ACGME Program Requirements for Graduate Medical Education in Undersea and Hyperbaric Medicine (Emergency Medicine or Preventive Medicine)

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ACGME Program Requirements for Graduate Medical Education
in Undersea and Hyperbaric Medicine

One-year 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.

Introduction

Int.A. Residency and fellowship programs are essential dimensions of the transformation of the medical student to the independent practitioner along the continuum of medical education. They are physically, emotionally, and intellectually demanding, and require longitudinally-concentrated effort on the part of the resident or fellow.

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 and fellow physician to assume personal responsibility for the care of individual patients. For the resident and fellow, 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 and fellows 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 and fellow’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. Definition and Scope of the Specialty

Int.B.1. The subspecialty of undersea and hyperbaric medicine is a discipline that deals with the prevention of injury and illness due to exposure to environments in which the ambient pressure is increased, such as in diving or hyperbaric chamber exposure, and the therapeutic use of high environmental pressure and the delivery of oxygen under high pressure to treat disease. The scope of the subspecialty emphasizes the occupational, environmental, safety, and clinical aspects of diving, hyperbaric chamber operations, compressed air work, and hyperbaric oxygen therapy.

Int.C. Duration of Education
The educational program in undersea and hyperbaric medicine must be 12 months in length. *(Core)*

I. Institutions

I.A. Sponsoring Institution

One sponsoring institution must assume ultimate responsibility for the program, as described in the Institutional Requirements, and this responsibility extends to fellow 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. The program director must be provided sufficient financial support and protected time, relative to program size, to fulfill the educational and administrative responsibilities of the program. *(Core)*

I.A.1.a) This must be at least 10 percent salary support or protected time. *(Core)*

I.A.2. The Sponsoring Institution should also sponsor an ACGME-accredited residency program in emergency medicine or preventive medicine. *(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 fellows; *(Detail)*

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

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

I.B.1.d) state the policies and procedures that will govern fellow education during the assignment; and, *(Detail)*

I.B.1.e) define the relationship that will exist between undersea and hyperbaric medicine fellows and faculty members in other programs. *(Detail)
I.B.2. The program director must submit any additions or deletions of participating sites routinely providing an educational experience, required for all fellows, of one month full time equivalent (FTE) or more through the Accreditation Council for Graduate Medical Education (ACGME) Accreditation Data System (ADS). 

I.B.3. The program must be based at a primary hospital (hereafter referred to as the primary clinical site).

I.B.4. All participating sites must provide appropriate support services to ensure an adequate educational experience.

I.B.4.a) This includes support personnel and physical resources to ensure that fellows have sufficient time and space to carry out their clinical and educational responsibilities.

I.B.5. Required experiences not available at the primary clinical site, including clinical experience in critical care areas, must be provided through a participating site.

I.B.6. Programs using multiple participating sites must ensure a unified educational experience for the fellows.

I.B.6.a) Each participating site must offer significant educational opportunities to the overall program.

I.B.6.b) Required rotations to participating sites that are geographically distant from the Sponsoring Institution must offer educational opportunities, unavailable locally, that significantly augment the fellows’ overall educational experience.

I.B.7. The number and location of participating sites must not preclude fellows’ participation in conferences and other educational experiences.

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.

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

II.A.2. Qualifications of the program director must include:

II.A.2.a) requisite specialty expertise and documented educational and administrative experience acceptable to the Review Committee.
II.A.2.b) current certification in the subspecialty by the American Board of Emergency Medicine, American Board of Preventive Medicine, American Osteopathic Board of Emergency Medicine, American Osteopathic Board of Preventive Medicine, or subspecialty qualifications that are acceptable to the Review Committee. (Core)

II.A.2.c) current medical licensure and appropriate medical staff appointment; (Core)

II.A.2.d) being clinically active in the practice of undersea and hyperbaric medicine; and, (Core)

II.A.2.e) at least three years’ experience as a physician faculty member in an ACGME-accredited program, as well as possession of adequate undersea and hyperbaric medicine experience judged to be acceptable by the Review Committee. (Core)

II.A.3. The program director must administer and maintain an educational environment conducive to educating the fellows in each of the ACGME competency areas. (Core)

The program director must:

II.A.3.a) prepare and submit all information required and requested by the ACGME; (Core)

II.A.3.b) be familiar with and oversee compliance with ACGME and Review Committee policies and procedures as outlined in the ACGME Manual of Policies and Procedures; (Detail)

II.A.3.c) obtain review and approval of the sponsoring institution’s GMEC/DIO before submitting information or requests to the ACGME, including:

II.A.3.c).(1) all applications for ACGME accreditation of new programs; (Detail)

II.A.3.c).(2) changes in fellow complement; (Detail)

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

II.A.3.c).(4) progress reports requested by the Review Committee; (Detail)

II.A.3.c).(5) requests for increases or any change to fellow duty hours; (Detail)

II.A.3.c).(6) voluntary withdrawals of ACGME-accredited programs; (Detail)
II.A.3.c).(7) requests for appeal of an adverse action; and, (Detail)

II.A.3.c).(8) appeal presentations to a Board of Appeal or the ACGME. (Detail)

II.A.3.d) obtain DIO review and co-signature on all program application forms, as well as any correspondence or document submitted to the ACGME that addresses: (Detail)

II.A.3.d).(1) program citations, and/or, (Detail)

II.A.3.d).(2) request for changes in the program that would have significant impact, including financial, on the program or institution. (Detail)

II.A.3.e) provide oversight and implementation of activities related to the recruitment, selection, instruction, supervision, counseling, evaluation, and advancement of fellows; and, (Core)

II.A.3.f) participate in academic societies and educational programs designed to enhance his or her educational and administrative skills. (Detail)

II.B. Faculty

II.B.1. There must be a sufficient number of faculty with documented qualifications to instruct and supervise all fellows. (Core)

II.B.1.a) This must include a minimum of two undersea and hyperbaric physicians based at the primary clinical site, including the program director. (Core)

II.B.2. The faculty must devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities and demonstrate a strong interest in the education of fellows. (Core)

II.B.3. The physician faculty must have current certification in the subspecialty by the American Board of Emergency Medicine, American Board of Preventive Medicine, American Osteopathic Board of Emergency Medicine, American Osteopathic Board of Preventive Medicine, or possess qualifications judged acceptable to the Review Committee. (Core)

II.B.4. The physician faculty must possess current medical licensure and appropriate medical staff appointment. (Core)

II.B.5. Faculty members must demonstrate sound clinical and teaching abilities, a commitment to their own continuing medical education, and participation in scholarly activities. (Core)
II.B.6. 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 the program. (Core)

II.B.7. While not all faculty members must be investigators, the faculty as a whole must demonstrate broad involvement in scholarly activity. (Core)

II.B.7.a) The faculty as a whole must demonstrate at least one piece of scholarly activity per year, averaged over five years. (Core)

II.B.8. Faculty members must regularly participate in clinical discussions, rounds, journal clubs, and research conferences in a manner that promotes a spirit of inquiry and scholarship and the provision of support for fellows’ participation, as appropriate, in scholarly activity. (Core)

II.B.9. Consultants from appropriate medical subspecialties should be available for consultation and didactic teaching, including those with experience and understanding of anesthesiology, critical care, emergency medicine, infectious disease, ophthalmology, plastic surgery, preventive medicine, rehabilitative medicine, vascular surgery, and other disciplines as they pertain to the comprehensive treatment of the clinical hyperbaric patient. (Detail)

II.C. Other Program Personnel

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

II.C.1. There must be at least one 0.2 FTE program coordinator dedicated to the fellowship program’s administration. (Core)

II.D. Resources

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

II.D.1. Space and Equipment

Adequate space must be available for faculty members to perform their educational, research, and administrative responsibilities. (Core)

II.D.1.a) Adequate conference and teaching space must be available for didactic and case conferences. (Detail)

II.D.2. Inpatient, Ambulatory Care, Laboratory, and Other Clinical Facilities

II.D.2.a) A hyperbaric chamber capable of treatment of the full range of conditions amenable to hyperbaric oxygen therapy must be available. (Core)
II.D.2.b) A full-service clinical laboratory that is capable of measurement of chemistry, blood indices, and microbiology of patients needing hyperbaric therapy must be available at all times. (Core)

II.D.2.c) Radiologic services must be available at all times within the primary clinical site. (Core)

II.D.2.d) Inpatient and outpatient facilities, including intensive care units capable of addressing the needs of patients with respiratory toxicants, gas forming infections, wound healing problems, gas embolism, and other conditions requiring hyperbaric treatment, must be available. (Core)

II.D.3. Patient Population

II.D.3.a) There must be a sufficient number and variety of patients of all ages with medical and surgical conditions requiring hyperbaric therapy. (Core)

II.D.3.b) The patient population at the primary clinical site must include the majority of emergent and elective indications for hyperbaric therapy. (Core)

II.D.4. Support Services

II.D.4.a) Support services must include physical therapy, social services, occupational medicine, and psychologic and psychological testing services. (Core)

