



AMERICAN ACADEMY OF  
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Recommended Curriculum Guidelines for Family Medicine Residents

# Care of the Surgical Patient

*This document was endorsed by the American Academy of Family Physicians (AAFP).*

## Introduction

This Curriculum Guideline defines a recommended training strategy for family medicine residents. Topic competencies, attitudes, knowledge, and skills that are critical to family medicine should be attained through longitudinal experience that promotes educational competencies defined by the Accreditation Council for Graduate Medical Education (ACGME), [www.acgme.org](http://www.acgme.org). The curriculum must include structured experience in several specified areas. Most of the resident's knowledge will be gained by caring for ambulatory patients who visit the family medicine center. Structured didactic lectures, conferences, journal clubs, and workshops must be included in the curriculum with an emphasis on outcomes-oriented, evidence-based studies that delineate common and chronic diseases affecting patients of all ages. Targeted techniques of health promotion and disease prevention are hallmarks of family medicine. Appropriate referral patterns and provision of cost-effective care should also be part of the curriculum.

Program requirements specific to family medicine residencies may be found on the ACGME website. Current AAFP Curriculum Guidelines may be found online at [www.aafp.org/cg](http://www.aafp.org/cg). These guidelines are periodically updated and endorsed by the AAFP and, in many instances, other specialty societies, as indicated on each guideline.

Each residency program is responsible for its own curriculum. ***This guideline provides a useful strategy to help residency programs form their curricula for educating family physicians.***

## **Preamble**

Care of the surgical patient is an important part of the education and practice of family physicians. Although few family physicians perform major surgeries, many assist during major surgical procedures. Family physicians are called upon by their surgical specialist colleagues to evaluate patients for surgery, make preoperative and perioperative recommendations for care, and assist in the postoperative medical management of patients. Family physicians are often asked to help their patients understand their appropriateness for surgery and the risks and benefits of surgical procedures. Some patients may turn to their family physician to help them understand the exact nature of a surgical procedure. Importantly, family physicians need to know how to appropriately refer patients for surgery, particularly in emergent or life-threatening situations.

## **Competencies**

At the completion of residency training, a family medicine resident should:

- Be able to perform a surgical assessment and develop an appropriate treatment plan (Medical Knowledge, Patient Care)
- Coordinate ambulatory, inpatient, and institutional care across health care providers, institutions, and agencies (Systems-based Practice, Patient Care)
- Demonstrate the ability to communicate effectively with the patient, as well as with the patient's family and caregivers, to ensure that the diagnosis and treatment plan are clearly understood (Interpersonal and Communication Skills)
- Demonstrate the ability to communicate effectively with the surgeon supervisor/consultant about the patient's symptoms, physical findings, test results, and proposed plan of care (Interpersonal and Communication Skills, Professionalism)
- Recognize his or her practice limitations and seek consultation with other health care providers when necessary to provide optimal care (Professionalism, Practice-based Learning and Improvement)

## **Attitudes**

The resident should develop attitudes that encompass:

- Recognition of the importance of collaboration between the family physician and the surgeon as partners in the evaluation of surgical patients and the decision-making process regarding their care
- Awareness of the principles involved in differentiating the causative origin of clinical symptoms that result in the need for medical and/or surgical intervention

- Sensitivity to concerns and anxieties of the patient and the patient's family members regarding the potential for surgical intervention

## Knowledge

In the appropriate setting, the resident should demonstrate the ability to apply knowledge of:

1. Basic principles of surgical diagnosis
  - a. Basic surgical anatomy
  - b. Wound physiology, care, and healing processes
  - c. Clinical assessment, including history, physical examination, laboratory evaluation, and differential diagnosis of key signs and symptoms of surgical conditions
  - d. Invasive versus noninvasive diagnostic tests
2. Anesthesia
  - a. Premedication
  - b. Agents and routes of administration
  - c. Resuscitation methods
3. Recognition of surgical emergencies
  - a. Respiratory
    - i. Airway obstruction
    - ii. Chest trauma
      - 1) Flail chest
      - 2) Hemothorax
      - 3) Pneumothorax
  - b. Circulation
    - i. Hypovolemia
      - 1) Gastrointestinal bleeding
      - 2) Traumatic blood loss
  - c. Acute abdomen
    - i. Perforated viscus
    - ii. Intestinal obstruction
    - iii. Incarcerated hernia
    - iv. Mesenteric ischemia
    - v. Appendicitis
    - vi. Diverticulitis
  - d. Soft tissue
    - i. Necrotizing soft tissue infections

- ii. Thermal injuries
- e. Trauma
  - i. Advanced Trauma Life Support
- 4. Common surgical procedures
  - a. Appendectomy
  - b. Cholecystectomy
  - c. Herniorrhaphy
  - d. Colectomy
  - e. Hemorrhoidectomy – surgical or simple banding
  - f. Breast surgery – lumpectomy, mastectomy
  - g. Arterial bypass
  - h. Varicose vein procedures
  - i. Thyroidectomy and thyroid nodules
  - j. Parathyroidectomy
- 5. Ethical, legal, and socioeconomic considerations
  - a. Informed consent
  - b. Quality of life
  - c. Cultural sensitivity
  - d. End-of-life issues
- 6. Preoperative assessment
  - a. Recognition of appropriate surgical candidates
  - b. Surgical risk assessment
  - c. Comorbid diseases
  - d. Antibiotic prophylaxis
  - e. Patient preparation (bowel, medication, schedule, etc.)
- 7. Intraoperative care
  - a. Basic principles of asepsis and sterile technique
  - b. Patient monitoring
  - c. Fluid management
  - d. Blood requirements
  - e. Temperature control
  - f. Use of basic surgical instruments

