ACGME Program Requirements for Graduate Medical Education in Thoracic Surgery

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Common Program Requirements are in BOLD

Where applicable, text in italics describes the underlying philosophy of the requirements in that section. These philosophic statements are not program requirements and are therefore not citable.

The “Specialty Background and Intent” text in the boxes below provide detail regarding the intention behind specific requirements, as well as guidance on how to implement the requirements in a way that supports excellence in residency education. Note that the Thoracic Surgery FAQs have been integrated into this document and, where appropriate, guidance is given on additional Review Committee resource information.

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.

Thoracic surgery is a surgical specialty that encompasses the operative, pre-operative, post-operative, and surgical critical care of patients with acquired and congenital pathologic conditions within the chest. Included are the surgical repair of congenital and acquired conditions of the heart, including the pericardium, coronary arteries, valves, great vessels, and myocardium. In addition to operations and management of diseases of the thoracic and thoracoabdominal aorta, the scope of practice in thoracic surgery includes the evaluation of vascular disease, and the exposure, cannulation, reconstruction, and treatment of the carotid, brachiocephalic, axillary, iliac, and femoral vessels. It also includes pathologic conditions of the lung/trachea/bronchi, esophagus/foregut and chest
wall, the mediastinum, the diaphragm, and the pericardium. Management of the airway and injuries to the chest are also within the scope of the specialty.

Int.C. Education in thoracic surgery must be provided in one of these three formats:

Int.C.1. Independent Program (traditional format): 24 months of thoracic surgery education preceded by completion of residency education as specified in section III.A. (Core)*

Int.C.1.a) Programs wishing to provide a 36-month curriculum, or other innovative educational format, must document a comprehensive educational rationale for the program, which must be approved in advance by the Review Committee. (Core)

Int.C.2. Joint Surgery/Thoracic Surgery Program (the 4+3 program): 84 months of education, all of which must be completed in the same institution, and all of the program years must be accredited by the ACGME. (Core)

Int.C.3. Integrated Program: 72 months of thoracic surgery education (completed in one institution unless otherwise approved by the American Board of Thoracic Surgery) following completion of an MD or DO degree program from an institution accredited by the Liaison Committee of Medical Education (LCME) or by the Commission on Osteopathic College Accreditation (COCA). Graduates of medical schools from countries other than the United States or Canada must present evidence of final certification by the Education Commission for Foreign Medical Graduates (ECFMG). (Core)

Int.C.3.a) The integrated program curriculum must document 72 months of clinical thoracic surgery education under the direction of the thoracic surgery program director. (Core)

Int.C.3.b) The last year of the integrated program must comprise a chief resident responsibility on the thoracic surgery service at the primary clinical site or at an approved participating site. (Core)

Int.C.4. The Review Committee must be informed of training credit granted by the American Board of Thoracic Surgery (ABTS), which affects the required length of training in the thoracic surgery program. (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.A.1. Institutions applying for an integrated program format must:

I.A.1.a) sponsor an ACGME-accredited independent thoracic surgery program and an ACGME-accredited general surgery program, each with a status of Continued Accreditation; and, (Core)

I.A.1.b) maintain both program formats after an integrated program is approved, at least until the integrated program has residents filling the PGY-1-4. (Core)

Specialty Background and Intent: An accredited general surgery program in a Sponsoring Institution applying for an integrated thoracic surgery program must ensure that residents achieve a diverse core surgery experience. The thoracic surgery program director is expected to work closely with the general surgery program director to ensure alignment with the education and training goals, objectives, and requirements of both programs. While on surgery rotations, residents are expected to meet the requirements of the general surgery program. Faculty members of the general surgery program are expected to complete the residents' end-of-rotation evaluations in a timely manner and participate in semiannual evaluations.

The presence of an independent thoracic surgery program promotes peer interaction and support for thoracic surgery residents, which is critical to a developing integrated thoracic surgery program. Sponsoring Institutions may voluntarily withdraw the independent thoracic surgery program once the integrated thoracic surgery program has residents in the PGY-4 year.

I.A.2. The Sponsoring Institution must:

I.A.2.a) demonstrate commitment to education in thoracic surgery in its support of the residency program; (Core)

I.A.2.b) provide at least 25 percent salary support for the program director which must include adequate protected time for the program director to accomplish the administrative duties of overseeing and managing the educational program; (Core)

I.A.2.c) provide support for an associate program director for any program with 10 or more residents/fellows; and, (Core)

I.A.2.d) provide and document faculty development in education and teaching for the program director and the members of the faculty. (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:

I.B.1.a) identify the faculty who will assume both educational and supervisory responsibilities for residents; (Detail)

I.B.1.b) specify their responsibilities for teaching, supervision, and formal evaluation of residents, as specified later in this document; (Detail)

I.B.1.c) specify the duration and content of the educational experience; and, (Detail)

I.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.2.a) Major changes in rotations at participating sites (i.e., sites where residents/fellows will spend three or more months over the course of their education and training) must be approved in advance of resident/fellow rotations. (Core)

Specialty Background and Intent: While listing a participating site and establishing a PLA are not required for elective rotations, programs may wish to do so. Listing the participating site in the Accreditation Data System (ADS) increases the accuracy of the operative Case Log. Establishing a PLA clarifies the goals and objectives of a rotation and its attendant policies, but also confirms that the participating site is aware of, and approves of, resident/fellow training there.

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.1.b) The appointment of the program director must be approved by the Review Committee. (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.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 specialty by the American Board of Thoracic Surgery, or specialty qualifications that are acceptable to the Review Committee; (Core)

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

II.A.3.d) documented experience educating thoracic surgery residents/fellows; (Core)

II.A.3.e) documented participation in a national thoracic surgery educational association (e.g., the Thoracic Surgery Directors Association); and, (Core)

II.A.3.f) documented formal faculty development activities in education and teaching, such as participation at local and national program director workshops and other educational activities. (Core)

Specialty Background and Intent: The Review Committee feels that training thoracic surgery residents/fellows is a complex undertaking and the accreditation requirements are extensive. Individuals pursuing a program director role must be sufficiently prepared to take on the role and have the support of the department and Sponsoring Institution to devote the time and effort required to oversee a high quality thoracic surgery program. Therefore, the Review Committee suggests that new program director candidates should have a minimum of five years' experience as a faculty member in graduate medical education and some experience as an associate program director or other residency/fellowship program leadership experience. A letter of support outlining the Sponsoring Institution’s plan for mentoring and providing appropriate resources should accompany requests for approval of program director candidates who do not have the minimum requisite experience. Sponsoring Institutions submitting a program director candidate who is not board certified by the American Board of Thoracic Surgery (ABTS) must provide the candidate’s credentials and letter(s) of support from the institution’s graduate medical education and thoracic surgery clinical leadership (e.g. Department Chair, Section Chief, etc.).

