ACGME Program Requirements for
Graduate Medical Education
in Vascular Surgery

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Common Program Requirements are in BOLD

Introduction

Int.A. Residency is an essential dimension of the transformation of the medical student to the independent practitioner along the continuum of medical education. It is physically, emotionally, and intellectually demanding, and requires longitudinally-concentrated effort on the part of the resident.

The specialty education of physicians to practice independently is experiential, and necessarily occurs within the context of the health care delivery system. Developing the skills, knowledge, and attitudes leading to proficiency in all the domains of clinical competency requires the resident physician to assume personal responsibility for the care of individual patients. For the resident, the essential learning activity is interaction with patients under the guidance and supervision of faculty members who give value, context, and meaning to those interactions. As residents gain experience and demonstrate growth in their ability to care for patients, they assume roles that permit them to exercise those skills with greater independence. This concept--graded and progressive responsibility--is one of the core tenets of American graduate medical education. Supervision in the setting of graduate medical education has the goals of assuring the provision of safe and effective care to the individual patient; assuring each resident’s development of the skills, knowledge, and attitudes required to enter the unsupervised practice of medicine; and establishing a foundation for continued professional growth.

Int.B. Vascular surgery is the surgical specialty involving diseases of the arterial, venous, and lymphatic circulatory systems, exclusive of those circulatory vessels intrinsic to the heart and intracranial vessels. Specialists in this discipline demonstrate not only the knowledge, skills, and understanding of the medical science relative to the vascular system, but also mature technical skills and surgical judgment.

Int.C. Two types of programs offer education in vascular surgery:

Int.C.1. Integrated Program

The educational program in vascular surgery for integrated programs must be 60 months in length. (Core)

Int.C.2. Independent Program

The educational program in vascular surgery for independent programs must be 24 months in length. (Core)

I. Institutions
I.A. Sponsoring Institution

One sponsoring institution must assume ultimate responsibility for the program, as described in the Institutional Requirements, and this responsibility extends to resident assignments at all participating sites. (Core)

The sponsoring institution and the program must ensure that the program director has sufficient protected time and financial support for his or her educational and administrative responsibilities to the program. (Core)

I.B. Participating Sites

I.B.1. There must be a program letter of agreement (PLA) between the program and each participating site providing a required assignment. The PLA must be renewed at least every five years. (Core)

The PLA should:

1. B.1.a) identify the faculty who will assume both educational and supervisory responsibilities for residents; (Detail)
2. B.1.b) specify their responsibilities for teaching, supervision, and formal evaluation of residents, as specified later in this document; (Detail)
3. B.1.c) specify the duration and content of the educational experience; and, (Detail)
4. B.1.d) state the policies and procedures that will govern resident education during the assignment. (Detail)

I.B.2. The program director must submit any additions or deletions of participating sites routinely providing an educational experience, required for all residents, of one month full time equivalent (FTE) or more through the Accreditation Council for Graduate Medical Education (ACGME) Accreditation Data System (ADS). (Core)

I.B.3. Integrated sites

A participating site designated as integrated with the sponsoring institution must have an Integration Agreement specifying that the program director must: (Core)

1. B.3.a) appoint the members of the faculty at the integrated site; (Detail)
2. B.3.b) appoint the chief or director of the teaching service in the integrated site; (Detail)
3. B.3.c) appoint all residents in the program; and, (Detail)
I.B.3.d) determine all rotations and assignments of both residents and members of the faculty. (Detail)

I.B.4. Integrated sites must be in geographic proximity to allow all residents to attend joint conferences, basic science lectures, and morbidity and mortality reviews on a regular and documented basis at a central location. (Core)

I.B.4.a) If the sites are geographically so remote that joint conferences cannot be held, an equivalent educational program of lectures and conferences at the integrated site must be fully documented. (Core)

II. Program Personnel and Resources

II.A. Program Director

II.A.1. There must be a single program director with authority and accountability for the operation of the program. The sponsoring institution’s GMEC must approve a change in program director. (Core)

II.A.1.a) The program director must submit this change to the ACGME via the ADS. (Core)

II.A.2. The program director should continue in his or her position for a length of time adequate to maintain continuity of leadership and program stability. (Detail)

II.A.2.a) The term of appointment must be for the length of the program plus one year. (Detail)

II.A.3. Qualifications of the program director must include:

II.A.3.a) requisite specialty expertise and documented educational and administrative experience acceptable to the Review Committee; (Core)

II.A.3.b) current certification in the subspecialty by the American Board of Surgery, or subspecialty qualifications that are acceptable to the Review Committee; and, (Core)

II.A.3.c) current medical licensure and appropriate medical staff appointment. (Core)

II.A.4. The program director must administer and maintain an educational environment conducive to educating the residents in each of the ACGME competency areas. (Core)

The program director must:

II.A.4.a) oversee and ensure the quality of didactic and clinical education in all sites that participate in the program; (Core)
II.A.4.b) approve a local director at each participating site who is accountable for resident education; (Core)

II.A.4.c) approve the selection of program faculty as appropriate; (Core)

II.A.4.d) evaluate program faculty; (Core)

II.A.4.e) approve the continued participation of program faculty based on evaluation; (Core)

II.A.4.f) monitor resident supervision at all participating sites; (Core)

II.A.4.g) prepare and submit all information required and requested by the ACGME; (Core)

II.A.4.g).(1) This includes but is not limited to the program application forms and annual program updates to the ADS, and ensure that the information submitted is accurate and complete. (Core)

II.A.4.h) ensure compliance with grievance and due process procedures as set forth in the Institutional Requirements and implemented by the sponsoring institution; (Detail)

II.A.4.i) provide verification of residency education for all residents, including those who leave the program prior to completion; (Detail)

II.A.4.j) implement policies and procedures consistent with the institutional and program requirements for resident duty hours and the working environment, including moonlighting, (Core)

and, to that end, must:

II.A.4.j).(1) distribute these policies and procedures to the residents and faculty; (Detail)

