

ACGME COMMON PROGRAM REQUIREMENTS APPEAR IN BOLD
SECTIONS OF TEXT NOT IN BOLD ARE SPECIALTY SPECIFIC REQUIREMENTS

PROGRAM REQUIREMENTS FOR GRADUATE MEDICAL EDUCATION IN ANESTHESIOLOGY

Preface

The program requirements set forth here are to be considered common to all specialties, and are complete only when supplemented, where indicated and individually, by each specialty.

I. Introduction

A. Definition and Scope of the Specialty

The Residency Review Committee (RRC) representing the medical specialty of anesthesiology exists in order to foster and maintain the highest standards of training and educational facilities in anesthesiology, which the RRC defines as the practice of medicine dealing with but not limited to the following:

1. Assessment of, consultation for, and preparation of patients for anesthesia;
2. Relief and prevention of pain during and following surgical, obstetric, therapeutic, and diagnostic procedures;
3. Monitoring and maintenance of normal physiology during the perioperative period;
4. Management of critically ill patients;
5. Diagnosis and treatment of acute, chronic, and cancer-related pain;
6. Clinical management and teaching of cardiac and pulmonary resuscitation;
7. Evaluation of respiratory function and application of respiratory therapy;
8. Conducting of clinical and basic science research;
9. Supervision, teaching, and evaluation of performance of personnel, both medical and paramedical, involved in perioperative care.

B. Duration and Scope of Education

1. Length of Program

A minimum of 4 years of graduate medical education is necessary to train a physician in the field of anesthesiology. Three years of the training must be in clinical anesthesia. The RRC for Anesthesiology and the Accreditation Council for Graduate Medical Education (ACGME) accredit programs only in those institutions that possess the educational resources to provide 3 years of clinical anesthesia training. The capability to provide the Clinical Base Year within the same institution is desirable but not required for accreditation.

2. Program Design

The continuum of education in anesthesiology consists of 4 years of training, the Clinical Base Year (CBY) and 36 months of clinical anesthesia training (CA-1, CA-2, and CA-3 years).

a) Clinical Base Year

One year of the resident's total training must be the Clinical Base Year, which should provide the resident with 12 months of broad education in medical disciplines relevant to the practice of anesthesiology. The Clinical Base Year usually precedes training in clinical anesthesia. It is strongly recommended that the Clinical Base Year be completed before the resident begins the CA-2 year; the Clinical Base Year, however, must be completed before the resident begins the CA-3 year.

If an accredited anesthesiology program offers this year of training, the RRC will verify that the content and oversight for the year are acceptable. If the year is judged to be in substantial compliance with the requirements for the Clinical Base Year (as defined below), the RRC will accredit the residency as a four-year program. When the Clinical Base Year is approved as part of the accredited anesthesiology residency program, the program director must maintain oversight for all rotations on the services that are used for the Clinical Base Year and must approve the rotations for individual residents.

When the resident obtains the CBY in another accredited program (eg, a Transitional Year program or a PGY-1 experience in another specialty), the anesthesiology program director must receive from the CBY program director the resident's written performance evaluation quarterly during the CBY. Acceptance into the CA-1 year depends on the resident demonstrating satisfactory abilities on these written evaluations. This requirement pertains to the resident who has been accepted into an anesthesiology program before

starting the CBY. For information concerning residents who transfer from a residency in another specialty or from another anesthesiology residency, refer to Sec. IV.C. Resident Transfers.

At least 6 months of the Clinical Base Year rotations must include experience in caring for inpatients in internal medicine, pediatrics, surgery, or any of the surgical specialties, obstetrics and gynecology, neurology, family medicine, or any combination of these. In addition, there should be rotations in critical care and emergency medicine, with at least one month, but no more than two months, devoted to each. Up to one month may be taken in anesthesiology. Rotations should ensure continuity of teaching and clinical experience. Each month of training may be counted only once. For example, a rotation in a pediatric intensive care unit may count as either a month in pediatrics or a month in critical care medicine.

The development of clinical skills and mature clinical judgment requires that residents be given responsibility, under proper supervision and commensurate with their ability, for decision-making and for direct patient care in all settings. The resident's patient care responsibilities should include the planning of care, and the writing of orders, progress notes and relevant records, subject to review and approval by senior residents and attending physicians.