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.b).(1) The program director must work with the site director at each participating site to determine all rotations and assignments for residents/fellows and faculty members. (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, 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) if applicable, monitor the demands of at-home call and adjust schedules as necessary to mitigate excessive service demands and/or fatigue.

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;

II.A.4.l) 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;

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;

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

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

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

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

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

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

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

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

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

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:

II.A.4.o).(1) program citations, and/or,
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) 
provide evidence that faculty members are actively engaged in the education and scholarly productivity of residents/fellows; (Core)

II.A.4.q) 
provide separate and regularly-scheduled teaching conferences, morbidity and mortality conferences, rounds, and other educational activities in which both the thoracic surgery faculty members and the residents/fellows attend and participate; (Core)

II.A.4.r) 
provide an organized and comprehensive block diagram demonstrating the overall educational construct for each track (i.e., thoracic surgery, cardiovascular surgery) of the program and for each year of training for all clinical assignments; (Core)

II.A.4.s) 
ensure that each resident/fellow is notified in writing of the length of the program at the time of application to the program; (Core)

II.A.4.s).(1) 
Documentation must be maintained in each resident’s file, including any required unaccredited years. (Core)

II.A.4.t) 
maintain conference records to document resident/fellow and faculty member attendance; (Core)

II.A.4.u) 
encourage residents/fellows to engage in peer interaction with residents/fellows in related specialties at all participating sites; (Detail)

II.A.4.v) 
establish guidelines for the assignment of clinical responsibilities for residents and/or fellows across the continuum of care, including clinic volume, on-call frequency, and back-up requirements, as well as the appropriate role for residents/fellows in surgical procedures; (Core)

II.A.4.w) 
appoint or approve the members of the faculty at each participating site; and, (Core)

II.A.4.x) 
appoint an associate program director for any program with 10 or more residents/fellows. (Core)

II.A.4.x).(1) 
Program directors who oversee residency and fellowship programs with 10 or more trainees in both programs combined must appoint an associate program director. (Core)

Specialty Background and Intent: Overseeing thoracic surgery residency and fellowship programs requires oversight of the clinical, educational, and administrative aspects of the program. The Review Committee feels that the addition of an associate program director once
a program director oversees more than 10 residents/fellows should provide residents/fellows with additional clinical and educational resources and augment the work of the program director.

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)

Specialty Background and Intent: In addition to being actively engaged in the education of residents and fellows, the Review Committee suggests that thoracic surgery faculty members in integrated thoracic surgery and, more importantly, independent thoracic surgery programs, intentionally participate in medical student education when appropriate. This may be formal medical student education or education provided while the medical student is on a rotation with the program. It is the opinion of the Committee that teaching to individuals with wide variation in knowledge of thoracic surgery, as would be expected when teaching medical students, residents, and fellows, increases an individual’s skills as an educator. This would benefit both the faculty member and secondarily the medical students, residents, and fellows. Another benefit of teaching medical students is that the student is exposed to the specialty of thoracic surgery, may establish a mentorship relationship that enhances the experience, and may help to recruit qualified applicants to programs.

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; (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.1.c) include one designated cardiothoracic faculty member responsible for coordinating multidisciplinary clinical conferences and organizing instruction and research in general thoracic surgery; and, (Core)

II.B.1.d) include qualified cardiothoracic surgeons and other faculty members in related disciplines who direct conferences. (Core)

II.B.2. The physician faculty must have current certification in the specialty by the American Board of Thoracic 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 non-physician 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.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.C.1. The Sponsoring Institution must provide adequate support for a program coordinator who is dedicated to the thoracic surgery program. (Core)

II.C.1.a) Residency coordinators who manage a single thoracic surgery program, multiple thoracic surgery programs, or other specialty programs (e.g., surgery, plastic surgery) with 20 or more residents/fellows in all programs combined must be provided additional administrative support. (Core)

Specialty Background and Intent: Residency coordinators play an essential role in the function and operation of residency/fellowship programs. They must be provided with sufficient resources to support program operations, the program director, residents/fellows, and the faculty. The Review Committee recognizes that some residency coordinators support large programs and some support multiple programs, including in other specialties. Some residency coordinators also support non-graduate medical education functions within their institutions. Support of large and/or multiple programs requires a facile working knowledge of each specialty’s requirements, as well as the ability to manage the day-to-day requirements of
large/multiple programs and their required data. To ensure that residency coordinators have sufficient support for performing those functions, the Review Committee limited the number of residents/fellows that a single coordinator should manage to 20 (in all programs, combined). Additional administrative support can take many forms, such as an additional coordinator, an assistant coordinator, or an administrative assistant. The allocation of percentage of full-time equivalency for the additional administrative support is not specified by the Review Committee, but should be based on the responsibilities of the residency coordinator.

It is suggested that residency coordinators assigned to non-thoracic surgery programs should support only other surgical specialties as these specialties have more similarities in their execution than would specialty in another area. Trying to cover programs under multiple hospital departments/specialties decreases the coordinator’s effectiveness with the thoracic surgery residents/fellows.

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 access to information services, including:

II.D.1.a) the electronic retrieval of patient information; (Core)

II.D.1.b) a comprehensive database for thoracic, adult cardiac, and congenital cardiac disease; and, (Core)

II.D.1.c) an on-site library, or electronic access to appropriate texts and journals. (Core)

II.D.2. There must be access to learning resources laboratory for resident/fellow education and remediation. (Core)

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.c).(1) The Review Committee for Thoracic Surgery does not allow exceptions to the eligibility requirements. (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.a).(1) Independent thoracic surgery fellowship education must be preceded by a successfully completed surgery or vascular surgery residency accredited by the ACGME, or general surgery, cardiac surgery, thoracic surgery, or vascular surgery residency accredited by the RCPSC. (Core)
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:

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

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

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;

III.A.2.b).(4) For an international graduate, verification of Educational Commission for Foreign Medical Graduates (ECFMG) certification; and,

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.