II.A.4.j).(2) monitor resident duty hours, according to sponsoring institutional policies, with a frequency sufficient to ensure compliance with ACGME requirements; (Core)

II.A.4.j).(3) adjust schedules as necessary to mitigate excessive service demands and/or fatigue; and, (Detail)

II.A.4.j).(4) if applicable, monitor the demands of at-home call and adjust schedules as necessary to mitigate excessive service demands and/or fatigue, (Detail)

II.A.4.k) monitor the need for and ensure the provision of back up
support systems when patient care responsibilities are
unusually difficult or prolonged; (Detail)

II.A.4.i) comply with the sponsoring institution’s written policies and
procedures, including those specified in the Institutional
Requirements, for selection, evaluation and promotion of
residents, disciplinary action, and supervision of residents;
(Detail)

II.A.4.m) be familiar with and comply with ACGME and Review
Committee policies and procedures as outlined in the ACGME
Manual of Policies and Procedures; (Detail)

II.A.4.n) obtain review and approval of the sponsoring institution’s
GMEC/DIO before submitting information or requests to the
ACGME, including: (Core)

II.A.4.n).(1) all applications for ACGME accreditation of new
programs; (Detail)

II.A.4.n).(2) changes in resident complement; (Detail)

II.A.4.n).(3) major changes in program structure or length of
training; (Detail)

II.A.4.n).(4) progress reports requested by the Review Committee;
(Detail)

II.A.4.n).(5) requests for increases or any change to resident duty
hours; (Detail)

II.A.4.n).(6) voluntary withdrawals of ACGME-accredited
programs; (Detail)

II.A.4.n).(7) requests for appeal of an adverse action; and, (Detail)

II.A.4.n).(8) appeal presentations to a Board of Appeal or the
ACGME. (Detail)

II.A.4.o) obtain DIO review and co-signature on all program
application forms, as well as any correspondence or
document submitted to the ACGME that addresses:
(Detail)

II.A.4.o).(1) program citations, and/or, (Detail)

II.A.4.o).(2) request for changes in the program that would have
significant impact, including financial, on the program
or institution. (Detail)

II.A.4.p) obtain prior Review Committee approval for any resident spending
a portion of his or her chief year at a participating site that is not
designated as an integrated site; (Detail)

II.A.4.q) prepare and implement a supervision policy that specifies lines of
responsibility for general surgery residents and vascular surgery
residents when both are assigned to the same service; (Core)

II.A.4.r) devote at least 50 percent of his or her time to program
management and administration, as well as to teaching, research,
and clinical care in the sponsoring institution and integrated sites;
and, (Core)

II.A.4.s) demonstrate scholarly activity by one or more of the following:

II.A.4.s).(1) peer-reviewed funding; (Detail)

II.A.4.s).(2) publication of original research or review articles in peer-
reviewed journals, or chapters in textbooks; (Detail)

II.A.4.s).(3) publication or presentation of case reports or clinical series
at local, regional, or national professional and scientific
society meetings; or, (Detail)

II.A.4.s).(4) participation in national committees or educational
organizations. (Detail)

II.B. Faculty

II.B.1. At each participating site, there must be a sufficient number of
faculty with documented qualifications to instruct and supervise all
residents at that location. (Core)

The faculty must:

II.B.1.a) devote sufficient time to the educational program to fulfill
their supervisory and teaching responsibilities; and to
demonstrate a strong interest in the education of residents,
and (Core)

II.B.1.b) administer and maintain an educational environment
conducive to educating residents in each of the ACGME
competency areas. (Core)

II.B.2. The physician faculty must have current certification in the
subspecialty by the American Board of Surgery, or possess
qualifications judged acceptable to the Review Committee. (Core)

II.B.3. The physician faculty must possess current medical licensure and
appropriate medical staff appointment. (Core)

II.B.4. The nonphysician faculty must have appropriate qualifications in
their field and hold appropriate institutional appointments. (Core)
II.B.5. The faculty must establish and maintain an environment of inquiry and scholarship with an active research component. (Core)

II.B.5.a) The faculty must regularly participate in organized clinical discussions, rounds, journal clubs, and conferences. (Detail)

II.B.5.b) Some members of the faculty should also demonstrate scholarship by one or more of the following:

II.B.5.b).(1) peer-reviewed funding; (Detail)

II.B.5.b).(2) publication of original research or review articles in peer-reviewed journals, or chapters in textbooks; (Detail)

II.B.5.b).(3) publication or presentation of case reports or clinical series at local, regional, or national professional and scientific society meetings; or, (Detail)

II.B.5.b).(4) participation in national committees or educational organizations. (Detail)

II.B.5.c) Faculty should encourage and support residents in scholarly activities. (Core)

II.B.6. In addition to the program director, there must be, for each approved residency position, at least one full-time faculty member whose major function is teaching and supervising residents in the program. (Core)

II.B.7. The members of the physician faculty must reflect sufficient diversity of interest to represent the many facets of vascular surgery. (Detail)

II.B.7.a) The terms of appointment for these faculty members must be at least three years. (Detail)

II.C. Other Program Personnel

The institution and the program must jointly ensure the availability of all necessary professional, technical, and clerical personnel for the effective administration of the program. (Core)

II.D. Resources

The institution and the program must jointly ensure the availability of adequate resources for resident education, as defined in the specialty program requirements. (Core)

II.D.1. There must be the capability to perform both open and endovascular procedures of sufficient breadth and volume to support the program. (Core)

II.D.2. The facility used to provide residents with experience in interpretation of
non-invasive vascular laboratory testing must be accredited by a recognized organization that would allow residency or fellowship graduates to fulfill the requirements of eligibility for specialty board certification. (Core)

II.D.2.a) The laboratory should be currently accredited in extracranial cerebrovascular, peripheral arterial and peripheral venous testing, and should have substantial experience in abdominal and visceral vascular imaging. (Detail)

II.D.3. In the absence of accreditation of all testing modules (i.e. venous, arterial, cerebrovascular, visceral) substantial experience in each testing modality must be demonstrated, and full accreditation in all modules achieved within two years from the time of the most recent annual program update. (Detail)