The resident should develop the following fundamental clinical skill competencies during the Clinical Base Year:

1. obtain a comprehensive medical history,
2. perform a comprehensive physical examination,
3. assess a patient's medical conditions
4. make appropriate use of diagnostic studies and tests,
5. integrate information to develop a differential diagnosis,
6. implement a treatment plan

Each clinical service on which the Clinical Base Year resident rotates must provide written evaluation of the resident's performance at the end of the rotation. The Anesthesiology program director is responsible for reviewing these written evaluations on a quarterly basis.

b) Clinical Anesthesia Training: CA-1 through CA-3 Years

These 3 years consist of training in basic and advanced anesthesia. They must encompass all aspects of perioperative care to include evaluation and management during the preoperative, intraoperative, and postoperative periods. The clinical training must progressively challenge the resident's cognitive and technical skills, and must provide experience in direct and progressively responsible patient management. As the resident advances through training, she or he should have the opportunity to learn to plan and to administer anesthesia care for patients with more severe and complicated diseases, as well as patients who undergo more complex surgical procedures. The training must culminate in sufficiently independent responsibility for clinical decision-making and patient care so that the graduating resident exhibits sound clinical judgment in a wide variety of clinical situations and can function as a leader of perioperative care teams.

The program should provide initial rotations in surgical anesthesia, critical care medicine, and pain medicine. Experience in these rotations must emphasize the fundamental aspects of anesthesia, preoperative evaluation and immediate postoperative care of surgical patients, and assessment and treatment of critically ill patients and those with acute and chronic pain. Residents should receive training in the complex technology and equipment associated with these practices. There must be documented evidence of direct faculty involvement with tutorials, lectures, and clinical supervision.

Clinical experience in surgical anesthesia, pain medicine, and critical care medicine should be distributed throughout the curriculum in order to provide progressive responsibility to trainees in the later stages of the curriculum.

During the 36 months of clinical anesthesia training, there must be a minimum of two identifiable 1-month rotations in each of obstetric anesthesia, pediatric anesthesia, neuroanesthesia, and cardiothoracic anesthesia. If the program director judges that a resident has gained satisfactory skills and experience in clinical anesthesia in any of these subspecialties before completion of the second required month, the resident may pursue other experiences that augment learning of perioperative care in the subspecialty during the time remaining in the second month. For example, a resident who has gained sufficient experience in cardiac anesthesia (see V.F.4, Clinical Components) before completion of the second

month of a cardiac anesthesia rotation may benefit from other perioperative experiences such as caring for patients in a cardiac angiographic suite or learning the basics of performance and interpretation of transthoracic or transesophageal echocardiograms.

Additional subspecialty rotations are encouraged, but the cumulative time in any one subspecialty may not exceed 6 months during the CA-1 through CA-3 years. Curricula specific to all subspecialty rotations must be on file in the department. Advanced subspecialty rotations, including those in critical care medicine and pain medicine, must reflect increased responsibility and learning opportunities. These assignments must not compromise the learning opportunities for residents participating in their initial subspecialty rotations.

Experiences in perioperative care must include rotations in critical care medicine, acute perioperative and chronic pain management, preoperative evaluation, and postanesthesia care. These experiences must consist of at least 4 months of distinct progressive rotations in critical care medicine; at least 3 months in pain medicine that may include one month in an acute perioperative pain management rotation, one month in a rotation for the assessment and treatment of inpatients and outpatients with chronic pain problems, and one month of regional analgesia experience in pain medicine; 1 month in a preoperative evaluation clinic; and 0.5 month in a postanesthesia care unit. The RRC will allow 2 months of critical care medicine and 1 month of pain medicine experiences to occur during the Clinical Base Year. The RRC anticipates that rotations in preoperative evaluation clinics, acute perioperative pain management, and postoperative care units may occur in divided rotations. However, the rotation unit may not be less than one week. Successive experiences must reflect increased responsibility and learning opportunities.

During the 36 months of training residents may select additional focused educational experiences in advanced clinical anesthesiology subspecialties and/or related activities, remaining CBY required rotations, or research. For example, residents seeking broad exposure in critical care-related specialties may choose to take one or more rotations in echocardiography, nutrition, infectious diseases, or nephrology. Some may wish to gain experiences in pain medicine-related specialties such as physical medicine & rehabilitation, neurology, or psychiatry. Others may wish to choose advanced clinical anesthesiology subspecialty rotations or unique anesthesia-related experiences.

The program director must determine the sequencing of the rotations.

C. Program Objectives

An accredited program in anesthesiology must provide education, training, and experience in an atmosphere of mutual respect between instructor and residents so that residents will be stimulated and prepared to apply acquired knowledge and talents independently. The program must provide an environment that promotes the acquisition of the knowledge, skills, clinical judgment, and attitudes essential to the practice of anesthesiology.