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.

** 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.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.B.2. A minimum of one thoracic surgery resident/fellow must be appointed in each year of the program to provide for sufficient peer interaction. (Core)

Specialty Background and Intent: The Review Committee approves resident/fellow positions for each year of training. An increase in complement in any year and for any reason (e.g., remediation, research year, etc.) must be approved in advance by the Review Committee. Requests for an increase in complement (permanent or temporary) must be submitted through ADS, and must be accompanied by an educational rationale outlining the anticipated impact on all thoracic surgery program formats (i.e., independent, integrated, and/or 4+3 programs) sponsored by the same Sponsoring Institution.

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.C.2.a) The summative evaluation must include an assessment of each resident’s/fellow’s performance to date, a summary of the evaluations of the resident/fellow by faculty members and other evaluators, a current Milestones assessment, assessment of the operative Case Logs, and the resident’s/fellow’s comprehensive rotation schedule listing all rotations completed during the educational program. (Core)
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. All trainees in both ACGME-accredited and non-accredited programs at the Sponsoring Institution and participating sites that might affect the educational experience of the thoracic surgery residents/fellows must be identified, and their relationship to the thoracic surgery residents/fellows must be detailed in the annual program update. (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.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. (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 demonstrate competence in the development and execution of patient care plans, including obtaining informed consent and developing the goals of care; (Outcome)

IV.A.5.a).(2).(b) must demonstrate competence in the use of information technology as it pertains to and supports patient care; (Outcome)

IV.A.5.a).(2).(c) must demonstrate competence in pre- and post-operative care; (Outcome)

IV.A.5.a).(2).(c).(i) Post-operative care must include experience in the immediate post-operative period, continuity of care through recovery, and, when necessary, long-term management and follow-up. (Outcome)

IV.A.5.a).(2).(d) must demonstrate competence in evaluation of diagnostic studies; and, (Outcome)

IV.A.5.a).(2).(e) must demonstrate competence in:

IV.A.5.a).(2).(e).(i) providing pre-operative management, including the selection and timing of operative intervention and the selection of appropriate operative procedures; (Outcome)

IV.A.5.a).(2).(e).(ii) providing peri- and post-operative management of thoracic and cardiovascular patients; (Outcome)

IV.A.5.a).(2).(e).(iii) providing critical care to patients with thoracic and cardiovascular surgical disorders, including trauma patients, whether or not operative intervention is required; and, (Outcome)

IV.A.5.a).(2).(e).(iv) correlating the pathologic and diagnostic aspects of cardiothoracic disorders, demonstrating performance of diagnostic procedures, and accurately interpreting appropriate imaging studies. (Outcome)

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 the ability to critically evaluate scientific and medical literature and be able to integrate knowledge of the literature into clinical care; and, (Outcome)

IV.A.5.b).(2) must demonstrate knowledge in the use of cardiac and respiratory support devices. (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; (Outcome)

IV.A.5.c).(8) participate in the education of patients, families, students, residents and other health professionals; and, (Outcome)

IV.A.5.c).(9) demonstrate the ability to analyze personal practice outcomes and apply quality improvement methodologies to optimize patient care and enhance patient safety. (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, (Outcome)

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; (Outcome)

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; and, (Outcome)

IV.A.5.e).(6) high standards of ethical behavior; continuity of care (pre-operative, operative, and post-operative); sensitivity to age, gender, culture, and other differences; and honesty, dependability, and commitment. (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) practice cost-effective and high-quality care, promote disease prevention, demonstrate the ability to conduct a risk-benefit analysis, and know how different practice systems operate to deliver care. (Outcome)

IV.A.6. Curriculum Organization and Resident/Fellow Experiences

IV.A.6.a) Resident/fellow experiences must be carefully structured to ensure graded levels of responsibility, continuity in patient care, a balance between education and clinical service, and progressive clinical experiences. (Core)

IV.A.6.b) Integrated thoracic surgery programs must sequence the thoracic surgery educational components throughout the program in order to provide a cohesive, progressive, and longitudinal educational experience. (Core)

IV.A.6.b).(1) A minimum of 24 months and a maximum of 36 months of the program must include education in core fundamental surgical care and principles education, including pre- and post-operative evaluation and care. (Core)
IV.A.6.b).(2) The remainder of the curriculum must include education in oncology, transplantation, basic and advanced laparoscopic surgery, surgical critical care and trauma management, thoracic surgery, and adult and congenital cardiac surgery. *(Core)*

**Specialty Background and Intent:** In an integrated thoracic surgery program, the core surgical education experience should include rotations designed to expose residents to the fundamentals of general and cardiothoracic surgery. Recommended rotations include general surgery; cardiac surgery; thoracic surgery; congenital cardiac surgery; critical care; plastic surgery; trauma; vascular surgery; pediatric surgery; abdominal and alimentary tract surgery; basic and advanced laparoscopic skills; head, neck, and endocrine surgery; surgical oncology; and transplantation. The core surgical education experience should provide residents/fellows with the essential knowledge of general surgery and provide for sufficient operative experience, as outlined by the Review Committee in a resource about minimum required operative experience available on the Documents and Resources page of the Thoracic Surgery section of the ACGME website, as well as in the Case Log System, and by the ABTS.

IV.A.6.c) Residents/fellows must have a minimum operative experience that includes:

**IV.A.6.c).(1) 24 month programs:** a minimum of 125 major cardiothoracic procedures during each year, for a total of 250 major cases; *(Core)*

**IV.A.6.c).(2) 36 month programs:** a minimum of 125 major cardiothoracic procedures during each year, for a total of 375 major cases; *(Core)*

**IV.A.6.c).(3) 4+3 joint programs:** a minimum of 125 major cardiothoracic procedures during each of the last two years of training, for a total of 250 major cases; *(Core)*

**IV.A.6.c).(4) Integrated programs:**

**IV.A.6.c).(4).a)** PGY-1-3: 375 procedures over three years of which 125 must be cardiothoracic procedures, up to 50 of which may be component cases; and, *(Core)*

**IV.A.6.c).(4).b)** PGY-4-6: a minimum of 125 major cardiothoracic procedures during each year, for a total of 375 major cases. *(Core)*

**Specialty Background and Intent:** The Review Committee has defined the minimum case requirements that programs must provide residents/fellows. These include the minimum yearly requirement, the required total major cases, and the minimum operative procedures within each defined category. Programs may establish a cardiothoracic surgery track, a thoracic surgery track, or they may provide residents/fellows a choice of either track. The case requirements document, which identifies the minimum case requirements for each track is posted on the Documents and Resources page of the Thoracic Surgery section of the ACGME.
website, and in the Case Log System. Programs are expected to accurately identify the educational track for each resident/fellow within ADS.