II.E. Medical Information Access

Residents must have ready access to specialty-specific and other appropriate reference material in print or electronic format. Electronic medical literature databases with search capabilities should be available. (Detail)

III. Resident Appointments

III.A. Eligibility Criteria

The program director must comply with the criteria for resident eligibility as specified in the Institutional Requirements. (Core)

III.A.1. Eligibility Requirements – Residency Programs

III.A.1.a) All prerequisite post-graduate clinical education required for initial entry or transfer into ACGME-accredited residency programs must be completed in ACGME-accredited residency programs, or in Royal College of Physicians and Surgeons of Canada (RCPSC)-accredited or College of Family Physicians of Canada (CFPC)-accredited residency programs located in Canada. Residency programs must receive verification of each applicant’s level of competency in the required clinical field using ACGME or CanMEDS Milestones assessments from the prior training program. (Core)

III.A.1.b) A physician who has completed a residency program that was not accredited by ACGME, RCPSC, or CFPC may enter an ACGME-accredited residency program in the same specialty at the PGY-1 level and, at the discretion of the program director at the ACGME-accredited program may be advanced to the PGY-2 level based on ACGME Milestones assessments at the ACGME-accredited program. This provision applies only to entry into residency in those
specialties for which an initial clinical year is not required for entry. (Core)

III.A.1.c) A Review Committee may grant the exception to the eligibility requirements specified in Section III.A.2.b) for residency programs that require completion of a prerequisite residency program prior to admission. (Core)

III.A.1.d) Review Committees will grant no other exceptions to these eligibility requirements for residency education. (Core)

III.A.2. Eligibility Requirements – Fellowship Programs

All required clinical education for entry into ACGME-accredited fellowship programs must be completed in an ACGME-accredited residency program, or in an RCPSC-accredited or CFPC- accredited residency program located in Canada. (Core)

III.A.2.a) Fellowship programs must receive verification of each entering fellow’s level of competency in the required field using ACGME or CanMEDS Milestones assessments from the core residency program. (Core)

III.A.2.b) Fellow Eligibility Exception

A Review Committee may grant the following exception to the fellowship eligibility requirements:

An ACGME-accredited fellowship program may accept an exceptionally qualified applicant**, who does not satisfy the eligibility requirements listed in Sections III.A.2. and III.A.2.a), but who does meet all of the following additional qualifications and conditions: (Core)

III.A.2.b).(1) Assessment by the program director and fellowship selection committee of the applicant’s suitability to enter the program, based on prior training and review of the summative evaluations of training in the core specialty; and (Core)

III.A.2.b).(2) Review and approval of the applicant’s exceptional qualifications by the GMEC or a subcommittee of the GMEC; and (Core)

III.A.2.b).(3) Satisfactory completion of the United States Medical Licensing Examination (USMLE) Steps 1, 2, and, if the applicant is eligible, 3, and; (Core)

III.A.2.b).(4) For an international graduate, verification of Educational Commission for Foreign Medical Graduates (ECFMG) certification; and, (Core)
III.A.2.b).(5) Applicants accepted by this exception must complete fellowship Milestones evaluation (for the purposes of establishment of baseline performance by the Clinical Competency Committee), conducted by the receiving fellowship program within six weeks of matriculation. This evaluation may be waived for an applicant who has completed an ACGME International-accredited residency based on the applicant's Milestones evaluation conducted at the conclusion of the residency program. **(Core)**

III.A.2.b).(5).(a) If the trainee does not meet the expected level of Milestones competency following entry into the fellowship program, the trainee must undergo a period of remediation, overseen by the Clinical Competency Committee and monitored by the GMEC or a subcommittee of the GMEC. This period of remediation must not count toward time in fellowship training. **(Core)**

** An exceptionally qualified applicant has (1) completed a non-ACGME-accredited residency program in the core specialty, and (2) demonstrated clinical excellence, in comparison to peers, throughout training. Additional evidence of exceptional qualifications is required, which may include one of the following: (a) participation in additional clinical or research training in the specialty or subspecialty; (b) demonstrated scholarship in the specialty or subspecialty; (c) demonstrated leadership during or after residency training; (d) completion of an ACGME-International-accredited residency program.

III.A.2.c) The Review Committee for Surgery does not allow exceptions to the Eligibility Requirements for Fellowship Programs in Section III.A.2. **(Core)**

III.A.2.d) To be eligible for appointment to an independent program, residents must have successfully completed a surgery residency program accredited by the ACGME or the RCPSC an ACGME-accredited residency program in surgery. **(Core)**

III.A.2.e) To be eligible for appointment to an Early Specialization Program (ESP), residents must have successfully completed four years of an ACGME-accredited residency program in surgery that has been prior-approved by the Review Committee for participation as an ESP and that is in the same institution as the ESP vascular surgery program. **(Core)**

III.A.2.f) To be eligible for appointment to an integrated program, graduates must have an MD or DO degree from an institution accredited by
III.A.2.f)(1) Graduates of medical schools in countries other than the United States or Canada must present evidence of final certification by the ECFMG. (Core)

III.A.2.g) Prior to appointment in the program, each resident must be notified in writing of the required length of the program. (Core)

III. B. Number of Residents

The program's educational resources must be adequate to support the number of residents appointed to the program. (Core)

III.B.1. The program director may not appoint more residents than approved by the Review Committee, unless otherwise stated in the specialty-specific requirements. (Core)

III. C. Resident Transfers

III.C.1. Before accepting a resident who is transferring from another program, the program director must obtain written or electronic verification of previous educational experiences and a summative competency-based performance evaluation of the transferring resident. (Detail)

III.C.2. A program director must provide timely verification of residency education and summative performance evaluations for residents who may leave the program prior to completion. (Detail)

III. D. Appointment of Fellows and Other Learners

The presence of other learners (including, but not limited to, residents from other specialties, subspecialty fellows, PhD students, and nurse practitioners) in the program must not interfere with the appointed residents' education. (Core)

III.D.1. The program director must report the presence of other learners to the DIO and GMEC in accordance with sponsoring institution guidelines. (Detail)