In addition to clinical skills, the program should emphasize interpersonal skills, effective communication, and professionalism. The residency program must work toward ensuring that its residents, by the time they graduate, assume responsibility and act responsibly and with integrity; demonstrate a commitment to excellence and ethical principles of clinical care, including confidentiality of patient information, informed consent, and business practices; demonstrate respect and regard for the needs of patients and society that supersede self-interest; and work effectively as members of a health-care team or other professional group. Further, residents are expected to create and sustain a therapeutic relationship with patients, engage in active listening, provide information using appropriate language, ask clear questions, provide an opportunity for comments and questions, and demonstrate sensitivity and responsiveness to cultural differences, including awareness of their own and their patients' cultural perspectives.

These objectives can be achieved only when the program leadership, faculty, supporting staff, and administration demonstrate a commitment to the educational program and provide appropriate resources and facilities. Service commitments must not compromise the achievement of educational goals and objectives.

II. Institutions

A. Sponsoring Institution

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

The institution sponsoring an accredited program in anesthesiology must also sponsor or be affiliated with ACGME-approved residencies in at least the specialties of general surgery and internal medicine.

B. Participating Institutions

1. **Assignment to an institution must be based on a clear educational rationale, integral to the program curriculum, with clearly-stated activities and objectives. When multiple participating institutions are used, there should be assurance of the continuity of the educational experience.** Assignments should provide resources not otherwise available to the program.
2. **Assignment to a participating institution requires a letter of agreement with the sponsoring institution. Such a letter of agreement should:**
 - a) **identify the faculty who will assume both educational and supervisory responsibilities for residents;**
 - b) **specify their responsibilities for teaching, supervision, and formal evaluation of residents, as specified in Sections III B and VII A of this document;**
 - c) **specify the duration and content of the educational experience,** and outline the educational goals and objectives to be attained by the resident during the assignment;
 - d) **state the policies and procedures that will govern resident education during the assignment; and**

A participating institution may be either *integrated* or *affiliated* with the parent institution:

1. An *integrated institution* must formally acknowledge the authority of the core program director over the educational program in that hospital, including the appointments of all faculty and all residents. Integrated institutions should be in close geographic proximity to the parent institution to allow all residents to attend joint conferences. If an institution is not in geographic proximity and joint conferences cannot be held, an equivalent educational program in the integrated institution must be fully established and documented. Rotations to integrated institutions are not limited in duration. It is expected, however, that the majority of the program will be provided in the parent institution. Prior approval of the RRC must be obtained for participation of an institution on an integrated basis, regardless of the duration of the rotation.
2. An *affiliated institution* is one that is related to the core program for the purpose of providing limited rotations that complement the experience available in the parent institution. Assignments at affiliated institutions must be made for educational purposes and not to fulfill service needs. Rotations to affiliated institutions may be no more than a maximum of 12

months during the 3 years of clinical anesthesia. Prior approval of the RRC must be obtained if the duration of a rotation at an affiliated institution will exceed 6 months.

III. Program Personnel and Resources

A. Program Director

1. **There must be a single program director responsible for the program. The person designated with this authority is accountable for the operation of the program** and should be a member of the staff of the sponsoring or integrated institution. When the program director is not the department chair, the department chair must be an anesthesiologist who also meets the qualification criteria found below in III.A.3.a-e. **In the event of a change of either program director or department chair, the program director should promptly notify the executive director of the RRC through the Web Accreditation Data System of the ACGME.** The RRC may initiate an inspection of the program in conjunction with this change when it deems it necessary to ensure continuing quality.
2. **The program director, together with the faculty, is responsible for the general administration of the program, and for the establishment and maintenance of a stable educational environment. Adequate lengths of appointment for both the program director and faculty are essential to maintaining such an appropriate continuity of leadership.** Frequent changes in leadership or long periods of temporary leadership may adversely affect an educational program and may present serious cause for concern.
3. **Qualifications of the program director are as follows:**
 - a) **The program director must possess the requisite specialty expertise, as well as documented educational and administrative abilities.**
 - b) **The program director must be certified in the specialty by the American Board of Anesthesiology, or possess qualifications judged to be acceptable by the RRC.**
 - c) **The program director must be appointed in good standing and based at the primary teaching site.**
 - d) The program director must be licensed to practice medicine in the state where the institution that sponsors the program is located. (Certain federal programs are exempted.)

- e) The program director must possess faculty experience, leadership, organizational and administrative qualifications, and the ability to function effectively within an institutional governance. The program director must have significant academic achievements in anesthesiology, such as publications, the development of educational programs, or the conduct of research.

