

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

One-year Common Program Requirements are in **BOLD**

Effective: February, 2002

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. A program in undersea and hyperbaric medicine must provide a broad educational experience and a sound basis for the development of physician practitioners, educators, researchers, and administrators capable of practicing in academic and clinical settings.

Int.B.2. Training in undersea and hyperbaric medicine 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. It is expected that the fellow will develop a satisfactory level of clinical maturity, judgment, and technical skill that will, on completion of the program, render the fellow capable of independent practice in undersea and hyperbaric medicine.

Int.B.3. Programs must offer a broad education in undersea and hyperbaric medicine to prepare the fellow to function as a specialist capable of providing comprehensive patient care.

Int.C. Duration and Scope of Education

The length of the educational program shall consist of 12 months. The program must be associated with an Accreditation Council for Graduate Medical Education (ACGME)-accredited residency program in emergency medicine or preventive medicine.

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.

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.

I.A.1. It is highly desirable that the program structure include the participation of a medical school.

I.A.2. The program should be based at a primary hospital (hereafter referred to as the primary clinical site). More of the didactic and clinical experiences should take place at the primary clinical site than at any other single site. Educationally justified exceptions to this requirement will be considered.

I.A.3. The following services must be organized and provided at the primary clinical site:

I.A.3.a) 24-hour availability of hyperbaric medicine services with at least 100 consultations and 1000 patient treatments per year;

I.A.3.b) an emergency service for both adult and pediatric patients, adult and pediatric inpatient facilities, and adult and pediatric surgical and intensive care facilities; and,

I.A.3.c) inpatient and outpatient facilities with staff members who consult the hyperbaric medicine service.

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.

The PLA should:

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

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

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

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

I.B.1.e) state the educational objectives and the method to accomplish and to evaluate each objective;

I.B.1.f) specify the resources and facilities in the institution(s) that will be available to each fellow including but not limited to library resources;

I.B.1.g) define a fellow's duties, responsibilities, and duty hours for each assignment; and,

I.B.1.h) define the relationship that will exist between undersea and hyperbaric medicine fellows and the faculty in other programs.

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. All participating sites must provide appropriate support services to ensure an adequate educational experience. This includes support personnel and physical resources to ensure that fellows have sufficient time and space to carry out their clinical and educational functions.

I.B.4. The program must develop an institutional affiliation with a clinical facility to provide fellows with clinical experience in critical care areas should this experience not be provided at the sponsoring institution.

I.B.5. Approval of participating sites will be based on the presence of sufficient opportunities for fellows to manage as appropriate either as primary

physicians or consultants, the entire course of therapy including for critically-ill patients in both adult and pediatric categories.

- I.B.6. Programs using multiple participating sites must ensure the provision of a unified educational experience for the fellows. Each participating site must offer significant educational opportunities to the overall program that do not duplicate experiences otherwise available within the program. An acceptable educational rationale must be provided for each participating site.
- I.B.7. Participating sites must not be geographically distant from the sponsoring institution unless special resources are provided that are not available at the primary clinical site.
- I.B.8. The number and geographic distribution of participating sites must not preclude all fellows' participation in conferences and other educational exercises.
- I.B.9. Participation by any institution that provides three months or more of education in a program must be approved by the Review Committee.

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. After approval, the program director must submit this change to the ACGME via the ADS.

II.A.1.a) The program director, together with the faculty, is responsible for activities related to the recruitment, selection, instruction, supervision, counseling, evaluation, and advancement of fellows and the maintenance of records related to program accreditation.

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 or the American Board of Preventive Medicine, or specialty qualifications that are acceptable to the Review Committee; and,

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

II.A.2.c).(1) The program director must have licensure to practice

medicine in the state where the institution that sponsors the program is located. (Certain federal programs are exempted.)