III.D.2. Although a senior vascular surgery resident in an integrated program or any vascular surgery resident in an independent program may function with a chief resident in general surgery on the same service with the same junior residents, they must not have primary responsibility for the same patients. (Core)

IV. Educational Program

IV.A. The curriculum must contain the following educational components:
IV.A.1. Overall educational goals for the program, which the program must make available to residents and faculty; (Core)

IV.A.2. Competency-based goals and objectives for each assignment at each educational level, which the program must distribute to residents and faculty at least annually, in either written or electronic form; (Core)

IV.A.3. Regularly scheduled didactic sessions; (Core)

IV.A.3.a) The following conferences must exist:

IV.A.3.a).(1) a review, held at least biweekly, of all current complications and deaths, including radiological and pathological correlation of surgical specimens and autopsies when relevant; (Detail)

IV.A.3.a).(2) a course or a structured series of conferences to ensure coverage of the basic and clinical sciences fundamental to vascular surgery, as well as in the technological advances that relate to vascular surgery and the care of patients with vascular diseases; (Detail)

IV.A.3.a).(3) regular organized clinical teaching; and, (Detail)

IV.A.3.a).(4) a regular review of recent literature in a journal club format. (Detail)

IV.A.3.b) Residents must actively participate in the planning and presentation of required conferences. (Core)

IV.A.3.b).(1) Each resident must participate in at least 75 percent of all required conferences. (Detail)

IV.A.3.b).(2) Participation by the members of the faculty in program conferences must in aggregate be at least 50 percent. (Detail)

IV.A.4. Delineation of resident responsibilities for patient care, progressive responsibility for patient management, and supervision of residents over the continuum of the program; and, (Core)

IV.A.5. ACGME Competencies

The program must integrate the following ACGME competencies into the curriculum: (Core)

IV.A.5.a) Patient Care and Procedural Skills

IV.A.5.a).(1) 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: (Outcome)

IV.A.5.a).(1).(a) must demonstrate manual dexterity appropriate for
their educational levels; and, (Outcome)

IV.A.5.a).(1).(b) must develop and execute patient care plans
appropriate for their educational levels. (Outcome)

IV.A.5.a).(2) Residents must be able to competently perform all
medical, diagnostic, and surgical procedures
considered essential for the area of practice.
Residents: (Outcome)

IV.A.5.a).(2).(a) must develop competence in performing operative
procedures in the following defined list of
categories:

abdominal; (Outcome)

cerebrovascular; (Outcome)

peripheral; (Outcome)

complex; (Outcome)

endovascular diagnostic; (Outcome)

endovascular therapeutic; and, (Outcome)

endovascular aneurysm repair. (Outcome)

IV.A.5.a).(2).(b) must develop competence in patient management,
including determining an appropriate diagnosis and
operative plan, providing pre-operative care, and
directing post-operative care; (Outcome)

IV.A.5.a).(2).(c) must develop competence in assessing the
vascular portion of angiography, computed
tomography (CT) scanning, and magnetic
resonance imaging (MRI) and magnetic resonance
angiogram (MRA) images; and, (Outcome)

IV.A.5.a).(2).(d) must demonstrate the ability to accurately interpret
non-invasive laboratory studies. (Outcome)

IV.A.5.a).(2).(d).(i) This experience must include the range and
number of non-invasive studies that would
allow residency or fellowship graduates to
fulfill the requirements of eligibility for
IV.A.5.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: (Outcome)

IV.A.5.b).(1) must demonstrate knowledge of the fundamental sciences, including anatomy, biology, embryology, microbiology, physiology, and pathology as they relate to the pathophysiology, diagnosis, and treatment of vascular lesions; and, (Outcome)

IV.A.5.b).(2) must demonstrate knowledge of the methods and techniques of angiography, CT scanning, and MRI, MRA, and other vascular imaging modalities. (Outcome)

IV.A.5.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. (Outcome)

Residents are expected to develop skills and habits to be able to meet the following goals:

IV.A.5.c).(1) identify strengths, deficiencies, and limits in one’s knowledge and expertise; (Outcome)

IV.A.5.c).(2) set learning and improvement goals; (Outcome)

IV.A.5.c).(3) identify and perform appropriate learning activities; (Outcome)

IV.A.5.c).(4) systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement; (Outcome)

IV.A.5.c).(5) incorporate formative evaluation feedback into daily practice; (Outcome)

IV.A.5.c).(6) locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems; (Outcome)

IV.A.5.c).(7) use information technology to optimize learning; and, (Outcome)
IV.A.5.c).(8) participate in the education of patients, families, students, residents and other health professionals. (Outcome)

IV.A.5.d) Interpersonal and Communication Skills

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

Residents are expected to:

IV.A.5.d).(1) communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds; (Outcome)

IV.A.5.d).(2) communicate effectively with physicians, other health professionals, and health related agencies; (Outcome)

IV.A.5.d).(3) work effectively as a member or leader of a health care team or other professional group; (Outcome)

IV.A.5.d).(4) act in a consultative role to other physicians and health professionals; and,

IV.A.5.d).(5) maintain comprehensive, timely, and legible medical records, if applicable. (Outcome)

IV.A.5.e) Professionalism

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

Residents are expected to demonstrate:

IV.A.5.e).(1) compassion, integrity, and respect for others; (Outcome)

IV.A.5.e).(2) responsiveness to patient needs that supersedes self-interest; (Outcome)

IV.A.5.e).(3) respect for patient privacy and autonomy; (Outcome)

IV.A.5.e).(4) accountability to patients, society and the profession; and,

IV.A.5.e).(5) sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and
sexual orientation. (Outcome)

IV.A.5.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. (Outcome)

Residents are expected to:

IV.A.5.f).(1) work effectively in various health care delivery settings and systems relevant to their clinical specialty; (Outcome)

IV.A.5.f).(2) coordinate patient care within the health care system relevant to their clinical specialty; (Outcome)

IV.A.5.f).(3) incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate; (Outcome)