4. Responsibilities of the Program Director are as follows:

- a) **The program director must oversee and organize the activities of the educational program in all institutions that participate in the program. This includes selecting and supervising the faculty and other program personnel at each participating institution, appointing a local site director, and monitoring appropriate resident supervision at all participating institutions.**
- b) **The program director is responsible for preparing an accurate statistical and narrative description of the program as requested by the RRC, as well as updating annually both program and resident records through the ACGME's Accreditation Data System.**
- c) **The program director must ensure the implementation of fair policies, grievance procedures, and due process, as established by the sponsoring institution and in compliance with the Institutional Requirements.**
- d) **The program director must seek the prior approval of the RRC for any changes in the program that may significantly alter the educational experience of the residents. Such changes include:**
 - (1) **the addition or deletion of a participating institution as specified in Section II of this document;**
 - (2) **a change in the format of the educational program;**
 - (3) **a change in the approved resident complement;**

On review of a proposal for any such major change in a program, the RRC may determine that a site visit is necessary.
- e) The program director is responsible for confirming that all residents completing the program have met the requirements of the

48-month continuum, ie, the Clinical Base Year and the 36-month anesthesiology residency.

- f) The program director is responsible for regular review of the residents' clinical experience logs and for verifying their accuracy and completeness when they are transmitted to the RRC.

B. Faculty

1. **At each participating institution, there must be a sufficient number of faculty with documented qualifications to instruct and supervise adequately all residents in the program.** The number of faculty must be sufficient to provide each resident with adequate supervision, which shall not vary substantially with the time of day or the day of the week. In the clinical anesthesia setting, faculty members should not direct anesthesia at more than 2 anesthetizing locations simultaneously.
2. **The faculty, furthermore, must devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities. They must demonstrate a strong interest in the education of residents, and must support the goals and objectives of the educational program of which they are a member.**
3. **Qualifications of the physician faculty are as follows:**
 - a) **The physician faculty must possess the requisite specialty expertise and competence in clinical care and teaching abilities, as well as documented educational and administrative abilities and experience in their field.**
 - b) **The physician faculty must be certified in the specialty by the American Board of Anesthesiology, or possess qualifications judged to be acceptable by the RRC.** Faculty who are not ABA-certified should be in the process of obtaining certification.
 - c) **The physician faculty must be appointed in good standing to the staff of an institution participating in the program.**
 - d) The faculty should have varying interests, capabilities, and backgrounds, and must include individuals who have specialized expertise in the subspecialties of anesthesiology, which includes but is not limited to critical care, obstetric anesthesia, pediatric anesthesia, neuroanesthesia, cardiothoracic anesthesia, and pain medicine. Didactic and clinical teaching must be provided by faculty with documented interests and expertise in the subspecialty involved. Fellowship training, several years of practice (primarily

within a subspecialty), and membership and active participation in national organizations related to the subspecialty may signify expertise.

4. **The responsibility for establishing and maintaining an environment of inquiry and scholarship rests with the faculty, and an active research component must be included in each program. *Scholarship* is defined as the following:**
 - a) **the scholarship of *discovery*, as evidenced by peer-reviewed funding or by publication of original research in a peer-reviewed journal;**
 - b) **the scholarship of *dissemination*, as evidenced by review articles or chapters in textbooks;**
 - c) **the scholarship of *application*, as evidenced by the publication or presentation of, for example, case reports or clinical series at local, regional, or national professional and scientific society meetings.**

All three of the above scholarship components must be present in the program.

Complementary to the above scholarship is the regular participation of the teaching staff in clinical discussions, rounds, journal clubs, and research conferences in a manner that promotes a spirit of inquiry and scholarship (e.g., the offering of guidance and technical support for residents involved in research such as research design and statistical analysis); and the provision of support for residents' participation, as appropriate, in scholarly activities.

5. **Qualifications of the nonphysician faculty are as follows:**
 - a) **Nonphysician faculty must be appropriately qualified in their field.**
 - b) **Nonphysician faculty must possess appropriate institutional appointments.**
6. Teaching by residents of medical students and junior residents represents a valid learning experience. The use of a resident as an instructor of junior residents, however, must not substitute for experienced faculty.

C. Other Program Personnel

Additional necessary professional, technical, and clerical personnel must be provided to support the program.

The integration of nonphysician personnel into a department with an accredited program in anesthesiology will not influence the accreditation of such a program unless it becomes evident that such personnel interfere with the training of resident physicians.

Interference may result from dilution of faculty effort, dilution of the available teaching experience, or downgrading of didactic material. Clinical instruction of residents by nonphysician personnel is inappropriate, as is excessive supervision of such personnel by resident staff. Additional necessary professional, technical, and clerical personnel must be provided to support the program.

D. Resources

The program must ensure that adequate resources (e.g., sufficient laboratory space and equipment, computer and statistical consultation services) are available.