- 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. The program director must:**
- II.A.3.a) prepare and submit all information required and requested by the ACGME;**
 - 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;**
 - II.A.3.c) obtain review and approval of the sponsoring institution's GMEC/DIO before submitting to the ACGME information or requests for the following:**
 - II.A.3.c).(1) all applications for ACGME accreditation of new programs;**
 - II.A.3.c).(2) changes in fellow complement;**
 - II.A.3.c).(3) major changes in program structure or length of training;**
 - II.A.3.c).(4) progress reports requested by the Review Committee;**
 - II.A.3.c).(5) responses to all proposed adverse actions;**
 - II.A.3.c).(6) requests for increases or any change to fellow duty hours;**
 - II.A.3.c).(7) voluntary withdrawals of ACGME-accredited programs;**
 - II.A.3.c).(8) requests for appeal of an adverse action; and,**
 - II.A.3.c).(9) appeal presentations to a Board of Appeal or the ACGME.**
 - II.A.3.d) obtain DIO review and co-signature on all program information forms, as well as any correspondence or document submitted to the ACGME that addresses:**
 - II.A.3.d).(1) program citations, and/or**
 - II.A.3.d).(2) request for changes in the program that would have significant impact, including financial, on the program or institution.**

- II.A.3.e) prepare a written statement outlining the educational goals of the program with respect to knowledge, skills, and other attributes of fellows for each major rotation or other program assignment;
- II.A.3.e).(1) This statement must be distributed to fellows and faculty.
- II.A.3.e).(2) This statement should be readily available for review.
- II.A.3.f) select fellows for appointment to the program in accordance with institutional and departmental policies and procedures;
- II.A.3.g) select and supervise the faculty and other program personnel at each institution participating in the program;
- II.A.3.h) supervise fellows through explicit written descriptions of supervisory lines of responsibility for the care of patients;
- II.A.3.h).(1) Such guidelines must be communicated to all members of the program staff.
- II.A.3.i) regularly evaluate fellows' knowledge, skills, and overall performance, including the development of professional attitudes consistent with being a physician;
- II.A.3.j) implement fair procedures, as established by the sponsoring institution, regarding academic discipline and fellow complaints or grievances;
- II.A.3.k) monitor fellow stress, including mental or emotional conditions inhibiting performance or learning and drug- or alcohol-related dysfunction; and,
- II.A.3.k).(1) Program directors and faculty should be sensitive to the need for timely provision of confidential counseling and psychological support services to fellows.
- II.A.3.k).(2) Situations that consistently produce undesirable stress on fellows must be evaluated and modified.
- II.A.3.l) notify each prospective fellow in writing, prior to entry into the program, of the required length of the program.
- II.A.4. The program director, with participation of the faculty, shall
 - II.A.4.a) at least quarterly evaluate the knowledge, skills, and professional growth of the fellows, using appropriate criteria and procedures;
 - II.A.4.b) communicate each evaluation to the fellow in a timely manner;
 - II.A.4.c) advance fellows to positions of higher responsibility only on the

basis of evidence of their satisfactory progressive scholarship and professional growth;

- II.A.4.d) maintain a permanent record of evaluation for each fellow and have it accessible to the fellow and other authorized personnel; and,
- II.A.4.e) provide a written final evaluation for each fellow who completes the program.
- II.A.4.e).(1) The evaluation must include a review of the fellow's performance during the final period of training and should verify that the fellow has demonstrated sufficient professional ability to practice competently and independently.
- II.A.4.e).(2) This final evaluation should be part of the fellow's permanent record maintained by the institution.

