



ACGME International

**Advanced Specialty Program Requirements for
Graduate Medical Education in
General Surgery**

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General Surgery**

I. Introduction

I.A. Definition and Scope of the Specialty

The educational program in general surgery must lead to the acquisition of an appropriate fund of knowledge and technical skills, the ability to integrate the acquired knowledge into the clinical situation, and the development of surgical judgment. It prepares the resident to function as a qualified practitioner of surgery at the advanced level of performance expected of a board-certified specialist.

I.B. Duration of Education

I.B.1. The education in general surgery must be 60 or 72 months in length.

II. Institutions

II.A. Sponsoring Institution

See International Foundational Requirements, Section I.A.

II.B. Participating Sites

See International Foundational Requirements, Section I.B.

III. Program Personnel and Resources

III.A. Program Director

See International Foundational Requirements, Section II.A.

III.B. Faculty

See International Foundational Requirements, Section II.B.

III.C. Other Program Personnel

III.C.1. Staff for a variety of other services that provide a critical role in the care of patients with surgical conditions, such as radiology and pathology, must be available.

III.D. Resources

III.D.1. An accredited surgery program must be conducted in an institution that can document a sufficient breadth of patient care. At a minimum, the institution must routinely care for patients with a broad spectrum of surgical diseases and conditions.

III.D.2. The institutional volume and variety of operative experience must be adequate to ensure a sufficient number and distribution of complex cases (as determined by the Review Committee-International) for each resident in the program.

III.D.3. The institution and the program must jointly ensure the availability of adequate resources for resident education, including:

III.D.3.a) online radiographic and laboratory reporting systems at the primary clinical site; and,

III.D.3.b) simulation and skills laboratories.

IV. Resident Appointments

IV.A. Eligibility Criteria

See International Foundational Requirements, Section III.A.

IV.B. Number of Residents

IV.B.1. The program director may not appoint more residents than approved by the Review Committee-International, unless otherwise stated in the specialty-specific requirements. The program's educational resources must be adequate to support the number of residents appointed to the program.

IV.B.2. Residency positions must be allocated to one of two groups: categorical or preliminary positions.

IV.B.2.a) Residents who have satisfactorily completed a preliminary training year must not be appointed to additional years as preliminary residents.

IV.B.2.b) The number of preliminary positions must not exceed the total number of approved post-graduate year one (PGY-1) categorical positions.

IV.B.2.c) Documentation of continuation in graduate medical education for preliminary residents must be provided at the time of each site visit.

IV.B.2.d) It is the responsibility of the program director to counsel and assist preliminary residents in obtaining future positions.

IV.B.3. The final two years of residency education must be spent in the same program.

V. Specialty-Specific Educational Program

V.A. Regularly Scheduled Didactic Sessions

- V.A.1. The core curriculum must include a didactic program based upon the core knowledge content of general surgery.
- V.A.2. The educational program should include the fundamentals of basic science as applied to clinical surgery, including:
- V.A.2.a) applied surgical anatomy and surgical pathology;
 - V.A.2.b) the elements of wound healing;
 - V.A.2.c) homeostasis, shock, and circulatory physiology;
 - V.A.2.d) hematologic disorders;
 - V.A.2.e) immunobiology and transplantation;
 - V.A.2.f) oncology;
 - V.A.2.g) surgical endocrinology;
 - V.A.2.h) surgical nutrition;
 - V.A.2.i) fluid and electrolyte balance; and,
 - V.A.2.j) the metabolic response to injury, including to burns.
- V.A.3. The following types of conferences must exist within a program:
- V.A.3.a) a course or a structured series of lectures that ensures education in the basic and clinical sciences fundamental to surgery, including technological advances that relate to surgery and the care of patients with surgical diseases, as well as education in critical thinking, design of experiments, and evaluation of data;
 - V.A.3.b) regular organized clinical teaching, such as grand rounds, ward rounds, and clinical conferences; and,
 - V.A.3.c) a weekly morbidity and mortality or quality improvement conference.
- V.A.4. The program must document a clinical curriculum that is sequential, comprehensive, and organized from basic to complex.
- V.A.5. Conferences should be scheduled to permit resident attendance on a regular basis, and resident time must be protected from interruption by routine clinical duties.

V.A.6. Documentation of attendance by 75 percent of residents at the core conferences must be achieved.

V.A.7. Sole reliance on textbook review is inadequate.

V.B. Clinical Experiences

V.B.1. The clinical program should be organized as follows:

V.B.1.a) At least 54 months must be spent on clinical assignments in surgery, with documented experience in emergency care and surgical critical care.