1. There must be adequate space and equipment for the educational program, including meeting rooms, classrooms with visual and other educational aids, study areas for residents, office space for teaching staff, diagnostic and therapeutic facilities, laboratory facilities, and computer support. The institution must provide appropriate on-call facilities for male and female residents and faculty.
2. There must be a department library. This may be complemented, but not replaced, by private faculty book collections and hospital and/or institutional libraries. Journals, reference books, and other texts in print or electronic form must be readily available to residents and faculty during nights and weekends. Residents must also have ready access to a major medical library, either at the institution where the residents are located or through arrangements with convenient nearby institutions. Library services must include electronic retrieval of information from medical databases. There must be access to an on-site library or to a collection of appropriate texts and journals in each institution participating in a residency program.

IV. Resident Appointments

A. Eligibility Criteria

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

B. Number of Residents

The RRC will approve the number of residents based upon criteria that include the adequacy of resources for resident education, ie, the quality and volume of patients and related clinical material available for education, faculty-resident ratio, institutional funding, and the quality of faculty teaching.

1. General issues considered by the RRC include the adequacy of resources for resident education such as volume and variety of patients and related clinical material available for education, faculty-resident ratio, institutional funding and support of education, the quality of faculty teaching, and scholarship. Specific criteria evaluated when establishing numbers of residents for programs include:
 - a) ABA certification rate of program graduates during the most recent applicable 5-year period;
 - b) Current accreditation status and duration of review cycle;
 - c) Most recent accreditation citations, especially any relating to adequacy of clinical experience and/or faculty coverage;
 - d) Clinical volumes demonstrating that there will be sufficient experience for all residents.
2. Appointment of a minimum of nine residents with, on average, three appointed in each of the CA-1, CA-2 and CA-3 years is required. Any proposed increase in the number of residents must receive prior approval by the RRC.

C. Resident Transfers

To determine the appropriate level of education for residents who are transferring from another residency program, the program director must receive written verification of previous educational experiences and a statement regarding the performance evaluation of the transferring resident prior to their acceptance into the program. A program director is required to provide verification of residency education for residents who may leave the program prior to completion of their education.

D. Appointment of Fellows and Other Students

The appointment of fellows and other specialty residents or students must not dilute or detract from the educational opportunities available to regularly appointed residents.

V. Program Curriculum

A. Program Design

1. Format

The program design and sequencing of educational experiences will be approved by the RRC as part of the review process.

2. Goals and Objectives

The program must possess a written statement that outlines its educational goals with respect to the knowledge, skills, and other attributes of residents for each major assignment and for each level of the program. This statement must be distributed to residents and faculty, and must be reviewed with residents prior to their assignments.

There must be a written description of each rotation in the CA-1 and CA-2 years. The goals and objectives for the CA-1 and CA-2 experience must be separate and distinct from those designed for the CA-3 year training.

B. Specialty Curriculum

The program must possess a well-organized and effective curriculum, both didactic and clinical. The curriculum must also provide residents with direct experience in progressive responsibility for patient management.

Substance Abuse Policy: The residency program must have a written policy and an educational program regarding substance abuse as it relates to physician well-being that specifically address the needs of anesthesiology.

C. Residents Scholarly Activities

Each program must provide an opportunity for residents to participate in research or other scholarly activities, and residents must participate actively in such scholarly activities.

Each resident must complete an academic assignment. This assignment usually occurs during the final 24 months of training, but it may, at the program director's

discretion, occur earlier. Academic projects may include grand rounds presentations, preparation and publication of review articles, book chapters, manuals for teaching or clinical practice, or similar academic activities. Alternatively, a resident may elect to develop and perform or participate in one or more clinical or laboratory investigations. The RRC expects that the outcomes of resident investigations will be suitable for presentation at local, regional, or national scientific meetings and that many will result in peer-reviewed abstracts or manuscripts. A faculty supervisor must be in charge of each project and investigation.

D. ACGME Competencies

The residency program must require its residents to obtain competence in the six areas listed below to the level expected of a new practitioner. Programs must define the specific knowledge, skills, behaviors, and attitudes required, and provide educational experiences as needed in order for their residents to demonstrate the following:

- 1. *Patient care* that is compassionate, appropriate, and effective for the treatment of health programs and the promotion of health;**
- 2. *Medical Knowledge* about established and evolving biomedical, clinical, and cognate sciences, as well as the application of this knowledge to patient care;**
- 3. *Practice-based learning and improvement* that involves the investigation and evaluation of care for their patients, the appraisal and assimilation of scientific evidence, and improvements in patient care;**
- 4. *Interpersonal and communication skills* that result in the effective exchange of information and collaboration with patients, their families, and other health professionals;**
- 5. *Professionalism*, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds;**
- 6. *Systems-based practice*, as manifested by actions that 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.**

E. Didactic Components

Didactic instruction should encompass clinical anesthesiology and related areas of basic science, as well as pertinent topics from other medical and surgical disciplines. Didactic presentations related to the specific issues noted in Section V.F (Clinical Components) are required. Practice management should be included in the curriculum, and should address issues such as operating room management, types of practice, job acquisition, financial planning, contract negotiations, billing arrangements, professional liability, and legislative and regulatory issues. The material covered in the didactic program should demonstrate appropriate continuity and sequencing to ensure that residents are ultimately exposed to all subjects at regularly held teaching conferences. The number and types of such conferences may vary among programs, but there must be evidence of regular faculty participation. The program director should also seek to enrich the program by providing lectures and contact with faculty from other disciplines and other institutions.