<table>
<thead>
<tr>
<th>Section</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>IV.A.6.c).(5)</td>
<td>an adequate volume of operative experience, distribution of categories, and complexity of procedures to ensure a balanced and equivalent clinical education; and, (Core)</td>
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<td>IV.A.6.c).(6)</td>
<td>documented operative experience attesting that residents: (Core)</td>
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<tr>
<td>IV.A.6.c).(6).(a)</td>
<td>participate in the risk assessment, diagnosis, pre-operative planning, and selection of operation for a patient; (Core)</td>
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<tr>
<td>IV.A.6.c).(6).(b)</td>
<td>perform technical manipulations that constitute the essential parts of a patient's operation; (Core)</td>
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<tr>
<td>IV.A.6.c).(6).(c)</td>
<td>have significant involvement in post-operative care; and, (Core)</td>
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<tr>
<td>IV.A.6.c).(6).(d)</td>
<td>are supervised by the responsible faculty member(s). (Core)</td>
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<td>IV.A.6.d</td>
<td>Assignments to non-procedural areas must be limited to a maximum of three months during the final three years of an integrated program, at any time during an independent program, or at any time during the cardiothoracic component of a 4+3 program. (Core)</td>
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<td>IV.A.6.d).(1)</td>
<td>Non-procedural experience should not occur in the final year (i.e., during the chief year). (Detail)</td>
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<td>IV.A.6.e</td>
<td>Chief year rotations must take place at the primary clinical site or at an approved participating site; exceptions must be approved in advance by the Review Committee. (Core)</td>
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<td>IV.A.6.f</td>
<td>Residents/fellows in the final year of thoracic surgery should have primary management of patients throughout the continuum of care. (Core)</td>
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<td>IV.A.6.g</td>
<td>Elective rotations must be limited to a maximum of six months in the final years of the program, including: (Core)</td>
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<td>IV.A.6.g).(1)</td>
<td>a maximum of three months in each year for a two-year fellowship and a maximum of three months each in the second and third years of a three-year program; (Core)</td>
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<td>IV.A.6.g).(2)</td>
<td>a maximum of three months each in the PG-5 and PG-6 years of an integrated program; or, (Core)</td>
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IV.A.6.g).(3) a maximum of three months each in the second and third years of thoracic surgery training in a 4+3 program. (Core)

Specialty Background and Intent: The Review Committee recognizes the benefits of elective rotations in the final two years of the educational program and international rotations (any year) when sound educational rationale and collaborative relationships conducive to residency/fellowship education and training are demonstrated. Elective rotations are those rotations conducted away from the primary site or an approved participating site. Elective rotations have been limited for each educational format to ensure that residents are not away from the primary site for extended periods of time during the educational program. The Review Committee will consider requests for approval of elective rotations in the final two years of the educational program and international rotations in accordance with the guidelines listed in a document provided on the Documents and Resources page of the Thoracic Surgery section of the ACGME website. Programs must also obtain approval by the ABTS for international rotations. Programs are encouraged to review the United States State Department Travel Advisory list before allowing residents to attend international rotations.

IV.A.6.h) Outpatient responsibilities must include:

IV.A.6.h).(1) the opportunity to examine a patient pre-operatively, to consult with the attending surgeon regarding operative care, and to participate in the surgery and post-operative care of that patient; and, (Core)

IV.A.6.h).(2) seeing most patients personally in an outpatient setting. (Core)

IV.A.6.h).(2).(a) When a resident/fellow cannot personally see a patient pre- or post-operatively, he or she must communicate with the attending surgeon to ensure continuity of care for the patient. (Core)

IV.B. Residents’ Scholarly Activities

IV.B.1. 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)

IV.B.2. Residents should participate in scholarly activity. (Core)

IV.B.2.a) Residents/fellows must not have a protected research rotation during the program. (Core)

Specialty Background and Intent: While a protected research rotation is not permitted during the accredited program, the Review Committee recognizes that some residents/fellows wish to pursue a protected research opportunity during the course of their training. Residents/fellows pursuing protected research time should be made inactive in ADS (i.e., “In Program but Doing Research/Other Training”) for the duration of the time away from the program. While inactive, residents/fellows may not log operative procedures or other clinical work, and the time inactive may not be included in the total required training time. Programs that wish to fill the positions of
inactive residents/fellows must request any necessary complement increase in advance, to facilitate the return of the inactive resident/fellow to training.

IV.B.2.b) Each resident/fellow must demonstrate annual scholarship that results in one or more of the following: (Core)

IV.B.2.b).(1) peer-reviewed/indexed publications with PubMed-Indexed for Medline (PMID); or, (Detail)

IV.B.2.b).(2) conference presentations, including abstracts and posters, at international, national, regional meetings; or, (Detail)

IV.B.2.b).(3) textbook chapters; or, (Detail)

IV.B.2.b).(4) participation in basic, translational, or clinical research or quality improvement projects; or, (Detail)

IV.B.2.b).(5) lectures or presentations (such as grand rounds or case presentations) of at least 30 minutes in duration within the Sponsoring Institution or program. (Detail)

IV.B.3. The sponsoring institution and program should allocate adequate educational resources to facilitate resident involvement in scholarly activities. (Detail)

IV.B.3.a) The Sponsoring Institution and/or program should provide support for residents'/fellows’ attendance at national professional meetings. (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 ensure the reporting of Milestones evaluations of each resident semi-annually to ACGME; (Core)

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

V.A.1.b).(1).(d) review all available information to track and predict residents’/fellows’ progress. (Core)

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.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.B.4. There must be a system in place to ensure that the content of resident evaluations of faculty members does not adversely affect residents’/fellows’ educational/career progression in the program. (Core)

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.b).(1) The program must provide documentation of faculty member participation in annual faculty development activities in resident/fellow evaluation and teaching. (Core)

Specialty Background and Intent: Programs are expected to evaluate each resident's/fellow’s performance, including cognitive performance, technical skills, and professional behaviors. The Review Committee expects integrated thoracic surgery programs to require that residents use a widely accepted examination (e.g., the American Board of Surgery In-Service Examination (ABSITE) and/or the Thoracic Surgery In-Training Examination) as one measure of resident performance during PGY-1-3. The Thoracic Surgery ABSITE may also be used as one measure of resident evaluation during PGY-4-6 of an integrated thoracic surgery program, and in all years of an independent thoracic surgery program.