II.D.4.b) The following services must be provided at the primary clinical site: (Core)

II.D.4.b).(1) 24-hour availability of hyperbaric medicine services with at least 100 consultations and 1000 patient treatments per year; (Core)

II.D.4.b).(2) an emergency service for both adult and pediatric patients, adult and pediatric inpatient facilities, and adult and pediatric surgical and intensive care facilities; and, (Core)

II.D.4.b).(3) inpatient and outpatient facilities with staff members who consult the hyperbaric medicine service. (Core)

II.E. Medical Information Access

Fellows 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)
II.E.1. Available reference material must include hyperbaric texts and journals.  
(Core)

III. Fellow Appointments

III.A. 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 a Royal College of Physicians and Surgeons of Canada (RCPSC)-accredited or College of Family Physicians Canada (CFPC)-accredited residency program located in Canada, (Core)

Prior to entry in the program, fellows must have completed a residency program accredited by the ACGME, or by the RCPSC in Canada, that includes a minimum of 12 months of preventive, primary, surgical, and/or critical care training. (Core)

III.A.1. 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. 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. and III.A.1., but who does meet all of the following additional qualifications and conditions: (Core)

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

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

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

III.A.2.d) For an international graduate, verification of Educational Commission for Foreign Medical Graduates (ECFMG) certification; and, (Core)
III.A.2.e) 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.e).(1) 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.A.3. The Review Committees for Emergency Medicine and Preventive Medicine allow exceptions to the Eligibility Requirements for Fellowship Programs in Section III.A.  

III.B. Number of Fellows  
The program’s educational resources must be adequate to support the number of fellows appointed to the program.  

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

IV. Educational Program  
IV.A. The curriculum must contain the following educational components:  

IV.A.1. Skills and competencies the fellow will be able to demonstrate at the conclusion of the program. The program must distribute these skills and competencies to fellows and faculty at least annually, in either written or electronic form.
IV.A.1.a) Programs must teach the basic skills and knowledge that constitute the foundations of hyperbaric medicine practice, and must provide progressive responsibility for and experience in the application of these principles to the management of clinical problems. (Core)

IV.A.1.b) Programs must offer a broad education in undersea and hyperbaric medicine to prepare fellows to provide comprehensive patient care in the specialty. (Core)

IV.A.1.c) The program director and teaching faculty members must prepare and comply with written educational goals for the program. (Core)

IV.A.1.c).(1) All educational components should be related to the program goals. (Detail)

IV.A.1.d) Seminars and critical literature review activities pertaining to the subspecialty must be conducted regularly and as scheduled. (Core)

IV.A.1.e) Each program must offer its fellows an average of at least five hours per week of planned educational experiences not including change-of-shift reports. (Core)

IV.A.1.e).(1) These educational experiences must include presentations based on the core content areas. (Core)

IV.A.1.e).(2) These educational experiences should include:

- administrative seminars; (Detail)
- clinical and basic science; (Detail)
- journal review; (Detail)
- morbidity and mortality conferences; and, (Detail)
- research methods. (Detail)

IV.A.1.f) Fellows must participate, on average, in at least 70 percent of the planned didactic experiences offered. (Core)

IV.A.2. ACGME Competencies

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

IV.A.2.a) Patient Care and Procedural Skills

IV.A.2.a).(1) Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the
treatment of health problems and the promotion of health. Fellows: (Outcome)

must demonstrate competence in the: (Outcome)

IV.A.2.a).(1).(a) assessment of prospective divers for fitness to dive; (Outcome)

IV.A.2.a).(1).(b) assessment of hyperbaric chamber personnel for fitness to participate as a tender in a multiplace hyperbaric chamber; (Outcome)

IV.A.2.a).(1).(c) assessment of patients with suspected decompression sickness or arterial gas embolism and prescription of treatment; (Outcome)

IV.A.2.a).(1).(d) assessment of patients with specific problem wounds with respect to indications for hyperbaric oxygen therapy, fitness for hyperbaric treatment and prescription of treatment; (Outcome)

IV.A.2.a).(1).(e) assessment and management of patients with complications of hyperbaric therapy; (Outcome)

IV.A.2.a).(1).(f) management of critically-ill patients in the hyperbaric environment; and, (Outcome)

IV.A.2.a).(1).(g) assessment of patients with toxic gas exposure (e.g., carbon monoxide). (Outcome)

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

IV.A.2.b) Medical Knowledge

Fellows 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. Fellows: (Outcome)

IV.A.2.b).(1) must demonstrate competence in their knowledge of the indications and contraindications for hyperbaric oxygen therapy and dive medicine. (Outcome)