F. Clinical Components

A wide spectrum of disease processes and surgical procedures must be available within the program to provide each resident with a broad exposure to different types of anesthetic management within the anesthesiology residency program. The following list represents the minimum clinical experience that should be obtained by each resident in the program. Care should be provided for:

1. Forty patients undergoing vaginal delivery. There must be evidence of direct resident involvement in cases involving high-risk obstetrics.
2. Twenty patients undergoing cesarean sections.
3. One hundred patients less than 12 years of age undergoing surgery or other procedures requiring anesthetics. Within this patient group, 20 children must be less than 3 years of age, including 5 less than 3 months of age.
4. Twenty patients undergoing cardiac surgery. The majority of these cardiac procedures must involve the use of cardiopulmonary bypass.
5. Twenty patients undergoing open or endovascular procedures on major vessels, including carotid surgery, intrathoracic vascular surgery, intra-abdominal vascular surgery, or peripheral vascular surgery. Excluded from this category is surgery for vascular access or repair of vascular access.

6. Twenty patients undergoing non-cardiac intrathoracic surgery, including pulmonary surgery and surgery of the great vessels, esophagus, and the mediastinum and its structures.
7. Twenty patients undergoing intracerebral procedures. These patients include those undergoing intracerebral endovascular procedures. However, the majority of these twenty procedures must involve an open cranium.
8. Forty patients undergoing surgical procedures, including cesarean sections, in whom epidural anesthetics are used as part of the anesthetic technique or epidural catheters are placed for perioperative analgesia. Use of a combined spinal/epidural technique may be counted as both a spinal and an epidural procedure.
9. Twenty patients undergoing procedures for complex, life-threatening injuries. Examples of these injuries include trauma associated with car crashes, falls from high places, penetrating wounds, industrial and farm accidents, and assaults. Burns covering more than 20% of body surface area also are included in this category.
10. Forty patients undergoing surgical procedures, including cesarean sections, with spinal anesthetics. Use of a combined spinal/epidural technique may be counted as both a spinal and an epidural procedure.
11. Forty patients undergoing surgical procedures in whom peripheral nerve blocks are used as part of the anesthetic technique or perioperative analgesic management.
12. Twenty new patients who are evaluated for management of acute, chronic, or cancer-related pain disorders. Residents should have familiarity with the breadth of pain management including clinical experience with interventional pain procedures.
13. Patients with acute postoperative pain. There must be documented involvement in the management of acute postoperative pain, including familiarity with patient-controlled intravenous techniques, neuraxial blockade, and other pain-control modalities.
14. Patients scheduled for evaluation prior to elective surgical procedures. There must be documented involvement for at least 4 weeks in preoperative medicine.
15. Patients who require specialized techniques for their perioperative care. There must be significant experience with a broad spectrum of airway management techniques (e.g., performance of fiberoptic intubation and

lung isolation techniques such as double lumen endotracheal tube placement and endobronchial blockers). Residents also should have significant experience with central vein and pulmonary artery catheter placement and the use of transesophageal echocardiography and evoked potentials. The resident must either personally participate in cases in which EEG or processed EEG monitoring is actively used as part of the procedure or have adequate didactic instruction to ensure familiarity with EEG use and interpretation. Bispectral index use and other similar interpolated modalities are not sufficient to satisfy this requirement.

16. Patients immediately after anesthesia. There must be a postanesthesia care experience of 0.5 month involving direct care of patients in the postanesthesia-care unit and responsibilities for management of pain, hemodynamic changes, and emergencies related to the postanesthesia-care unit. The RRC expects resident clinical responsibilities in the postoperative care unit to be limited to the care of postoperative patients, with the exception of providing emergency response capability for cardiac arrests and rapid response situations within the faculty. Designated faculty must be readily and consistently available for consultation and teaching.
17. Critically ill patients. There must be a minimum of 4 months of critical care medicine distributed throughout the curriculum in order to provide progressive responsibility to trainees in the later stages of the curriculum. No more than 2 months of critical care medicine will be credited for training that occurs before the CA-1 year. Each critical care medicine rotation should be at least one month in duration, with progressive patient care responsibility in advanced rotations. Overall, this training must take place in units providing care for both men and women in which the majority of patients have multisystem disease. The postanesthesia-care unit experience does not satisfy this requirement. Anesthesia residents must actively participate in all patient care activities and as a fully integrated member of the critical care team. During at least 2 of the required 4 months of critical care medicine, faculty anesthesiologists experienced in the practice and teaching of critical care must be actively involved in the care of the critically ill patients and the educational activities of the residents.
18. Geriatric patients. There must be appropriate didactic instruction and sufficient clinical experience in managing problems of the geriatric population.
19. Ambulatory surgical patients. There must be appropriate didactic instruction and sufficient clinical experience in managing the specific needs of the ambulatory surgical patient.