IV.A.5.f).(4) advocate for quality patient care and optimal patient care systems; (Outcome)

IV.A.5.f).(5) work in interprofessional teams to enhance patient safety and improve patient care quality; (Outcome)

IV.A.5.f).(6) participate in identifying system errors and implementing potential systems solutions; and, (Outcome)

IV.A.5.f).(7) demonstrate the ability to apply knowledge of the roles of different specialists and other health care professionals in overall patient management. (Outcome)

IV.A.6. Curriculum Organization and Resident Experiences

The curriculum for each resident in an integrated program must include:

IV.A.6.a) core surgical education experience of 24 months, which may include: general surgery, cardiac surgery, thoracic surgery, congenital cardiac surgery, cardiothoracic surgery, critical care, urology, gynecology, neurological surgery, plastic surgery, burn surgery, trauma, surgical critical care, pediatric surgery, abdominal and alimentary tract surgery, basic and advanced laparoscopic skills, head and neck and endocrine surgery, surgical oncology, and transplantation. (Core)
IV.A.6.a).(1).(a) This experience must include: two years of documented educational experiences in core surgical education, including: pre- and post-operative evaluation and care; critical care and trauma management; and basic technical experience in skin and soft tissue, abdomen and alimentary track, airway management, laparoscopic surgery, and thoracic surgery. (Core)

IV.A.6.a).(2) 36 months of documented educational experiences concentrated in vascular surgery; and, (Core)

IV.A.6.a).(2).(a) Up to six months of vascular-related rotations (i.e., "vascular medicine" cardiology, interventional radiology) may be included as part of these 36 months. (Core)

IV.A.6.a).(3) no more than six months dedicated to research. (Detail)

IV.A.6.b) Residents in an integrated program must complete the last two years of their vascular surgery education in the same institution, whether that is at the primary clinical site or at an integrated site(s). (Core)

IV.A.6.c) Residents in an integrated program should perform a minimum of 500 operations, to include 250 major vascular reconstructive procedures. (Core)

IV.A.6.c).(1) Operative experience in excess of 1500 total cases must be justified by the program director. (Core)

IV.A.6.d) Residents in an independent program should perform a minimum of 250 major vascular reconstructive procedures. (Core)

IV.A.6.d).(1) Operative experience in excess of 900 total cases must be justified by the program director. (Core)

IV.A.6.e) The curriculum for residents in all programs, regardless of format, must include a final year with chief resident responsibility on the vascular surgery service at the primary clinical site or at an integrated site(s). (Core)

IV.A.6.f) Resident experiences, regardless of program format, must include:

IV.A.6.f).(1) primary responsibility for continuity of patient care, including ambulatory care, inpatient care, referral and consultation, and utilization of community resources; (Core)

IV.A.6.f).(2) progressive senior surgical responsibilities in the total care of vascular surgery patients, including pre-operative
evaluation, therapeutic decision-making, operative experience, and post-operative management; (Core)

participation in providing consultation with faculty member supervision. (Core)

Residents should have clearly defined educational responsibilities for other residents, medical students, and professional personnel. (Detail)

These teaching experiences should correlate basic biomedical knowledge with the clinical aspects of vascular surgery. (Detail)

experience in the application, assessment, and limitations of non-invasive vascular diagnostic techniques; and. (Core)

The program must provide didactic and clinical training regarding non-invasive vascular diagnostic testing and interpretation. (Detail)

Training must not be achieved solely through attendance at off-site review or test-preparation courses. (Detail)

experience with outpatient activities. (Detail)

An average of one half-day per week should be devoted to these outpatient activities. (Detail)

Experience as teaching assistants, when operative experience justifies a teaching role, should be provided. (Detail)

**IV.B. Residents’ Scholarly Activities**

The curriculum must advance residents’ knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care. (Core)

Residents must have instruction in critical thinking, design of experiments, and evaluation of data. (Detail)

Residents should participate in scholarly activity. (Core)

Residents should participate in clinical and/or laboratory research. (Detail)

The sponsoring institution and program should allocate adequate educational resources to facilitate resident involvement in scholarly activities. (Detail)
V. Evaluation

V.A. Resident Evaluation

V.A.1. The program director must appoint the Clinical Competency Committee. (Core)

V.A.1.a) At a minimum the Clinical Competency Committee must be composed of three members of the program faculty. (Core)

V.A.1.a).(1) The program director may appoint additional members of the Clinical Competency Committee.

V.A.1.a).(1).(a) These additional members must be physician faculty members from the same program or other programs, or other health professionals who have extensive contact and experience with the program’s residents in patient care and other health care settings. (Core)

V.A.1.a).(1).(b) Chief residents who have completed core residency programs in their specialty and are eligible for specialty board certification may be members of the Clinical Competency Committee. (Core)

V.A.1.b) There must be a written description of the responsibilities of the Clinical Competency Committee. (Core)

V.A.1.b).(1) The Clinical Competency Committee should:

V.A.1.b).(1).(a) review all resident evaluations semi-annually; (Core)

V.A.1.b).(1).(b) prepare and assure the reporting of Milestones evaluations of each resident semi-annually to ACGME; and, (Core)

V.A.1.b).(1).(c) advise the program director regarding resident progress, including promotion, remediation, and dismissal. (Detail)

V.A.2. Formative Evaluation

V.A.2.a) The faculty must evaluate resident performance in a timely manner during each rotation or similar educational assignment, and document this evaluation at completion of the assignment. (Core)

V.A.2.b) The program must:
V.A.2.b).(1) provide objective assessments of competence in patient care and procedural skills, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice based on the specialty-specific Milestones; (Core)

V.A.2.b).(2) use multiple evaluators (e.g., faculty, peers, patients, self, and other professional staff); (Detail)

V.A.2.b).(3) document progressive resident performance improvement appropriate to educational level; and, (Core)

V.A.2.b).(4) provide each resident with documented semiannual evaluation of performance with feedback. (Core)

V.A.2.c) The evaluations of resident performance must be accessible for review by the resident, in accordance with institutional policy. (Detail)