Specialty Background and Intent: The Review Committee expects the program director and faculty members to participate in educational sessions aimed at improving knowledge and techniques involved in teaching residents. While not every faculty member must participate in
a faculty development activity each year, the program director and faculty members should engage frequently enough to ensure that they continue to develop and support their skills as educators, trainers, and mentors. Examples of such activities include lectures, workshops, or courses on faculty development provided by the GME office of the Sponsoring Institution, and departmental grand rounds or faculty sessions on such topics as methods of teaching and methods of evaluation. Formal activities, such as national courses specifically created to help improve the teaching and assessment of residents, are encouraged.

V.C.2.c) graduate performance, including performance of program graduates on the certification examination; (Core)

V.C.2.c).(1) At least 65 percent of program graduates from the preceding five years taking the American Board of Thoracic Surgery examination for the first time must have passed each of the written (Part I) and oral (Part II) examinations. (Outcome)

V.C.2.c).(2) At least 65 percent of program graduates from the preceding five years taking the American Osteopathic Board of Surgery – Cardiothoracic Surgery examination for the first time must have passed each of the written and oral examinations. (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.d).(2).(a) Programs must use the results of assessments to provide program improvement (e.g., quality of the didactic and clinical curriculum use of educational tools, such as skills labs and other activities; and ACGME annual surveys of faculty members and residents/fellows). (Core)

V.C.2.d).(2).(b) Programs must use the results of assessments to provide faculty improvement (e.g., development activities to improve faculty members’ teaching and evaluation skills, continuing education activities related to education, the development of new skills in their specialty to improve patient care, and scholarly activities). (Detail)
Specialty Background and Intent: The Review Committee recognizes that there are numerous mechanisms by which programs may conduct their annual program evaluation. It is recommended that programs incorporate the ACGME annual Resident and Faculty Survey results as a confidential evaluation source for program and faculty evaluations.

V.C.2.d). The program must document its active participation in clinical databases/registries used to assess and improve patient outcomes. (Core)

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. The Learning and Working Environment

Residency education must occur in the context of a learning and working environment that emphasizes the following principles:

- **Excellence in the safety and quality of care rendered to patients by residents today**
- **Excellence in the safety and quality of care rendered to patients by today’s residents in their future practice**
- **Excellence in professionalism through faculty modeling of:**
  - the effacement of self-interest in a humanistic environment that supports the professional development of physicians
  - the joy of curiosity, problem-solving, intellectual rigor, and discovery
- **Commitment to the well-being of the students, residents, faculty members, and all members of the health care team**

VI.A. Patient Safety, Quality Improvement, Supervision, and Accountability

VI.A.1. Patient Safety and Quality Improvement

All physicians share responsibility for promoting patient safety and enhancing quality of patient care. Graduate medical education must prepare residents to provide the highest level of clinical care with continuous focus on the safety, individual needs, and humanity of their patients. It is the right of each patient to be cared for by residents who are appropriately supervised; possess the requisite
knowledge, skills, and abilities; understand the limits of their knowledge and experience; and seek assistance as required to provide optimal patient care.

Residents must demonstrate the ability to analyze the care they provide, understand their roles within health care teams, and play an active role in system improvement processes. Graduating residents will apply these skills to critique their future unsupervised practice and effect quality improvement measures.

It is necessary for residents and faculty members to consistently work in a well-coordinated manner with other health care professionals to achieve organizational patient safety goals.

VI.A.1.a) Patient Safety

VI.A.1.a).(1) Culture of Safety

A culture of safety requires continuous identification of vulnerabilities and a willingness to transparently deal with them. An effective organization has formal mechanisms to assess the knowledge, skills, and attitudes of its personnel toward safety in order to identify areas for improvement.

VI.A.1.a).(1).(a) The program, its faculty, residents, and fellows must actively participate in patient safety systems and contribute to a culture of safety. (Core)

VI.A.1.a).(1).(b) The program must have a structure that promotes safe, interprofessional, team-based care. (Core)

VI.A.1.a).(2) Education on Patient Safety

Programs must provide formal educational activities that promote patient safety-related goals, tools, and techniques. (Core)

VI.A.1.a).(3) Patient Safety Events

Reporting, investigation, and follow-up of adverse events, near misses, and unsafe conditions are pivotal mechanisms for improving patient safety, and are essential for the success of any patient safety program. Feedback and experiential learning are essential to developing true competence in the ability to identify causes and institute sustainable systems-based changes to ameliorate patient safety vulnerabilities.
VI.A.1.a).(3).(a) Residents, fellows, faculty members, and other clinical staff members must:

VI.A.1.a).(3).(a).(i) know their responsibilities in reporting patient safety events at the clinical site; (Core)

VI.A.1.a).(3).(a).(ii) know how to report patient safety events, including near misses, at the clinical site; and, (Core)

VI.A.1.a).(3).(a).(iii) be provided with summary information of their institution’s patient safety reports. (Core)

VI.A.1.a).(3).(b) Residents must participate as team members in real and/or simulated interprofessional clinical patient safety activities, such as root cause analyses or other activities that include analysis, as well as formulation and implementation of actions. (Core)

VI.A.1.a).(4) Resident Education and Experience in Disclosure of Adverse Events

Patient-centered care requires patients, and when appropriate families, to be apprised of clinical situations that affect them, including adverse events. This is an important skill for faculty physicians to model, and for residents to develop and apply.

VI.A.1.a).(4).(a) All residents must receive training in how to disclose adverse events to patients and families. (Core)

VI.A.1.a).(4).(b) Residents should have the opportunity to participate in the disclosure of patient safety events, real or simulated. (Detail)

VI.A.1.b) Quality Improvement

VI.A.1.b).(1) Education in Quality Improvement

A cohesive model of health care includes quality-related goals, tools, and techniques that are necessary in order for health care professionals to achieve quality improvement goals.
VI.A.1.b).(1).(a) Residents must receive training and experience in quality improvement processes, including an understanding of health care disparities. (Core)

VI.A.1.b).(2) Quality Metrics

Access to data is essential to prioritizing activities for care improvement and evaluating success of improvement efforts.