8. Postoperative care
  - a. Routine
    - i. Wound care
    - ii. Patient mobilization
    - iii. Nutrition management
    - iv. Pain management
    - v. Suctions and drains
  - b. Common complications
    - i. Fever workup and management
    - ii. Wound dehiscence
    - iii. Urinary retention
    - iv. Hemorrhage
    - v. Pneumonia
    - vi. Atelectasis
    - vii. Fluid overload
    - viii. Transfusion reaction
    - ix. Thrombophlebitis
    - x. Pulmonary embolism
    - xi. Oliguria
    - xii. Respiratory insufficiency
    - xiii. Ileus
    - xiv. Infection
    - xv. Shock
9. Outpatient surgery
  - a. Patient selection
  - b. Procedural sedation and analgesia
  - c. Postoperative observation principles
  - d. Follow-up care
10. Office care of common conditions
  - a. Lumps, bumps, and abscesses
  - b. Simple lacerations
  - c. Superficial burns
  - d. Common methods of anesthesia
11. Adjunctive and long-term care of organ donors and recipients
12. Adjunctive and long-term care of bariatric surgical patients

13. Recognition and care of surgical wounds
  - a. Penetrating wounds
  - b. Avulsion, crush, or shear injury wounds
  - c. Bite wounds

## **Skills**

In the appropriate setting, the resident should demonstrate the ability to independently perform or appropriately refer:

1. Preoperative assessment
2. Surgical risk evaluation, including assessment of medication use
  - a. Surgical risk evaluation
  - b. Physical assessment
  - c. Radiographic assessment
  - d. Noninvasive diagnostic procedures
  - e. Invasive diagnostic procedures
    - i. Paracentesis
    - ii. Nasogastric lavage
    - iii. Peritoneal lavage
    - iv. Thoracentesis
    - v. Bladder aspiration
    - vi. Central venous access (central venous pressure, Swan-Ganz catheter)
    - vii. Venous cutdown
    - viii. Arterial puncture and catheterization
    - ix. Needle aspiration and biopsy technique
3. Recognition of need for emergent surgical techniques
  - a. Cricothyroidotomy
  - b. Needle thoracostomy
  - c. Pericardiocentesis

4. Intraoperative skills
  - a. Preparation and draping of operative field
  - b. First assist at major surgery
  - c. Basic use of surgical instruments
  - d. Incision and dissection
  - e. Exposure and retraction
  - f. Hemostasis
  - g. Estimation of blood loss
  - h. Fluid replacement
  - i. Wound closure
    - i. Technique selection (ligature, staples, adhesives)
    - ii. Suture selection
    - iii. Drains
    - iv. Dressings
5. Postoperative care
  - a. Suture removal
  - b. Dressing changes
  - c. Drain removal
6. Minor surgical techniques
  - a. Local anesthesia
  - b. Simple excision
  - c. Incision and drainage of cysts and abscesses
  - d. Aspiration
  - e. Foreign body removal
  - f. Minor burns
  - g. Vasectomy
  - h. Cauterization and electrodesiccation
  - i. Skin biopsy (punch, shave, excisional)
  - j. Wound debridement
  - k. Enucleation and excision of external thrombotic hemorrhoid
  - l. Nail surgery
  - m. Cryosurgery (liquid nitrogen)

7. Counseling about advance directives, organ donations, and end-of-life issues
8. Recognition and treatment of venous stasis ulcers, arterial ulcers, and neuropathic ulcers
9. Grading and treatment of decubitus ulcers

## Resources

American College of Surgeons. *ATLS: Advanced Trauma Life Support for Doctors (Student Course Manual)*. 8<sup>th</sup> ed. Chicago, IL: American College of Surgeons; 2008.

Barker LR, Fiebach NH, Kern DE, Thomas PA, Ziegelstein RC, Zieve PD, eds. *Principles of Ambulatory Medicine*. 7<sup>th</sup> ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2007.

Lawrence PF, Bell RM, Dayton M, eds. *Essentials of General Surgery*. 4<sup>th</sup> ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2006.

Pfenninger JL, Fowler GC. *Procedures for Primary Care*. 3<sup>rd</sup> ed. Philadelphia, PA: Elsevier Saunders; 2011.

Tuggy M, Garcia J. *Atlas of Essential Procedures*. Philadelphia, PA: Elsevier Saunders; 2011.

Zuber TJ, Mayeaux EJ Jr, eds. *Atlas of Primary Care Procedures*. Philadelphia, PA: Lippincott Williams & Wilkins; 2004.

## Website Resources

Family Practice Notebook. Surgery Book. <http://fpnotebook.com/Surgery/index.htm>

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