V.A.2.d) The semiannual assessment must include a review of each resident's operative experience to ensure breadth and balance of experience in the surgical care of vascular diseases. (Core)

V.A.2.d).(1) The program director must ensure that the operative experience of individual residents in the same program is comparable. (Detail)

V.A.3. Summative Evaluation

V.A.3.a) The specialty-specific Milestones must be used as one of the tools to ensure residents are able to practice core professional activities without supervision upon completion of the program. (Core)

V.A.3.b) The program director must provide a summative evaluation for each resident upon completion of the program. (Core)

This evaluation must:

V.A.3.b).(1) become part of the resident’s permanent record maintained by the institution, and must be accessible for review by the resident in accordance with institutional policy; (Detail)

V.A.3.b).(2) document the resident’s performance during the final period of education; and, (Detail)

V.A.3.b).(3) verify that the resident has demonstrated sufficient
competence to enter practice without direct supervision. (Detail)

V.B. Faculty Evaluation

V.B.1. At least annually, the program must evaluate faculty performance as it relates to the educational program. (Core)

V.B.2. These evaluations should include a review of the faculty’s clinical teaching abilities, commitment to the educational program, clinical knowledge, professionalism, and scholarly activities. (Detail)

V.B.3. This evaluation must include at least annual written confidential evaluations by the residents. (Detail)

V.C. Program Evaluation and Improvement

V.C.1. The program director must appoint the Program Evaluation Committee (PEC). (Core)

V.C.1.a) The Program Evaluation Committee:

V.C.1.a).(1) must be composed of at least two program faculty members and should include at least one resident; (Core)

V.C.1.a).(2) must have a written description of its responsibilities; and, (Core)

V.C.1.a).(3) should participate actively in:

V.C.1.a).(3).(a) planning, developing, implementing, and evaluating educational activities of the program; (Detail)

V.C.1.a).(3).(b) reviewing and making recommendations for revision of competency-based curriculum goals and objectives; (Detail)

V.C.1.a).(3).(c) addressing areas of non-compliance with ACGME standards; and, (Detail)

V.C.1.a).(3).(d) reviewing the program annually using evaluations of faculty, residents, and others, as specified below. (Detail)

V.C.2. The program, through the PEC, must document formal, systematic evaluation of the curriculum at least annually, and is responsible for rendering a written, annual program evaluation. (Core)

The program must monitor and track each of the following areas:
V.C.2.a) resident performance; (Core)
V.C.2.b) faculty development; (Core)
V.C.2.c) graduate performance, including performance of program graduates on the certification examination; (Core)
V.C.2.c).(1) At least 60 percent of a program’s graduates from the preceding five years taking the American Board of Surgery qualifying and certifying examinations for vascular surgery for the first time must pass. (Outcome)
V.C.2.d) program quality; and, (Core)
V.C.2.d).(1) Residents and faculty must have the opportunity to evaluate the program confidentially and in writing at least annually, and (Detail)
V.C.2.d).(2) The program must use the results of residents’ and faculty members’ assessments of the program together with other program evaluation results to improve the program. (Detail)
V.C.2.e) progress on the previous year’s action plan(s). (Core)
V.C.3. The PEC must prepare a written plan of action to document initiatives to improve performance in one or more of the areas listed in section V.C.2., as well as delineate how they will be measured and monitored. (Core)
V.C.3.a) The action plan should be reviewed and approved by the teaching faculty and documented in meeting minutes. (Detail)
VI. Resident Duty Hours in the Learning and Working Environment
VI.A. Professionalism, Personal Responsibility, and Patient Safety
VI.A.1. Programs and sponsoring institutions must educate residents and faculty members concerning the professional responsibilities of physicians to appear for duty appropriately rested and fit to provide the services required by their patients. (Core)
VI.A.2. The program must be committed to and responsible for promoting patient safety and resident well-being in a supportive educational environment. (Core)
VI.A.3. The program director must ensure that residents are integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs. (Core)
VI.A.4. The learning objectives of the program must:

VI.A.4.a) be accomplished through an appropriate blend of supervised patient care responsibilities, clinical teaching, and didactic educational events; and, (Core)

VI.A.4.b) not be compromised by excessive reliance on residents to fulfill non-physician service obligations. (Core)

VI.A.5. The program director and institution must ensure a culture of professionalism that supports patient safety and personal responsibility. (Core)

VI.A.6. Residents and faculty members must demonstrate an understanding and acceptance of their personal role in the following:

VI.A.6.a) assurance of the safety and welfare of patients entrusted to their care; (Outcome)

VI.A.6.b) provision of patient- and family-centered care; (Outcome)

VI.A.6.c) assurance of their fitness for duty; (Outcome)

VI.A.6.d) management of their time before, during, and after clinical assignments; (Outcome)

VI.A.6.e) recognition of impairment, including illness and fatigue, in themselves and in their peers; (Outcome)

VI.A.6.f) attention to lifelong learning; (Outcome)

VI.A.6.g) the monitoring of their patient care performance improvement indicators; and, (Outcome)

VI.A.6.h) honest and accurate reporting of duty hours, patient outcomes, and clinical experience data. (Outcome)

VI.A.7. All residents and faculty members must demonstrate responsiveness to patient needs that supersedes self-interest. They must recognize that under certain circumstances, the best interests of the patient may be served by transitioning that patient’s care to another qualified and rested provider. (Outcome)

VI.B. Transitions of Care

VI.B.1. Programs must design clinical assignments to minimize the number of transitions in patient care. (Core)

VI.B.2. Sponsoring institutions and programs must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety. (Core)
VI.B.3. Programs must ensure that residents are competent in communicating with team members in the hand-over process. (Outcome)

VI.B.4. The sponsoring institution must ensure the availability of schedules that inform all members of the health care team of attending physicians and residents currently responsible for each patient’s care. (Detail)

VI.C. Alertness Management/Fatigue Mitigation

VI.C.1. The program must:

VI.C.1.a) educate all faculty members and residents to recognize the signs of fatigue and sleep deprivation; (Core)