IV.A.2.c) Practice-based Learning and Improvement

Fellows are expected to develop skills and habits to be able to meet the following goals:
IV.A.2.c).(1) systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement; and, (Outcome)

IV.A.2.c).(2) locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems; (Outcome)

IV.A.2.d) Interpersonal and Communication Skills

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

IV.A.2.e) Professionalism

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

IV.A.2.f) Systems-based Practice

Fellows 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)

IV.A.3. Curriculum Organization and Fellow Experiences

IV.A.3.a) The curriculum must include the following academic and clinical content: (Core)

IV.A.3.a).(1) history of undersea and hyperbaric medicine; (Core)

IV.A.3.a).(2) decompression theory and physiology, including theory and application of decompression tables; (Core)

IV.A.3.a).(3) oxygen physiology in normobaric, hyperbaric and hypobaric environments, and oxygen toxicity; (Core)

IV.A.3.a).(4) pathophysiology of decompression illness and arterial gas embolism, including iatrogenic gas embolism; (Core)

IV.A.3.a).(5) diving operations and human performance in the hyperbaric and hypobaric environments; (Core)

IV.A.3.a).(6) medical examination and standards for divers and personnel working in hyperbaric and hypobaric environments; (Core)
IV.A.3.a).(7) effects of hyperbaric oxygenation on infectious disease; (Core)

IV.A.3.a).(8) principles of treatment of toxic gas exposures, such as carbon monoxide poisoning; (Core)

IV.A.3.a).(9) effects of hyperbaric oxygenation on irradiated tissues and ischemic wounds; (Core)

IV.A.3.a).(10) tissue oxygen measurement; (Core)

IV.A.3.a).(11) multiplace and monoplace hyperbaric chamber operations, including safety considerations, management of critically-ill patients in the hyperbaric environment, clinical monitoring, and mechanical ventilation; (Core)

IV.A.3.a).(12) evaluation of the patient for clinical hyperbaric treatment, including contraindications and side effects; (Core)

IV.A.3.a).(13) hazards of standard electrical therapies in hyperbaric environment, including electrical defibrillation and precautions; (Core)

IV.A.3.a).(14) emergency procedures for both monoplace and multiplace installations; (Core)

IV.A.3.a).(15) saturation diving covering air quality standards and life support requirements, including the physiology and practical (medical) issues associated with heliox, trimix, and hydrogen/oxygen/helium mixtures; and, (Core)

IV.A.3.a).(16) systems management, including administrative aspects of chamber operations, such as billing issues, quality assurance, and peer review. (Core)

IV.A.3.b) At least 10 months of fellow experiences must include:

IV.A.3.b).(1) participation as the primary or consulting physician responsible for providing direct/bedside patient evaluation and management; and, (Core)

IV.A.3.b).(2) the evaluation and management of patients with both acute and non-emergency indications for hyperbaric oxygen therapy. (Core)

IV.A.3.b).(2).(a) Each fellow must have the opportunity to evaluate at least 50 patients for treatment initiation of hyperbaric therapy or fitness to dive, including responsibility for providing bedside evaluation and management. (Core)
IV.A.3.c) Up to two months of electives are allowed for additional training in areas of relevance to undersea and hyperbaric medicine, such as critical care, surgery, submarine medicine, toxicology or radiation oncology. (Detail)

IV.A.3.d) Fellows should maintain their primary Board skills during their fellowship. (Detail)

IV.A.3.d). Fellows should not devote more than 12 hours per week, averaged over four weeks, to clinical practice unrelated to undersea and hyperbaric medicine. (Detail)

IV.A.3.e) Fellows must have progressive experience and responsibility for the teaching of undersea and hyperbaric medicine to health care trainees and professionals, including medical students, interns, other fellows, and nurses. (Core)

IV.B. Fellows’ Scholarly Activities

IV.B.1. The curriculum must advance fellows’ 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. Fellows must participate in scholarly activity that includes at least one of the following:

IV.B.2.a) peer-reviewed funding and research; (Outcome)

IV.B.2.b) publication of original research or review articles; or, (Outcome)

IV.B.2.c) presentations at local, regional, or national professional and scientific society meetings. (Outcome)

V. Evaluation

V.A. Fellow 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 fellows 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 fellow evaluations semi-annually; (Core)

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

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

V.A.2. Formative Evaluation

V.A.2.a) The faculty must evaluate fellow performance in a timely manner. (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) provide each fellow with documented semiannual evaluation of performance with feedback; (Core)