V.B.1.a).(1) At least 42 of the 54 months must be spent on clinical assignments in the essential content areas of surgery, including:

V.B.1.a).(1).(a) the abdomen and its contents;

V.B.1.a).(1).(b) the alimentary tract;

V.B.1.a).(1).(c) skin, soft tissues, and breast;

V.B.1.a).(1).(d) endocrine surgery;

V.B.1.a).(1).(e) head and neck surgery;

V.B.1.a).(1).(f) pediatric surgery;

V.B.1.a).(1).(g) surgical critical care;

V.B.1.a).(1).(h) surgical oncology;

V.B.1.a).(1).(i) trauma and non-operative trauma (burn experience that includes patient management may be counted toward non-operative trauma); and,

V.B.1.a).(1).(j) the vascular system.

V.B.1.b) Rotations in burn care, gynecology, neurological surgery, orthopaedic surgery, cardiac surgery, and urology are not required. Clearly documented goals and objectives must be presented if these components are included as rotations.

V.B.1.c) There must be a transplant rotation that includes patient management and cover knowledge of the principles of immunology, immunosuppression, and the management of general surgical conditions arising in transplant patients. Clearly documented goals and objectives must be presented for this experience.

- V.B.1.d) No more than six months total may be allocated to research or to non-surgical disciplines, such as anesthesiology, internal medicine, pediatrics, or surgical pathology (gastroenterology is exempt from this limit if the rotation provides endoscopic experiences).
- V.B.1.e) No more than 12 months may be devoted to a surgical discipline other than the principal components of surgery.
- V.B.2. Each resident must perform a minimum number of specific cases for accreditation. Performance of this minimum number of cases must not be interpreted as an equivalent to competence achievement.
- V.B.3. Each resident must have a minimum of 750 major cases across the five years of training.
- V.B.3.a) A minimum of 150 major cases must occur in a resident's chief year.
- V.B.4. Residents must have experience with a variety of endoscopic procedures, including esophogastro-duodenoscopy, colonoscopy, and bronchoscopy, as well as experience in advanced laparoscopy.
- V.B.5. Residents must have experience with evolving diagnostic and therapeutic methods.
- V.B.6. The program must provide residents with an outpatient experience to evaluate patients both pre-operatively, including initial evaluation, and post-operatively.
- V.B.6.a) At least 75 percent of assignments in the essential content areas must include an outpatient experience of one half-day per week. (An outpatient experience is not required for assignments in the secondary components of surgery or surgical critical care).
- V.B.7. Operative Experience
- V.B.7.a) The program must document that residents are performing a sufficient breadth of complex procedures to graduate qualified surgeons.
- V.B.7.b) All residents (categorical, designated preliminary, and non-designated preliminary residents in ACGME-I-accredited positions) must enter their operative experience, concurrently during each year of the residency, in the ACGME-I Case Log System.
- V.B.7.c) A chief resident and a fellow (whether or not the fellow is in an ACGME-I-accredited position) must not have primary responsibility for the same patient, except that general surgeon and surgical critical care fellows may co-manage the non-operative care of the same patient.

- V.B.7.d) A resident will be considered the surgeon only when he or she can document a significant role in the following aspects of management: determination or confirmation of the diagnosis; provision of pre-operative care; selection and accomplishment of the appropriate operative procedure; and direction of post-operative care.
- V.B.8. Chief residents' clinical assignments should be scheduled in the final year of the program.
- V.B.8.a) These assignments must be scheduled at the primary clinical site, or at a participating site that meets all of the following criteria:
- V.B.8.a).(1) The program director must appoint the members of the teaching staff and the local program director at the participating site.
- V.B.8.a).(2) The faculty at the participating site must demonstrate a commitment to scholarly pursuits.
- V.B.8.a).(3) Clinical experiences in the essential content areas should be obtained at the participating site.
- V.B.8.a).(4) The participating site should be in geographic proximity to allow all residents to attend core conferences at the primary clinical site.
- V.B.8.a).(4).(a) If the participating site is geographically remote and joint conferences cannot be held, an equivalent educational program of lectures and conferences must occur at the participating site and must be fully documented.
- V.B.8.a).(4).(b) Morbidity and mortality reviews must occur at the participating site or at a combined central location.
- V.B.8.a).(4).(c) The participating site cannot be the primary site of another accredited general surgery residency.
- V.B.8.b) These assignments must include educational experiences in the essential content areas of general surgery.
- V.B.8.c) No more than four months of the chief year may be devoted exclusively to any one essential content area.
- V.B.8.c).(1) Non-cardiac thoracic surgery and transplantation rotations may be considered acceptable chief resident assignments, as long as the chief resident performs an appropriate number of complex cases with documented participation in pre- and post-operative care.