VI.C.1.b) educate all faculty members and residents in alertness management and fatigue mitigation processes; and, (Core)

VI.C.1.c) adopt fatigue mitigation processes to manage the potential negative effects of fatigue on patient care and learning, such as naps or back-up call schedules. (Detail)

VI.C.2. Each program must have a process to ensure continuity of patient care in the event that a resident may be unable to perform his/her patient care duties. (Core)

VI.C.3. The sponsoring institution must provide adequate sleep facilities and/or safe transportation options for residents who may be too fatigued to safely return home. (Core)

VI.D. Supervision of Residents

VI.D.1. In the clinical learning environment, each patient must have an identifiable, appropriately-credentialed and privileged attending physician (or licensed independent practitioner as approved by each Review Committee) who is ultimately responsible for that patient’s care. (Core)

VI.D.1.a) This information should be available to residents, faculty members, and patients. (Detail)

VI.D.1.b) Residents and faculty members should inform patients of their respective roles in each patient’s care. (Detail)

VI.D.2. The program must demonstrate that the appropriate level of supervision is in place for all residents who care for patients. (Core)

VI.D.2. Supervision may be exercised through a variety of methods. Some activities require the physical presence of the supervising faculty
member. For many aspects of patient care, the supervising physician may be a more advanced resident or fellow. Other portions of care provided by the resident can be adequately supervised by the immediate availability of the supervising faculty member or resident physician, either in the institution, or by means of telephonic and/or electronic modalities. In some circumstances, supervision may include post-hoc review of resident-delivered care with feedback as to the appropriateness of that care.

VI.D.3. Levels of Supervision

To ensure oversight of resident supervision and graded authority and responsibility, the program must use the following classification of supervision:

VI.D.3.a) Direct Supervision – the supervising physician is physically present with the resident and patient.

VI.D.3.b) Indirect Supervision:

VI.D.3.b).(1) with direct supervision immediately available – the supervising physician is physically within the hospital or other site of patient care, and is immediately available to provide Direct Supervision.

VI.D.3.b).(2) with direct supervision available – the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide Direct Supervision.

VI.D.3.c) Oversight – the supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.

VI.D.4. The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each resident must be assigned by the program director and faculty members.

VI.D.4.a) The program director must evaluate each resident’s abilities based on specific criteria. When available, evaluation should be guided by specific national standards-based criteria.

VI.D.4.b) Faculty members functioning as supervising physicians should delegate portions of care to residents, based on the needs of the patient and the skills of the residents.

VI.D.4.c) Senior residents or fellows should serve in a supervisory role of junior residents in recognition of their progress toward
independence, based on the needs of each patient and the
skills of the individual resident or fellow. (Detail)

VI.D.5. Programs must set guidelines for circumstances and events in
which residents must communicate with appropriate supervising
faculty members, such as the transfer of a patient to an intensive
care unit, or end-of-life decisions. (Core)

VI.D.5.a) Each resident must know the limits of his/her scope of
authority, and the circumstances under which he/she is
permitted to act with conditional independence. (Outcome)

VI.D.5.a).(1) In particular, PGY-1 residents should be supervised
either directly or indirectly with direct supervision
immediately available. (Core)

VI.D.5.a).(1).(a) The program must define those physician tasks for
which PGY-1 residents may be supervised
indirectly, with direct supervision available, and
must define “direct supervision” in the context of the
program. (Core)

VI.D.5.a).(1).(b) The program must define those physician tasks for
which PGY-1 residents must be supervised directly
until they have demonstrated competence as
defined by the program director, and must maintain
records of such demonstrations of competence. (Core)

VI.D.6. Faculty supervision assignments should be of sufficient duration to
assess the knowledge and skills of each resident and delegate to
him/her the appropriate level of patient care authority and
responsibility. (Detail)

VI.E. Clinical Responsibilities

VI.E.1. The clinical responsibilities for each resident must be based on PGY-level,
patient safety, resident education, severity and complexity of patient
illness/condition and available support services. (Core)

VI.E.2. The workload associated with optimal clinical care of surgical patients is a
continuum from the moment of admission to the point of discharge. (Core)

VI.E.3. During the residency education process, surgical teams should be made
up of attending surgeons, residents at various PG levels, medical
students (when appropriate), and other health care providers. (Core)

VI.E.4. The work of the caregiver team should be assigned to team members
based on each member’s level of education, experience, and
competence. (Core)
VI.E.4. As residents progress through levels of increasing competence and responsibility, it is expected that work assignments will keep pace with their advancement. (Core)

VI.F. Teamwork

Residents must care for patients in an environment that maximizes effective communication. This must include the opportunity to work as a member of effective interprofessional teams that are appropriate to the delivery of care in the specialty. (Core)

VI.F.1. Effective surgical practices entail the involvement of members with a mix of complementary skills and attributes (physicians, nurses, and other staff). Success requires both an unwavering mutual respect for those skills and contributions, and a shared commitment to the process of patient care. (Core)

VI.F.2. Residents must collaborate with fellow surgical residents, and especially with faculty, other physicians outside of their specialty, and non-traditional health care providers, to best formulate treatment plans for an increasingly diverse patient population. (Core)

VI.F.3. Residents must assume personal responsibility to complete all tasks to which they are assigned (or which they voluntarily assume) in a timely fashion. These tasks must be completed in the hours assigned, or, if that is not possible, residents must learn and utilize the established methods for handing off remaining tasks to another member of the resident team so that patient care is not compromised. (Core)

VI.F.4. Lines of authority should be defined by programs, and all residents must have a working knowledge of these expected reporting relationships to maximize quality care and patient safety. (Core)

VI.G. Resident Duty Hours

VI.G.1. Maximum Hours of Work per Week

Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities and all moonlighting. (Core)

VI.G.1.a) Duty Hour Exceptions

A Review Committee may grant exceptions for up to 10% or a maximum of 88 hours to individual programs based on a sound educational rationale. (Detail)

