotation Educational Goals & Objectives

Surgeons provide continuing care for patients with a myriad of surgical and psychosocial problems. During many patient encounters, the focus is on the diagnosis and treatment of illness. Not infrequently, this endeavor involves consultation with a variety of specialties and review of the risks and benefits of surgical intervention. As such, it is important for residents to be exposed to common surgical disease processes as well as recognize the unusual disease or common disease presenting in an unusual fashion. The Surgery rotation will provide the first year resident with an opportunity to learn normal and abnormal anatomy, gain basic procedural skills, and facilitate an understanding of commonly encountered issues in pre- and postoperative care. The goal of the rotation is to help the resident understand and be able to educate their patients on the evaluation and treatment of surgical disease by caring for patients preoperatively, intraoperatively, and postoperatively.

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 in the course of evaluating and treating surgical disease.
 - Residents should seek directed and appropriate medical consultation when necessary to further patient care.
 - Residents should supervise and ensure seamless transitions of care between the surgical team and the primary care team and between inpatient and outpatient care.

- II. Residents will demonstrate the ability to take a pertinent history and perform a focused physical exam. PGY1s should be able to differentiate between stable and unstable patients and elicit the following historical details:
 - Cardiovascular risk factors
 - Functional status
 - Nutritional status
 - Prior surgeries
 - Pulmonary risk factors

Residents should begin to recognize the contribution of comorbidities and medications to a patient's operative risk and risk for postoperative complications.

- III. Residents should be able to characterize the following physical findings:
 - abdominal distention, acute abdomen, anatomic landmarks for procedures, signs of arterial insufficiency, ulcers (arterial, decubitus, venous stasis, and neuropathic), volume status

- IV. Residents will understand the indications, contraindications, complications, limitations, and interpretation of following procedures, and become familiar with the safe and effective use of procedures they are able to perform on rotation, which may include:

- arterial line placement, central venous catheter placement, drain removal, dressings/wound management, excisional and punch biopsies, incision and drainage of superficial abscesses, local anesthetic administration, foley catheter placement, oral and nasogastric tube placement, nasogastric lavage, suturing, wound debridement, conscious sedation, nail surgery, needle aspiration and biopsy, FAST exam, venous cut down

Medical Knowledge

- I. Residents will develop an understanding of basic anatomy and pathophysiology as it pertains to the presentation of surgical disease. Residents should also have knowledge of the following issues as they pertain to surgical care:
 - Blood groups and principles of transfusion
 - Coagulation cascade, disorders of coagulation, and the effects of various medications on bleeding
 - Principles of fluid and electrolyte management

- II. Residents should understand the natural history of surgical disease and the expected outcome if a condition is observed, treated medically, or treated surgically. Residents will develop an approach to the following conditions commonly cared for by general surgeons in inpatient and outpatient settings:
 - Abscesses and cysts
 - Appendicitis
 - Bariatric and metabolic disorders that have surgical approaches
 - Biliary colic, cholecystitis, cholangitis
 - Bowel obstructions
 - Breast benign and malignant disorders
 - Burns
 - Colon inflammation
 - Colon cancer
 - Esophageal motility, reflux, and neoplastic conditions
 - Foreign body removal
 - Gallstones
 - Gastric disorders including ulcers, perforation, and tumors
 - Hemorrhoids
 - Liver diseases including portal hypertension, neoplasms, and biliary obstruction
 - Pancreatic inflammatory, neoplastic, and cystic disorders
 - Skin disorders: infections, tumors, ulcers
 - Small Bowel inflammatory and neoplastic conditions
 - Splenic dysfunctions that require surgical approaches
 - Thyroid and other endocrine disorders including tumors, hyper- and hypofunction
 - Wounds: avulsion, bite, crush, laceration, penetrating, shear injury
 - Ulcers: arterial, decubitus, venous stasis, and neuropathic
 - Vascular disorders: venous and arterial

- III. Residents will become comfortable with conditions requiring urgent identification and treatment, including:
- Acute abdomen
 - Bowel obstruction
 - Cardiopulmonary arrest
 - Compartment syndrome
 - Hemorrhage
 - Mesenteric ischemia
 - Necrotizing fasciitis
 - Pulseless extremity
 - Trauma: penetrating and blunt
- IV. Residents will understand the indications for ordering, appropriate use, and interpretation of laboratory and imaging studies
- To triage patients with acute illness
 - To further evaluate surgical patients, particularly when the diagnosis is unclear
 - To prepare for surgery
 - In the context of patient comorbidities and pretest probability of disease
- V. 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.