- V.B.8.d) The chief resident may act as a teaching assistant (TA) to a more junior resident with appropriate faculty supervision when justified by the experience.
- V.B.8.d).(1) Up to TA 50 cases listed will be credited toward the total requirement of 750 cases.
- V.B.8.d).(2) TA cases may not count towards the 150 minimum cases needed to fulfill the operative requirements for the chief resident year.
- V.B.8.d).(3) Junior residents performing these cases will also be credited as surgeon for these cases.

V.C. Residents' Scholarly Activities

See International Foundational Requirements, Section IV.B.

V.D. Duty Hour and Work Limitations

See International Foundational Requirements, Section VI.

VI. ACGME-I Competencies

VI.A. Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents must demonstrate proficiency in:

- VI.A.1. manual dexterity appropriate for their level;
- VI.A.2. developing and executing patient care plans appropriate for their level, including management of pain;
- VI.A.3. managing patients with severe and complex illnesses and with major injuries;
- VI.A.4. the essential content areas of: the abdomen and its contents; the alimentary tract; skin, soft tissues, and breast; endocrine surgery; head and neck surgery; pediatric surgery; surgical critical care; surgical oncology; trauma and non-operative trauma; and the vascular system; and,
- VI.A.5. managing general surgical conditions arising in transplant patients.

VI.B. Medical Knowledge

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. Residents must demonstrate proficiency in knowledge of:

- VI.B.1. critical evaluation of pertinent scientific information;
- VI.B.2. the fundamentals of basic science as applied to clinical surgery;
- VI.B.3. applied surgical anatomy and surgical pathology;
- VI.B.4. the elements of wound healing;
- VI.B.5. homeostasis, shock, and circulatory physiology;
- VI.B.6. hematologic disorders;
- VI.B.7. immunobiology and transplantation;
- VI.B.8. oncology;
- VI.B.9. surgical endocrinology;
- VI.B.10. surgical nutrition, and fluid and electrolyte balance;
- VI.B.11. metabolic response to injury; and,
- VI.B.12. burn physiology and initial burn management.

VI.C. Practice-based Learning and Improvement

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals:

- VI.C.1. identify strengths, deficiencies, and limits in one's knowledge and expertise;
- VI.C.2. set learning and improvement goals;
- VI.C.3. identify and perform appropriate learning activities;
- VI.C.4. systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement;
- VI.C.5. incorporate formative evaluation feedback into daily practice;
- VI.C.6. locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems;
- VI.C.7. use information technology to optimize learning;
- VI.C.8. participate in the education of patients, families, students, residents and other health professionals;

VI.C.9. participate in morbidity and mortality conferences that evaluate and analyze patient care outcomes; and,

VI.C.10. utilize an evidence-based approach to patient care.

VI.D. Interpersonal and Communication Skills

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients and their families, and other health professionals. Residents must:

VI.D.1. communicate effectively with patients and their families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;

VI.D.2. communicate effectively with physicians, other health professionals, and health-related agencies;

VI.D.3. work effectively as a member or leader of a health care team or other professional group;

VI.D.4. act in a consultative role to other physicians and health professionals;

VI.D.5. maintain comprehensive, timely, and legible medical records;

VI.D.6. counsel and educate patients and their families; and,

VI.D.7. effectively document practice activities.

VI.E. Professionalism

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents must demonstrate:

VI.E.1. compassion, integrity, and respect for others;

VI.E.2. responsiveness to patient needs that supersedes self-interest;

VI.E.3. respect for patient privacy and autonomy;

VI.E.4. accountability to patients, society, and the profession;

VI.E.5. sensitivity and responsiveness to a diverse patient population, including diversity in gender, age, culture, race, religion, disabilities, and sexual orientation;

VI.E.6. high standards of ethical behavior; and,

VI.E.7. a commitment to continuous patient care.

VI.F. Systems-based Practice

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents must:

- VI.F.1. work effectively in various health care delivery settings and systems relevant to their clinical specialty;
- VI.F.2. coordinate patient care within the health care system relevant to their clinical specialty;
- VI.F.3. incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care, as appropriate;
- VI.F.4. advocate for quality patient care and optimal patient care systems;
- VI.F.5. work in inter-professional teams to enhance patient safety and improve patient care quality;
- VI.F.6. participate in identifying system errors and implementing potential systems solutions;
- VI.F.7. practice high-quality, cost-effective patient care;
- VI.F.8. demonstrate knowledge of risk-benefit analysis; and,
- VI.F.9. demonstrate an understanding of the roles of different specialists and other health care professionals in overall patient management.