20. Patients undergoing diagnostic or therapeutic procedures outside of the surgical suites. There must be appropriate didactic instruction and sufficient clinical experience in managing the specific needs of patients undergoing these procedures.

G. ACLS Certification

All residents must hold current certification as providers for advanced cardiac life support (ACLS).

H. Clinical Documentation

1. Resident Log

The program director must require the residents to maintain an electronic record of their clinical experience. The program director or faculty must review the record on a regular basis. It must be submitted annually to the RRC office in accordance with the format and the due date specified by the RRC. The logs must be reviewed for accuracy and completeness before they are submitted to the RRC. The program should also have the means for monitoring the appropriate distribution of cases among the residents.

2. Patient Records

A comprehensive anesthesia record must be maintained for each patient as an ongoing reflection of the drugs administered, the monitoring employed, the techniques used, the physiologic variations observed, the therapy provided as required, and the fluids administered. The patient's medical record should contain evidence of preoperative and postoperative anesthesia assessment.

VI. Resident Duty Hours and the Working Environment

Providing residents with a sound didactic and clinical education must be carefully planned and balanced with concerns for patient safety and resident well-being. Each program must ensure that the learning objectives of the program are not compromised by excessive reliance on residents to fulfill service obligations. Didactic and clinical education must have priority in the allotment of residents' time and energy. Duty hour assignments must recognize that faculty and residents collectively have responsibility for the safety and welfare of patients.

A. Supervision of Residents

1. **All patient care must be supervised by qualified faculty. The program director must ensure, direct, and document adequate supervision of**

residents at all times. Residents must be provided with rapid, reliable systems for communicating with supervising faculty.

- 2. Faculty schedules must be structured to provide residents with continuous supervision and consultation.** Supervision shall not vary substantially with the time of day or day of the week. In the clinical setting, faculty members should not direct anesthesia at more than 2 anesthetizing locations simultaneously.
- 3. Faculty and residents must be educated to recognize the signs of fatigue and adopt and apply policies to prevent and counteract the potential negative effects.**

B. Duty Hours

- 1. Duty hours are defined as all clinical and academic activities related to the residency program; i.e., patient care (both inpatient and outpatient), administrative duties relative to patient care, the provision for transfer of patient care, time spent in-house during call activities, and scheduled activities such as conferences. Duty hours do *not* include reading and preparation time spent away from the duty site.**
- 2. Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities.**
- 3. Residents must be provided with 1 day in 7 free from all educational and clinical responsibilities, averaged over a 4-week period, inclusive of call. *One day* is defined as 1 continuous 24-hour period free from all clinical, educational, and administrative duties.**
- 4. Adequate time for rest and personal activities must be provided. This should consist of a 10-hour time period provided between all daily duty periods and after in-house call. The RRC will not consider requests for a rest period of less than 10 hours.**

C. On-Call Activities

The objective of on-call activities is to provide residents with continuity of patient care experiences throughout a 24-hour period, as well as with the challenges of providing care outside regular duty hours. Therefore, on-call activities, including those that occur throughout the night, and on weekends and holidays, are necessary components of the education of all residents. *In-house call* is defined as those duty hours beyond the normal work day, when residents are required to be immediately available in the assigned institution.

- 1. In-house call must occur no more frequently than every third night, averaged over a 4-week period.**
- 2. Continuous on-site duty, including in-house call, must not exceed 24 consecutive hours. Residents may remain on duty for up to 6 additional hours to participate in didactic activities, transfer care of patients, conduct outpatient clinics, and maintain continuity of medical and surgical care. During the 6 additional hours, residents may not administer anesthesia for a new operative case or manage new admissions to the intensive care unit.**
- 3. No new patients may be accepted after 24 hours of continuous duty. A new patient is defined as any patient for whom the resident has not previously provided care.**
- 4. *At-home call (or pager call)* is defined as a call taken from outside the assigned institution.**
 - a) The frequency of at-home call is not subject to the every-third-night limitation. At-home call, however, must not be so frequent as to preclude rest and reasonable personal time for each resident. Residents taking at-home call must be provided with 1 day in 7 completely free from all educational and clinical responsibilities, averaged over a 4-week period.**
 - b) When residents are called into the hospital from home, the hours residents spend in-house are counted toward the 80-hour limit.**
 - c) The program director and the faculty must monitor the demands of at-home call in their programs, and make scheduling adjustments as necessary to mitigate excessive service demands and/or fatigue.**