II.B. Faculty

- II.B.1. There must be a sufficient number of faculty with documented qualifications to instruct and supervise all fellows.**
- 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.**
- II.B.3. The physician faculty must have current certification in the subspecialty by the American Board of Emergency Medicine or the American Board of Preventive Medicine, or possess qualifications acceptable to the Review Committee.**
- II.B.4. The physician faculty must possess current medical licensure and appropriate medical staff appointment.**
- 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.
- 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 each program. *Scholarship* is defined as the following:
 - II.B.6.a) the scholarship of *discovery*, as evidenced by peer-reviewed funding or by publication of original research in a peer-reviewed journal;
 - II.B.6.b) the scholarship of *dissemination*, as evidenced by review articles or chapters in textbooks; and,

- II.B.6.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.
- II.B.7. While not all of the faculty members must be investigators, the faculty as a whole must demonstrate broad involvement in scholarly activity.
- 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 (e.g., the offering of guidance and technical support for fellows involved in research such as research design and statistical analysis); and the provision of support for fellows' participation, as appropriate, in scholarly activities.
- II.B.9. A member of the faculty of each participating site must be designated to assume responsibility for the day-to-day activities of the program at that institution, with overall coordination by the program director.
- II.B.10. Consultants from appropriate medical subspecialties should be available for consultation and didactic teaching including those with experience and understanding of such fields of medicine as preventive medicine, infectious disease, orthopaedic surgery, vascular surgery, plastic surgery, anesthesiology, critical care, emergency medicine, ophthalmology, rehabilitative medicine and other disciplines as they pertain to the comprehensive treatment of the clinical hyperbaric patient.

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.

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.

- II.D.1. Space and equipment
- Adequate space must be available for faculty to perform their educational, research and administrative functions.
- II.D.1.a) A library containing hyperbaric texts and journals must be readily available.
- II.D.1.b) Adequate conference and teaching space must be available for didactic and case conferences.

- II.D.2. Inpatient, Ambulatory Care, Laboratory, and Other Clinical Facilities
- II.D.2.a) A hyperbaric chamber must be available that is capable of treatment of the full range of conditions amenable to hyperbaric oxygen therapy.
- II.D.2.b) A full-service clinical laboratory must be available at all times that is capable of measurement of chemistry, blood indices, and microbiology of patients needing hyperbaric therapy.
- II.D.2.c) Radiologic services must be available within the institution at all times.
- II.D.2.d) Inpatient and outpatient facilities including intensive care units capable of addressing the needs of patients with respiratory poisons, gas forming infections, wound healing problems, gas embolism and other conditions requiring hyperbaric treatment must be available.
- II.D.3. Patient Population
- II.D.3.a) There must be a sufficient number of patients of all ages and both sexes with medical and surgical conditions requiring hyperbaric therapy.
- II.D.3.b) Patients with necrotizing infections, carbon monoxide and cyanide poisoning, diving problems, gas embolism and osteomyelitis must be present in the patient population.
- II.D.4. Support Services
- Support services must include physical therapy, social services, occupational medicine, psychologic and psychological testing services.

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.

III. Fellow Appointments

III.A. Eligibility Criteria

Each fellow must successfully complete an ACGME-accredited specialty program and/or meet other eligibility criteria as specified by the Review Committee. The program must document that each fellow has met the eligibility criteria.

- III.A.1. Prerequisite training for entry to an undersea and hyperbaric medicine program is contingent upon completion of an ACGME-accredited

residency program involving a minimum of 12 months of preventive, primary, surgical, and/or critical care training.

III.B. Number of Fellows

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

III.B.1. The Review Committee will approve the number of fellows in the program. Approval will be based on the number, qualifications, and scholarly activity of the faculty; the volume and variety of the patient population available for education purposes; and the institutional resources available to the program.

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 annually, in either written or electronic form. These skills and competencies should be reviewed by the fellow at the start of each rotation;

IV.A.1.a) The program director and teaching faculty members must prepare and comply with written educational goals for the program. All educational components should be related to the program goals. Clinical, basic science, and research conferences as well as seminars and critical literature review activities pertaining to the subspecialty must be conducted regularly and as scheduled.

IV.A.2. ACGME Competencies

The program must integrate the following ACGME competencies into the curriculum:

IV.A.2.a) Patient Care

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.