VI.A.1.b).(2).(a) Residents and faculty members must receive data on quality metrics and benchmarks related to their patient populations. (Core)

Specialty Background and Intent: Examples of registries that publish national quality data include the Society of Thoracic Surgery database and National Surgical Quality Improvement Program (NSQIP).

VI.A.1.b).(3) Engagement in Quality Improvement Activities

Experiential learning is essential to developing the ability to identify and institute sustainable systems-based changes to improve patient care.

VI.A.1.b).(3).(a) Residents must have the opportunity to participate in interprofessional quality improvement activities. (Core)

VI.A.1.b).(3).(a).(i) This should include activities aimed at reducing health care disparities. (Detail)

VI.A.2. Supervision and Accountability

VI.A.2.a) Although the attending physician is ultimately responsible for the care of the patient, every physician shares in the responsibility and accountability for their efforts in the provision of care. Effective programs, in partnership with their Sponsoring Institutions, define, widely communicate, and monitor a structured chain of responsibility and accountability as it relates to the supervision of all patient care.

Supervision in the setting of graduate medical education provides safe and effective care to patients; ensures each resident’s development of the skills, knowledge, and attitudes required to enter the unsupervised practice of medicine; and establishes a foundation for continued professional growth.

VI.A.2.a).(1) Each patient must have an identifiable and appropriately-credentialed and privileged attending
physician (or licensed independent practitioner as specified by the applicable Review Committee) who is responsible and accountable for the patient’s care.

(Core)

Specialty Background and Intent: “Appropriately credentialed and privileged attending physicians” include certified thoracic surgeons supervising thoracic surgery rotations, certified general surgeons supervising core surgery rotations, etc.

VI.A.2.a).(1).(a) This information must be available to residents, faculty members, other members of the health care team, and patients. (Core)

VI.A.2.a).(1).(b) Residents and faculty members must inform each patient of their respective roles in that patient’s care when providing direct patient care. (Core)

VI.A.2.b) Supervision may be exercised through a variety of methods. 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, fellow, or senior resident physician, either on site or by means of telephonic and/or electronic modalities. Some activities require the physical presence of the supervising faculty member. In some circumstances, supervision may include post-hoc review of resident-delivered care with feedback.

VI.A.2.b).(1) The program must demonstrate that the appropriate level of supervision in place for all residents is based on each resident’s level of training and ability, as well as patient complexity and acuity. Supervision may be exercised through a variety of methods, as appropriate to the situation. (Core)

VI.A.2.c) Levels of Supervision

To promote oversight of resident supervision while providing for graded authority and responsibility, the program must use the following classification of supervision: (Core)

VI.A.2.c).(1) Direct Supervision – the supervising physician is physically present with the resident and patient. (Core)

VI.A.2.c).(2) Indirect Supervision:

VI.A.2.c).(2).(a) with Direct Supervision immediately available – the supervising physician is physically within
VI.A.2.c).(2).(b) 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. (Core)

VI.A.2.c).(3) Oversight – the supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered. (Core)

VI.A.2.d) 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. (Core)

VI.A.2.d).(1) The program director must evaluate each resident’s abilities based on specific criteria, guided by the Milestones. (Core)

VI.A.2.d).(2) Faculty members functioning as supervising physicians must delegate portions of care to residents based on the needs of the patient and the skills of each resident. (Core)

VI.A.2.d).(3) Senior residents or fellows should serve in a supervisory role to 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.A.2.e) Programs must set guidelines for circumstances and events in which residents must communicate with the supervising faculty member(s). (Core)

VI.A.2.e).(1) Each resident must know the limits of their scope of authority, and the circumstances under which the resident is permitted to act with conditional independence. (Outcome)

VI.A.2.e).(1).(a) Initially, PGY-1 residents must be supervised either directly, or indirectly with direct supervision immediately available. (Core)
Specialty Background and Intent: Some examples of tasks for which PGY-1 integrated thoracic surgery residents should have direct supervision until competence is demonstrated or may be supervised indirectly include:

Direct Supervision:
Patient Management Competencies:
- Initial evaluation and management of patients in an urgent or emergent situation, including urgent consultations, trauma, and Emergency Department consultations (Advanced Trauma Life Support (ATLS) required);
- Evaluation and management of postoperative complications, including anuria, cardiac arrhythmias, change in neurologic status, change in respiratory rate, compartment syndromes, hypertension, hypotension, hypoxemia, and oliguria;
- Evaluation and management of critically-ill patients, either immediately post-operatively or in the intensive care unit, including the conduct of monitoring and orders for medications, testing and other treatments; and,
- Management of patients in cardiac or respiratory arrest (Advanced Cardiac Life Support (ACLS) required).

Procedural Competencies:
- Performance of advanced vascular access procedures, including central venous catheterization, temporary dialysis access, and arterial cannulation;
- Repair of surgical incisions of the skin and soft tissues;
- Repair of lacerations of the skin and soft tissues;
- Excision of lesions of the skin and subcutaneous tissues;
- Thoracostomy tube placement;
- Paracentesis;
- Endotracheal intubation; and,
- Bedside debridement of wounds.

Indirect Supervision:
Patient Management Competencies:
- Evaluation and management of patients admitted to the hospital, including taking an initial history and conducting a physical examination, formulation of a plan of therapy, and determining necessary orders for therapy and tests;
- Pre-operative evaluation and management, including taking a history and conducting a physical examination, formulation of a plan of therapy, and specification of necessary tests;
- Evaluation and management of post-operative patients, including the conduct of monitoring and ordering medications, testing, and other treatments;
- Transfer patients between hospital units or hospitals;
- Discharge of patients from the hospital; and,
- Interpretation of laboratory results.