D. Moonlighting

- 1. Because residency education is a full-time endeavor, the program director must ensure that moonlighting does not interfere with the ability of the resident to achieve the goals and objectives of the educational program.**
- 2. The program director must comply with the sponsoring institution's written policies and procedures regarding moonlighting, in compliance with the ACGME Institutional Requirements.**

3. **Any hours a resident works for compensation at the sponsoring institution or any of the sponsor's primary clinical sites must be considered part of the 80-hour weekly limit on duty hours. This refers to the practice of *internal moonlighting*.**

E. Oversight

1. **Each program must have written policies and procedures consistent with the Institutional and Program Requirements for resident duty hours and the working environment. These policies must be distributed to the residents and the faculty. Duty hours must be monitored with a frequency sufficient to ensure an appropriate balance between education and service.**
2. **Back-up support systems must be provided when patient care responsibilities are unusually difficult or prolonged, or if unexpected circumstances create resident fatigue sufficient to jeopardize patient care.**

F. Duty Hours Exceptions

The RRC for Anesthesiology will not consider requests for an exception to the limit to 80 hours per week, averaged monthly.

VII. Evaluation

A. Resident

1. Formative Evaluation

The faculty must evaluate in a timely manner the residents whom they supervise. In addition, the residency program must demonstrate that it has an effective mechanism for assessing resident performance throughout the program, and for utilizing the results to improve resident performance.

The resident should be evaluated following each rotation, and the written evaluations should be maintained in each resident's file.

- a) **Assessment should include the use of methods that produce an accurate assessment of residents' competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.**

- b) **Assessment should include the regular and timely performance feedback to residents that includes at least semiannual written evaluations. Such evaluations are to be communicated to each resident in a timely manner, and maintained in a record that is accessible to each resident.**
- c) **Assessment should include the use of assessment results, including evaluation by faculty, patients, peers, self, and other professional staff, to achieve progressive improvements in residents' competence and performance.**

2. Final Evaluation

The program director must provide a final evaluation for each resident who completes the program. This evaluation must include a review of the resident's performance during the final period of education, and should verify that the resident has demonstrated sufficient professional ability to practice competently and independently. The final evaluation must be part of the resident's permanent record maintained by the institution.

B. Faculty

The performance of the faculty must be evaluated by the program no less frequently than at the midpoint of the accreditation cycle, and again prior to the next site visit. The evaluations should include a review of their teaching abilities, commitment to the educational program, clinical knowledge, and scholarly activities. This evaluation must include annual written confidential evaluations by residents.

C. Program

The educational effectiveness of a program must be evaluated at least semiannually in a systematic manner.

- 1. **Representative program personnel (i.e., at least the program director, representative faculty, and one resident) must be organized to review program goals and objectives, and the effectiveness with which they are achieved. This group must conduct a formal documented meeting at least annually for this purpose. In the evaluation process, the group must take into consideration written comments from the faculty, the most recent report of the GMEC of the sponsoring institution, and the residents' confidential written evaluations. If deficiencies are found, the group should prepare an explicit plan of action, which should be approved by the faculty and documented in the minutes of the meeting.**

2. **The program should use resident performance and outcome assessment in its evaluation of the educational effectiveness of the residency program. Performance of program graduates on the certification examination should be used as one measure of evaluating program effectiveness. The program should maintain a process for using assessment results together with other program evaluation results to improve the residency program.**
3. As part of the overall evaluation of the program, the RRC will take into consideration the information provided by the ABA regarding resident performance on the certifying examinations over the most recent 5-year period. The RRC will also take into account noticeable improvements or declines during the period considered. Program graduates should take the certifying examination, and at least 70% of the program graduates should become certified.

VIII. Experimentation and Innovation

Since responsible innovation and experimentation are essential to improving professional education, experimental projects along sound educational principles are encouraged. Requests for experimentation or innovative projects that may deviate from the program requirements must be approved in advance by the RRC, and must include the educational rationale and method of evaluation. The sponsoring institution and program are jointly responsible for the quality of education offered to residents for the duration of such a project.

IX. Certification

Residents who plan to seek certification by the American Board of Anesthesiology should communicate with the office of the Board (Executive Vice President of the American Board of Anesthesiology, Inc., 4101 Lake Boone Trail, The Summit – Suite 510, Raleigh, NC 27607-7506 or www.theABA.org) regarding the full requirements for certification.

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