IV.A.2.a).(1) Competencies that will be attained at the end of the 12 month training period must include:

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

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

- hyperbaric chamber;
- IV.A.2.a).(1).(c) assessment of patients with suspected decompression sickness or iatrogenic gas embolism and prescription of treatment;
- 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;
- IV.A.2.a).(1).(e) assessment and management of patients with complications of hyperbaric therapy;
- IV.A.2.a).(1).(f) management of critically-ill patients in the hyperbaric environment; and,
- IV.A.2.a).(1).(g) assessment of patients with toxic gas exposure (e.g., carbon monoxide).

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.

- IV.A.2.b).(1) Competencies that will be attained at the end of the 12 month training period must include knowledge of the indications for hyperbaric oxygen therapy.

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,**
- IV.A.2.c).(2) **locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.**

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.

IV.A.2.e)

Professionalism

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

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.

IV.A.3.

Curriculum Organization and Fellow Experiences

The curriculum must include the following academic and clinical content:

IV.A.3.a)

history of undersea and hyperbaric medicine;

IV.A.3.b)

decompression theory and physiology, including theory and application of decompression tables;

IV.A.3.c)

oxygen physiology in normobaric, hyperbaric and hypobaric environments, and oxygen toxicity;

IV.A.3.d)

pathophysiology of decompression illness and arterial gas embolism, including iatrogenic gas embolism;

IV.A.3.e)

diving operations and human performance in the hyperbaric and hypobaric environments;

IV.A.3.f)

medical examination and standards for divers and personnel working in hyperbaric and hypobaric environments;

IV.A.3.g)

effects of hyperbaric oxygenation on infectious disease;

IV.A.3.h)

principles of treatment of toxic gas exposures, such as carbon monoxide poisoning;

IV.A.3.i)

effects of hyperbaric oxygenation on irradiated tissues and ischemic wounds;

IV.A.3.j)

tissue oxygen measurement;

IV.A.3.k)

multiplace and monoplace hyperbaric chamber operations, including safety considerations, management of critically-ill patients in the hyperbaric environment, clinical monitoring, and mechanical ventilation;

IV.A.3.l)

evaluation of the patient for clinical hyperbaric treatment, including contraindications and side effects;

- IV.A.3.m) hazards of standard electrical therapies in hyperbaric environment, including electrical defibrillation and precautions;
- IV.A.3.n) emergency procedures for both monoplace and multiplace installations;
- IV.A.3.o) 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,
- IV.A.3.p) systems management, including administrative aspects of chamber operations, such as billing issues, quality assurance, and peer review.
- IV.A.4. Fellows must have a minimum of 10 months of clinical experience as the primary or consulting physician responsible for providing direct/bedside patient evaluation and management. A maximum of two elective months can be offered in appropriate related areas.
- IV.A.5. Fellows must have opportunities to evaluate and manage patients with both acute and non-emergency indications for hyperbaric oxygen therapy.
- IV.A.5.a) Each fellow should have the opportunity to evaluate and manage 100 or more patients, including responsibility for providing bedside evaluation and management.
- IV.A.5.b) This experience should be organized for a minimum of 10 months or its full-time equivalent and cover IV.A.3.a)-h). Up to two months of elective time may be allowed for additional training in areas of relevance to undersea and hyperbaric medicine, such as critical care, surgery, submarine medicine, toxicology or radiation oncology.
- IV.A.6. 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.
- IV.A.6.a) These educational experiences should include presentations based on the defined curriculum, morbidity and mortality conferences, journal review, administrative seminars, and research methods. They may include but are not limited to problem-based learning, laboratory research, and computer-based instruction, as well as joint conferences cosponsored with other disciplines.
- IV.A.7. The program should provide the opportunity for the fellows to maintain their primary specialty skills during training, but it may not require that fellows provide more than 12 hours per week of clinical practice not related to hyperbaric medicine as a condition of the educational program.

IV.A.8. 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, fellows and nurses.