V.A.2.b).(4) at least quarterly evaluate the knowledge, skills, and professional growth of each fellow, using appropriate criteria and procedures; and, (Core)

V.A.2.b).(5) communicate evaluations to each fellow in a timely manner. (Core)
V.A.2.c) The evaluations of fellow performance must be accessible for review by the fellow, 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 fellows 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 fellow upon completion of the program. (Core)

This evaluation must:

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

V.A.3.b).(2) document the fellow’s performance during their education; and, (Detail)

V.A.3.b).(3) verify that the fellow 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.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 fellow; (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, fellows, 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) fellow performance; (Core)

V.C.2.b) faculty development; and, (Core)

V.C.2.c) 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

_Fellowship 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 fellows today**

- **Excellence in the safety and quality of care rendered to patients by today’s fellows 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/fellows, 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 fellows 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 fellows 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.

Fellows 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 fellows will apply these skills to critique their future unsupervised practice and effect quality improvement measures.

It is necessary for fellows 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)**

Fellows 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)**

**Fellow 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 fellows to develop and apply.*

**VI.A.1.a).(4).(a)**

All fellows must receive training in how to disclose adverse events to patients and families. (Core)
VI.A.1.a).(4).(b) Fellows 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) Fellows 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) Fellows and faculty members must receive data on quality metrics and benchmarks related to their patient populations. (Core)

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) Fellows 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 fellow’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)

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

VI.A.2.a).(1).(b) Fellows 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 fellow. Other portions of care provided by the fellow can be adequately supervised by the immediate availability of the supervising faculty member or fellow 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 fellow-delivered care with feedback.

VI.A.2.b).(1) The program must demonstrate that the appropriate level of supervision in place for all fellows is based on each fellow’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 fellow 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 fellow 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 the hospital or other site of patient care, and is immediately available to provide Direct Supervision. (Core)

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 fellow must be assigned by the program director and faculty members. (Core)

VI.A.2.d).(1) The program director must evaluate each fellow’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 fellows based on the needs of the patient and the skills of each fellow. (Core)

VI.A.2.d).(3) Fellows should serve in a supervisory role to residents or junior fellows 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 fellows must communicate with the supervising faculty member(s). (Core)

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

VI.A.2.f) Faculty supervision assignments must be of sufficient duration to assess the knowledge and skills of each fellow and to delegate to the fellow 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 fellows 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 fellows 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. Fellows 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:

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 fellows 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/fellows, faculty, and staff. Programs, in partnership with their Sponsoring Institutions, should have a process for education of fellows 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, fellows 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 fellowship training. Programs, in partnership with their Sponsoring Institutions, have the same responsibility to address well-being as they do to evaluate other aspects of fellow competence.

VI.C.1. This responsibility must include:

VI.C.1.a) efforts to enhance the meaning that each fellow 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 fellow well-being; (Core)

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

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

VI.C.1.d).(1) Fellows 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 fellow and faculty member burnout, depression, and substance abuse. The program, in partnership with its Sponsoring Institution, must educate faculty members and fellows in identification of the symptoms of burnout, depression, and substance abuse, including means to assist
those who experience these conditions. Fellows 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 fellows 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 fellows 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 fellow may be unable to perform their patient care responsibilities. These policies must be implemented without fear of negative consequences for the fellow 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 fellows to recognize the signs of fatigue and sleep deprivation; (Core)

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

VI.D.1.c) encourage fellows 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 fellow 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 fellows 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 fellow must be based on PGY level, patient safety, fellow ability, severity and complexity of patient illness/condition, and available support services. (Core)

VI.E.2. Teamwork

Fellows 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.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)

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 fellows 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 fellows 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 fellow 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 fellows 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 fellows with educational opportunities, as well as reasonable opportunities for rest and personal well-being. (Core)

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

VI.F.2.b).(1) There may be circumstances when fellows 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)

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

VI.F.2.d) Fellows 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 fellows 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 fellow education. (Core)

VI.F.3.a).(1).(a) Additional patient care responsibilities must not be assigned to a fellow 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 fellow, 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 Committees for Emergency Medicine and Preventive Medicine will not consider requests for exceptions to the 80-hour limit to the 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 fellow to achieve the goals and objectives of the educational program, and must not interfere with the fellow’s fitness for work nor compromise patient safety. (Core)

VI.F.5.b) Time spent by fellows 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.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.7. Maximum In-House On-Call Frequency
Fellows 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 fellows 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 fellow. *(Core)***

**VI.F.8.b) Fellows 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](http://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/Osteopathic_Recognition_Requirements.pdf))