Residents will become familiar with management of the following postoperative conditions:

- Atelectasis
- Deep venous thrombosis
- Fat embolus
- Fever
- Hemorrhage
- Ileus
- Malnutrition
- Oliguria
- Pneumonia
- Pulmonary embolus
- Respiratory insufficiency
- Shock
- Superficial and deep thrombophlebitis
- Transfusion reaction
- Uncontrolled pain
- Urinary retention
- Volume overload
- Wound dehiscence
- Wound infection

- V. All residents will spend some time in the operating room to better appreciate surgical pathology and the patient experience, and to gain focused surgical skills as appropriate to Family Medicine. Residents will also become familiar with:
- Pre-procedure patient preparation e.g. NPO, preparation for colonoscopy, medication management, etc.
 - sterile technique and preparation and draping of the operative patient
 - induction of anesthesia
 - management of conscious sedation
 - knowledge of basic anatomy
 - classification of wounds
 - estimation of blood loss
 - fluid and electrolyte replacement
 - function of and types of instruments, drains and dressings
 - wound closure
 - use of electrocautery
 - use of minimally invasive and endoscopic techniques
 - indications and uses of stapling devices
- VI. 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.

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. Residents should develop skills in evaluating new studies in published literature, through Journal Club and independent study.
- III. All residents should participate in case-based therapeutic decision-making, involving the primary care provider, surgeon and, where appropriate, other specialists.
- IV. Residents should learn to coordinate patient care as part of a larger team, including the nurse, pharmacist, dietician, physical therapist, and social worker to optimize patient care.
- V. All residents should respond with positive changes to feedback from members of the health care team.

Interpersonal and Communication Skills

- I. Residents must demonstrate organized and articulate 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. Residents must communicate with the microbiology staff, lab staff, and pathologist to obtain results in a timely fashion and to facilitate their interpretation.

- III. Residents should understand and comply with HIPPA with respect to use of health information.
- IV. Residents must learn to appreciate the impact of surgery on a patient's quality of life, help patients and their families make decisions for or against surgical intervention, and learn the essential elements of informed consent.

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. Residents 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.

Systems-Based Practice

- I. Residents must have a basic understanding that their diagnostic and treatment decisions involve cost and risk and affect quality of care.
- II. Residents should participate in ongoing surgical initiatives to improve quality while they are on service
- III. Residents should become aware of alternative therapies and their costs, risks, and benefits.

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.
- II. Conferences
 - Specialty-specific didactics
- III. Independent study
 - Journal and Textbook reading
 - Sabiston
 - Schwartz
 - Greenfield
 - *American Journal of Surgery*

- *Journal of the American College of Surgeons*
- Electronic resources
 - American College of Surgeons Resident Resources page
<https://www.facs.org/education/roles/residents>
 - Pain management and addiction:
<https://www.facs.org/education/opioids>
 - Clinical Key
 - Up to Date
 - SCORE (American Board of Surgery)

Evaluation

- I. Verbal mid-rotation individual feedback
- II. 360 Evaluation (biannual)
- III. Attending written evaluation of resident at the end of the month based on rotation observations and chart review.

Rotation Structure

- I. Residents should contact the surgery attending 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.
 - Rotations are a “hands-on” learning experience. Residents will be involved in discussion of patient presentation, differential diagnosis, decision for or against surgical intervention, and patient follow up. In addition, residents will be involved in surgical procedures at the bedside and in the operating room.
 - If the same patient returns during the rotation, particularly pre- and postoperatively, send the resident in to see the follow-up.
 - 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 the rotation.
 - When doing consults, ensure the resident understands the question asked and provides 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 specialty-specific didactics and required FM clinic and should be excused in a timely fashion to attend.