IV.A.9. Fellows should participate in the formal didactic teaching program.

IV.B. Fellows' Scholarly Activities

Research leading to publication should be encouraged.

V. Evaluation

V.A. Fellow Evaluation

V.A.1. Formative Evaluation

V.A.1.a) The faculty must evaluate fellow performance in a timely manner.

V.A.1.b) The program must:

V.A.1.b).(1) provide objective assessments of competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice;

V.A.1.b).(2) use multiple evaluators (e.g., faculty, peers, patients, self, and other professional staff); and,

V.A.1.b).(3) provide each fellow with documented semiannual evaluation of performance with feedback.

V.A.1.c) The evaluations of fellow performance must be accessible for review by the fellow, in accordance with institutional policy.

V.A.2. Summative Evaluation

V.A.3. The program director must provide a summative evaluation for each fellow upon completion of the program. This evaluation must 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. This evaluation must:

V.A.3.a) document the fellow's performance during their education, and

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

V.B. Faculty Evaluation

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

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.

V.C. Program Evaluation and Improvement

V.C.1. The program must document formal, systematic evaluation of the curriculum at least annually. The program must monitor and track each of the following areas:

V.C.1.a) fellow performance, and

V.C.1.b) faculty development.

V.C.2. If deficiencies are found, the program should prepare a written plan of action to document initiatives to improve performance in the areas listed in section V.C.1. The action plan should be reviewed and approved by the teaching faculty and documented in meeting minutes.

VI. Fellow Duty Hours in the Learning and Working Environment

VI.A. Professionalism, Personal Responsibility, and Patient Safety

VI.A.1. Programs and sponsoring institutions must educate fellows and faculty members concerning the professional responsibilities of physicians to appear for duty appropriately rested and fit to provide the services required by their patients.

VI.A.2. The program must be committed to and responsible for promoting patient safety and fellow well-being in a supportive educational environment.

VI.A.3. The program director must ensure that fellows are integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs.

VI.A.4. The learning objectives of the program must:

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

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

VI.A.5. The program director and sponsoring institution must ensure a culture of professionalism that supports patient safety and personal responsibility. Fellows and faculty members must demonstrate an understanding and acceptance of their personal role in the following:

VI.A.5.a) assurance of the safety and welfare of patients entrusted to their care;

VI.A.5.b) provision of patient- and family-centered care;

VI.A.5.c) assurance of their fitness for duty;

VI.A.5.d) management of their time before, during, and after clinical assignments;

VI.A.5.e) recognition of impairment, including illness and fatigue, in themselves and in their peers;

VI.A.5.f) attention to lifelong learning;

VI.A.5.g) the monitoring of their patient care performance improvement indicators; and,

VI.A.5.h) honest and accurate reporting of duty hours, patient outcomes, and clinical experience data.

VI.A.6. All fellows and faculty members must demonstrate responsiveness to patient needs that supersedes self-interest. Physicians must recognize that under certain circumstances, the best interests of the patient may be served by transitioning that patient's care to another qualified and rested provider.

VI.B. Transitions of Care

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

VI.B.2. Sponsoring institutions and programs must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety.

VI.B.3. Programs must ensure that fellows are competent in communicating with team members in the hand-over process.

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

VI.C. Alertness Management/Fatigue Mitigation

- VI.C.1. The program must:**
- VI.C.1.a) educate all faculty members and fellows to recognize the signs of fatigue and sleep deprivation;**
 - VI.C.1.b) educate all faculty members and fellows in alertness management and fatigue mitigation processes; and,**
 - VI.C.1.c) adopt fatigue mitigation processes to manage the potential negative effects of fatigue on patient care and learning, such as naps or back-up call schedules.**

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

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

VI.D. Supervision of Fellows

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

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

VI.D.1.b) Fellows and faculty members should inform patients of their respective roles in each patient's care.