Procedural Competencies:
- Performance of basic venous access procedures, including establishing intravenous access;
- Placement and removal of nasogastric tubes and Foley catheters; and,
- Arterial puncture for blood gas analysis.
VI.A.2.f) Faculty supervision assignments must be of sufficient duration to assess the knowledge and skills of each resident and to delegate to the resident the appropriate level of patient care authority and responsibility. (Core)

VI.B. Professionalism

VI.B.1. Programs, in partnership with their Sponsoring Institutions, must educate residents and faculty members concerning the professional responsibilities of physicians, including their obligation to be appropriately rested and fit to provide the care required by their patients. (Core)

VI.B.2. The learning objectives of the program must:

VI.B.2.a) be accomplished through an appropriate blend of supervised patient care responsibilities, clinical teaching, and didactic educational events; (Core)

VI.B.2.b) be accomplished without excessive reliance on residents to fulfill non-physician obligations; and, (Core)

VI.B.2.c) ensure manageable patient care responsibilities. (Core)

VI.B.3. The program director, in partnership with the Sponsoring Institution, must provide a culture of professionalism that supports patient safety and personal responsibility. (Core)

VI.B.4. Residents and faculty members must demonstrate an understanding of their personal role in the:

VI.B.4.a) provision of patient- and family-centered care; (Outcome)

VI.B.4.b) safety and welfare of patients entrusted to their care, including the ability to report unsafe conditions and adverse events; (Outcome)

VI.B.4.c) assurance of their fitness for work, including: (Outcome)

VI.B.4.c).(1) management of their time before, during, and after clinical assignments; and, (Outcome)

VI.B.4.c).(2) recognition of impairment, including from illness, fatigue, and substance use, in themselves, their peers, and other members of the health care team. (Outcome)

VI.B.4.d) commitment to lifelong learning; (Outcome)

VI.B.4.e) monitoring of their patient care performance improvement indicators; and, (Outcome)
VI.B.4.f) accurate reporting of clinical and educational work hours, patient outcomes, and clinical experience data. (Outcome)

VI.B.5. All residents and faculty members must demonstrate responsiveness to patient needs that supersedes self-interest. This includes the recognition 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.6. Programs must provide a professional, respectful, and civil environment that is free from mistreatment, abuse, or coercion of students, residents, faculty, and staff. Programs, in partnership with their Sponsoring Institutions, should have a process for education of residents and faculty regarding unprofessional behavior and a confidential process for reporting, investigating, and addressing such concerns. (Core)

VI.C. Well-Being

In the current health care environment, residents and faculty members are at increased risk for burnout and depression. Psychological, emotional, and physical well-being are critical in the development of the competent, caring, and resilient physician. Self-care is an important component of professionalism; it is also a skill that must be learned and nurtured in the context of other aspects of residency training. Programs, in partnership with their Sponsoring Institutions, have the same responsibility to address well-being as they do to evaluate other aspects of resident competence.

VI.C.1. This responsibility must include:

VI.C.1.a) efforts to enhance the meaning that each resident finds in the experience of being a physician, including protecting time with patients, minimizing non-physician obligations, providing administrative support, promoting progressive autonomy and flexibility, and enhancing professional relationships; (Core)

VI.C.1.b) attention to scheduling, work intensity, and work compression that impacts resident well-being; (Core)

VI.C.1.c) evaluating workplace safety data and addressing the safety of residents and faculty members; (Core)

VI.C.1.d) policies and programs that encourage optimal resident and faculty member well-being; and, (Core)

VI.C.1.d).(1) Residents must be given the opportunity to attend medical, mental health, and dental care appointments, including those scheduled during their working hours. (Core)
VI.C.1.e) attention to resident and faculty member burnout, depression, and substance abuse. The program, in partnership with its Sponsoring Institution, must educate faculty members and residents in identification of the symptoms of burnout, depression, and substance abuse, including means to assist those who experience these conditions. Residents and faculty members must also be educated to recognize those symptoms in themselves and how to seek appropriate care. The program, in partnership with its Sponsoring Institution, must: (Core)

VI.C.1.e).(1) encourage residents and faculty members to alert the program director or other designated personnel or programs when they are concerned that another resident, fellow, or faculty member may be displaying signs of burnout, depression, substance abuse, suicidal ideation, or potential for violence; (Core)

VI.C.1.e).(2) provide access to appropriate tools for self-screening; and, (Core)

VI.C.1.e).(3) provide access to confidential, affordable mental health assessment, counseling, and treatment, including access to urgent and emergent care 24 hours a day, seven days a week. (Core)

VI.C.2. There are circumstances in which residents may be unable to attend work, including but not limited to fatigue, illness, and family emergencies. Each program must have policies and procedures in place that ensure coverage of patient care in the event that a resident may be unable to perform their patient care responsibilities. These policies must be implemented without fear of negative consequences for the resident who is unable to provide the clinical work. (Core)

VI.D. Fatigue Mitigation

VI.D.1. Programs must:

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

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

VI.D.1.c) encourage residents to use fatigue mitigation processes to manage the potential negative effects of fatigue on patient care and learning. (Detail)

VI.D.2. Each program must ensure continuity of patient care, consistent with the program's policies and procedures referenced in VI.C.2, in
the event that a resident may be unable to perform their patient care responsibilities due to excessive fatigue. (Core)

VI.D.3. The program, in partnership with its Sponsoring Institution, must ensure adequate sleep facilities and safe transportation options for residents who may be too fatigued to safely return home. (Core)

VI.E. Clinical Responsibilities, Teamwork, and Transitions of Care

VI.E.1. Clinical Responsibilities

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

VI.E.2. Teamwork

Residents must care for patients in an environment that maximizes 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 and larger health system. (Core)

VI.E.2.a) Residents/fellows must collaborate with residents/fellows in other specialties in the multidisciplinary management of thoracic surgery patients. (Core)

Specialty Background and Intent: Effective surgical practice entails the involvement of interprofessional team members with a mix of complementary skills. It is suggested that residents/fellows have opportunities to collaborate with other surgical trainees and faculty members, physicians, and other health care professionals to best formulate treatment plans for an increasingly diverse patient population.

In order to support the development and/or maintenance of effective interprofessional teams, it is suggested that programs provide residents/fellows and faculty instruction in communication, compliance with clinical and educational work hour limits, prioritization of tasks, recognition of and sensitivity to the experience and competency of other team members, signs that indicate that an individual is overburdened with responsibilities that cannot be accomplished within an allotted time period, recognition of the signs and symptoms of fatigue not only in oneself but in other team members, techniques for team development, and time management skills.