The Review Committee for General Surgery will not accept requests for exceptions to the 80-hour limit to the residents’ work week.
VI.G.1.a).(1) In preparing a request for an exception the program director must follow the duty hour exception policy from the ACGME Manual on Policies and Procedures. (Detail)

VI.G.1.a).(2) Prior to submitting the request to the Review Committee, the program director must obtain approval of the institution’s GMEC and DIO. (Detail)

VI.G.2. Moonlighting

VI.G.2.a) Moonlighting must not interfere with the ability of the resident to achieve the goals and objectives of the educational program. (Core)

VI.G.2.b) Time spent by residents in Internal and External Moonlighting (as defined in the ACGME Glossary of Terms) must be counted towards the 80-hour Maximum Weekly Hour Limit. (Core)

VI.G.2.c) PGY-1 residents are not permitted to moonlight. (Core)

VI.G.3. Mandatory Time Free of Duty

Residents must be scheduled for a minimum of one day free of duty every week (when averaged over four weeks). At-home call cannot be assigned on these free days. (Core)

VI.G.4. Maximum Duty Period Length

VI.G.4.a) Duty periods of PGY-1 residents must not exceed 16 hours in duration. (Core)

VI.G.4.b) Duty periods of PGY-2 residents and above may be scheduled to a maximum of 24 hours of continuous duty in the hospital. (Core)

VI.G.4.b).(1) Programs must encourage residents to use alertness management strategies in the context of patient care responsibilities. Strategic napping, especially after 16 hours of continuous duty and between the hours of 10:00 p.m. and 8:00 a.m., is strongly suggested. (Detail)

VI.G.4.b).(2) It is essential for patient safety and resident education that effective transitions in care occur. Residents may be allowed to remain on-site in order to accomplish these tasks; however, this period of time must be no longer than an additional four hours. (Core)

VI.G.4.b).(3) Residents must not be assigned additional clinical responsibilities after 24 hours of continuous in-house
In unusual circumstances, residents, on their own initiative, may remain beyond their scheduled period of duty to continue to provide care to a single patient. Justifications for such extensions of duty are limited to reasons of required continuity for a severely ill or unstable patient, academic importance of the events transpiring, or humanistic attention to the needs of a patient or family.

Under those circumstances, the resident must:

- Appropriately hand over the care of all other patients to the team responsible for their continuing care; and,

- Document the reasons for remaining to care for the patient in question and submit that documentation in every circumstance to the program director.

The program director must review each submission of additional service, and track both individual resident and program-wide episodes of additional duty.

**Minimum Time Off between Scheduled Duty Periods**

- **PGY-1 residents** should have 10 hours, and must have eight hours, free of duty between scheduled duty periods.

- **Intermediate-level residents** should have 10 hours free of duty, and must have eight hours between scheduled duty periods. They must have at least 14 hours free of duty after 24 hours of in-house duty.

For independent programs, vascular surgery fellows are considered to be in the final years of education.

For integrated programs, PGY-2 and PGY-3 residents are considered to be at the intermediate level.

Residents in the final years of education must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods.

For independent programs, vascular surgery fellows are considered to be in the final years of education.
For integrated programs, residents at the PGY-4 level and beyond are considered to be in the final years of education.

VI.G.5.c).(1) This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day-off-in-seven standards. While it is desirable that residents in their final years of education have eight hours free of duty between scheduled duty periods, there may be circumstances when these residents must stay on duty to care for their patients or return to the hospital with fewer than eight hours free of duty. (Detail)

VI.G.5.c).(1).(a) Circumstances of return-to-hospital activities with fewer than eight hours away from the hospital by residents in their final years of education must be monitored by the program director. (Detail)

VI.G.5.c).(1).(b) The Review Committee defines such circumstances as: required continuity of care for a severely ill or unstable patient, or a complex patient with whom the resident has been involved; events of exceptional educational value; or, humanistic attention to the needs of a patient or family.

VI.G.6. Maximum Frequency of In-House Night Float

Residents must not be scheduled for more than six consecutive nights of night float. (Core)

VI.G.6.a) Night float rotations must not exceed two months in succession, or three months in succession for rotations with night shifts alternating with day shifts. (Detail)

VI.G.6.b) There can be no more than four months of night float per year. (Detail)

VI.G.6.c) There must be at least two months between each night float rotation. (Detail)

VI.G.6.d) The total amount of night float for any fellow in a two-year fellowship must be no more than eight months. (Detail)

VI.G.6.e) The total amount of night float for any resident over a five-year residency must be no more than 15 months (Detail)

VI.G.6.e).(1) Any rotation that requires residents to work nights in succession, is considered a night float rotation, and the total time on nights is counted toward the maximum allowable time for each resident over the five-year
VI.G.7. Maximum In-House On-Call Frequency

PGY-2 residents and above must be scheduled for in-house call no more frequently than every-third-night (when averaged over a four-week period). (Core)

VI.G.8. At-Home Call

VI.G.8.a) Time spent in the hospital by residents on at-home call must count towards the 80-hour maximum weekly hour limit. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for one-day-in-seven free of duty, when averaged over four weeks. (Core)

VI.G.8.a).(1) At-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each resident. (Core)

VI.G.8.b) Residents are permitted to return to the hospital while on at-home call to care for new or established patients. Each episode of this type of care, while it must be included in the 80-hour weekly maximum, will not initiate a new “off-duty period”. (Detail)

*Core Requirements: Statements that define structure, resource, or process elements essential to every graduate medical educational program.

Detail Requirements: Statements that describe a specific structure, resource, or process, for achieving compliance with a Core Requirement. Programs and sponsoring institutions in substantial compliance with the Outcome Requirements may utilize alternative or innovative approaches to meet Core Requirements.

Outcome Requirements: Statements that specify expected measurable or observable attributes (knowledge, abilities, skills, or attitudes) of residents or fellows at key stages of their graduate medical education.

Osteopathic Recognition

For programs seeking Osteopathic Recognition for the entire program, or for a track within the program, the Osteopathic Recognition Requirements are also applicable. (http://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/Osteopathic_Recognition_Requirements.pdf)