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

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

VI.D.3. Levels of Supervision

To ensure oversight of fellow supervision and graded authority and

responsibility, the program must use the following classification of supervision:

- VI.D.3.a) **Direct Supervision – the supervising physician is physically present with the fellow and patient.**
- VI.D.3.b) **Indirect Supervision:**
 - VI.D.3.b).(1) **with direct supervision immediately available – the supervising physician is physically within the hospital or other site of patient care, and is immediately available to provide Direct Supervision.**
 - VI.D.3.b).(2) **with direct supervision available – the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide Direct Supervision.**
- VI.D.3.c) **Oversight – the supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.**
- VI.D.4. **The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each fellow must be assigned by the program director and faculty members.**
 - VI.D.4.a) **The program director must evaluate each fellow’s abilities based on specific criteria. When available, evaluation should be guided by specific national standards-based criteria.**
 - VI.D.4.b) **Faculty members functioning as supervising physicians should delegate portions of care to fellows, based on the needs of the patient and the skills of the fellows.**
 - VI.D.4.c) **Fellows should serve in a supervisory role of residents or junior fellows in recognition of their progress toward independence, based on the needs of each patient and the skills of the individual fellow.**
- VI.D.5. **Programs must set guidelines for circumstances and events in which fellows must communicate with appropriate supervising faculty members, such as the transfer of a patient to an intensive care unit, or end-of-life decisions.**
 - VI.D.5.a) **Each fellow must know the limits of his/her scope of authority, and the circumstances under which he/she is permitted to act with conditional independence.**

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

VI.E. Clinical Responsibilities

The clinical responsibilities for each fellow must be based on PGY-level, patient safety, fellow education, severity and complexity of patient illness/condition and available support services.

VI.F. Teamwork

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

VI.G. Fellow Duty Hours

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

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

VI.G.1.a) Duty Hour Exceptions

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

VI.G.1.a).(1) In preparing a request for an exception the program director must follow the duty hour exception policy from the ACGME Manual on Policies and Procedures.

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

VI.G.2. Moonlighting

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

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

VI.G.3. Mandatory Time Free of Duty

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

VI.G.4. Maximum Duty Period Length

Duty periods of fellows may be scheduled to a maximum of 24 hours of continuous duty in the hospital. Programs must encourage fellows to use alertness management strategies in the context of patient care responsibilities. Strategic napping, especially after 16 hours of continuous duty and between the hours of 10:00 p.m. and 8:00 a.m., is strongly suggested.

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

VI.G.4.b) Fellows must not be assigned additional clinical responsibilities after 24 hours of continuous in-house duty.

VI.G.4.c) In unusual circumstances, fellows, on their own initiative, may remain beyond their scheduled period of duty to continue to provide care to a single patient. Justifications for such extensions of duty are limited to reasons of required continuity for a severely ill or unstable patient, academic importance of the events transpiring, or humanistic attention to the needs of a patient or family.

VI.G.4.c).(1) Under those circumstances, the fellow must:

VI.G.4.c).(1).(a) appropriately hand over the care of all other patients to the team responsible for their continuing care; and,

VI.G.4.c).(1).(b) document the reasons for remaining to care for the patient in question and submit that documentation in every circumstance to the program director.

VI.G.4.c).(2) The program director must review each submission of additional service, and track both individual fellow and program-wide episodes of additional duty.

VI.G.5. Minimum Time Off between Scheduled Duty Periods

VI.G.5.a) Fellows must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods.

Undersea and hyperbaric medicine fellows are considered to be in the final years of education.

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

VI.G.5.a).(1).(a) Circumstances of return-to-hospital activities with fewer than eight hours away from the hospital by fellows must be monitored by the program director.

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

Fellows must not be scheduled for more than six consecutive nights of night float.

VI.G.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).

VI.G.8. At-Home Call

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

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

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

ACGME Approved: 2/2002 Effective: 2/2002
Editorial Revision: July 1, 2009
Revised Common Program Requirements Effective: July 1, 2011