VI.E.3. Transitions of Care

VI.E.3.a) Programs must design clinical assignments to optimize transitions in patient care, including their safety, frequency, and structure. (Core)

Specialty Background and Intent: Residents/fellows have a personal responsibility to complete all tasks assigned to them, as well as those they voluntarily assume, during their scheduled hours. When that is not possible, residents are responsible for handing off remaining tasks to another member of the team, in accordance with the program’s established methods for hand-
offs, so that patient care is not compromised. This responsibility includes maintaining working knowledge of these expected reporting relationships to maximize quality care and patient safety.

VI.E.3.b) Programs, in partnership with their Sponsoring Institutions, must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety. (Core)

VI.E.3.c) Programs must ensure that residents are competent in communicating with team members in the hand-over process. (Outcome)

VI.E.3.d) Programs and clinical sites must maintain and communicate schedules of attending physicians and residents currently responsible for care. (Core)

VI.E.3.e) Each program must ensure continuity of patient care, consistent with the program’s policies and procedures referenced in VI.C.2, in the event that a resident may be unable to perform their patient care responsibilities due to excessive fatigue or illness, or family emergency. (Core)

VI.F. Clinical Experience and Education

Programs, in partnership with their Sponsoring Institutions, must design an effective program structure that is configured to provide residents with educational and clinical experience opportunities, as well as reasonable opportunities for rest and personal activities.

VI.F.1. Maximum Hours of Clinical and Educational Work per Week

Clinical and educational work hours must be limited to no more than 80 hours per week, averaged over a four-week period, inclusive of all in-house clinical and educational activities, clinical work done from home, and all moonlighting. (Core)

VI.F.2. Mandatory Time Free of Clinical Work and Education

VI.F.2.a) The program must design an effective program structure that is configured to provide residents with educational opportunities, as well as reasonable opportunities for rest and personal well-being. (Core)

VI.F.2.b) Residents should have eight hours off between scheduled clinical work and education periods. (Detail)

VI.F.2.b).(1) There may be circumstances when residents choose to stay to care for their patients or return to the hospital with fewer than eight hours free of clinical
experience and education. This must occur within the context of the 80-hour and the one-day-off-in-seven requirements. (Detail)

Specialty Background and Intent: The Review Committee recognizes that there are circumstances under which residents/fellows may choose to stay at the hospital or to return to the hospital to care for patients. Most often, this is likely to happen when residents/fellows have a role in the patient’s continuity of care.

Examples of these circumstances include:
- A patient on whom a resident operated/intervened that day who needs to return to the operating room (OR)
- A patient on whom a resident operated/intervened that day who requires transfer to an intensive care unit from a lower level of care
- A patient on whom a resident operated/intervened that day who is critically unstable
- A patient on whom a resident operated/intervened during that hospital admission who needs to return to the OR related to an operation or procedure previously performed by that resident
- A patient or patient’s family needs to discuss treatment of a critically-ill patient on whom the resident has operated or is responsible for care

Residents/fellows may also have fewer than eight hours off between scheduled clinical work and education periods in the event of a declared emergency or disaster, for which residents are included in the disaster plan, or to perform high profile, low frequency procedures necessary for competence in the field.

VI.F.2.c) Residents must have at least 14 hours free of clinical work and education after 24 hours of in-house call. (Core)

VI.F.2.d) Residents must be scheduled for a minimum of one day in seven free of clinical work and required education (when averaged over four weeks). At-home call cannot be assigned on these free days. (Core)

VI.F.3. Maximum Clinical Work and Education Period Length

VI.F.3.a) Clinical and educational work periods for residents must not exceed 24 hours of continuous scheduled clinical assignments. (Core)

VI.F.3.a).(1) Up to four hours of additional time may be used for activities related to patient safety, such as providing effective transitions of care, and/or resident education. (Core)

VI.F.3.a).(1).a) Additional patient care responsibilities must not be assigned to a resident during this time. (Core)

VI.F.4. Clinical and Educational Work Hour Exceptions
VI.F.4.a) In rare circumstances, after handing off all other responsibilities, a resident, on their own initiative, may elect to remain or return to the clinical site in the following circumstances:

VI.F.4.a).(1) to continue to provide care to a single severely ill or unstable patient; (Detail)

VI.F.4.a).(2) humanistic attention to the needs of a patient or family; or, (Detail)

VI.F.4.a).(3) to attend unique educational events. (Detail)

VI.F.4.b) These additional hours of care or education will be counted toward the 80-hour weekly limit. (Detail)

VI.F.4.c) A Review Committee may grant rotation-specific exceptions for up to 10 percent or a maximum of 88 clinical and educational work hours to individual programs based on a sound educational rationale.

The Review Committee for Thoracic Surgery will not consider requests for exceptions to the 80-hour limit to the residents'/fellows' work week.

VI.F.4.c).(1) In preparing a request for an exception, the program director must follow the clinical and educational work hour exception policy from the ACGME Manual of Policies and Procedures. (Core)

VI.F.4.c).(2) Prior to submitting the request to the Review Committee, the program director must obtain approval from the Sponsoring Institution's GMEC and DIO. (Core)

VI.F.5. Moonlighting

VI.F.5.a) Moonlighting must not interfere with the ability of the resident to achieve the goals and objectives of the educational program, and must not interfere with the resident's fitness for work nor compromise patient safety. (Core)

VI.F.5.b) Time spent by residents in internal and external moonlighting (as defined in the ACGME Glossary of Terms) must be counted toward the 80-hour maximum weekly limit. (Core)

VI.F.5.c) PGY-1 residents are not permitted to moonlight. (Core)

VI.F.6. In-House Night Float

Night float must occur within the context of the 80-hour and one-day-off-in-seven requirements. (Core)
VI.F.6.a) Residents/fellows must not have more than four consecutive weeks of night float assignment, and night float must not exceed one month per year. (Core)

VI.F.7. Maximum In-House On-Call Frequency

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

VI.F.8. At-Home Call

VI.F.8.a) Time spent on patient care activities by residents on at-home call must count toward the 80-hour maximum weekly 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 clinical work and education, when averaged over four weeks. (Core)

VI.F.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.F.8.b) Residents are permitted to return to the hospital while on at-home call to provide direct care for new or established patients. These hours of inpatient patient care must be included in the 80-hour maximum weekly limit. (Detail)

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*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)