

# ACGME Program Requirements for Graduate Medical Education in Medical Biochemical Genetics

*Common Program Requirements are in BOLD*

*Effective: July 1, 2007*

## Introduction

### Int.A. Description of the Specialty

- Int.A.1. Medical biochemical geneticists are physicians who provide comprehensive diagnostic, management, and genetic counseling services for patients with inborn errors of metabolism. They focus on the treatment of genetic disorders of intermediary metabolism, lysosomal storage diseases, disorders of energy metabolism, and related disorders.
- Int.A.2. Medical biochemical geneticists are able to:
- Int.A.2.a) diagnose and provide acute management of inborn errors of metabolism;
  - Int.A.2.b) provide long term management, including nutritional recommendations for chronic management of inborn errors of metabolism;
  - Int.A.2.c) provide genetic counseling, including assessment of mode of inheritance, recurrence risk, and information about natural history of disease;
  - Int.A.2.d) use their knowledge of heterogeneity, variability and natural history of inborn errors of metabolism in patient-care decision making;
  - Int.A.2.e) elicit and interpret individual and family medical histories;
  - Int.A.2.f) order and interpret specialized laboratory testing; and,
  - Int.A.2.g) interact with other health-care professionals, especially nutritionists, in the provision of services for patients with genetic disorders of intermediary metabolism.

### Int.B. Scope of Education

- Int.B.1. Accredited graduate medical education programs in medical biochemical genetics must provide the formal instruction and appropriate clinical experience necessary for fellows to develop the knowledge, skills, and attitudes essential to good clinical practice in the acute and chronic care of inborn errors of metabolism.
- Int.B.2. Programs must provide:
- Int.B.2.a) structured education, including formal coursework in the basic sciences and clinical areas pertinent to biochemical genetics, including advanced approaches to the diagnosis and treatment of inborn errors of

metabolism, long term nutritional management, molecular diagnosis, theory and practice of enzyme replacement therapy, and newborn screening;

Int.B.2.b) mentored clinical training in the practice of biochemical genetics in both outpatient and inpatient settings;

Int.B.2.c) advanced instruction in the interpretation of biochemical laboratory test results;

Int.B.2.d) basic instruction in medical biochemical genetic laboratory testing; and,

Int.B.2.e) basic instruction in clinical research.

Int.B.3. The program must possess a well-organized and effective curriculum, both didactic and clinical. The curriculum must also provide fellows with direct experience in progressive responsibility for patient management. The fellowship must be organized to provide a well-structured, integrated and progressive educational experience in medical biochemical genetics. The fellows must have the opportunity to develop the abilities to diagnose IEM, counsel patients, and manage the broad range of clinical problems that are encompassed by biochemical genetics. As biochemical genetics increasingly involves diagnosis and/or long term management of adults, fellows must be competent to work with patients of all ages.

#### Int.C. Program Length

Int.C.1. Medical biochemical genetics residencies are accredited to provide one year of graduate medical education. Physicians who have completed a residency in Medical Genetics accredited by the Accreditation Council for Graduate Medical Education (ACGME) are eligible for appointment to a one -year biochemical genetics fellowship.

Int.C.2. In the one year program, the 12 months of biochemical genetics education must include 11 months of broad-based, clinically-oriented biochemical genetics activities and one month of activities in a medical biochemical genetics diagnostic laboratory.

### 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. Institutions sponsoring medical biochemical genetics programs should also sponsor ACGME-accredited programs in medical genetics, pediatrics and internal medicine.

## **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; and,**

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

**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).**

## **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) Sponsoring institutions must develop and implement policies and procedures to ensure continuity when the program director departs, is on sabbatical, or is unable to meet his or her duties for any other reason.**

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

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

- II.A.3.a) requisite specialty expertise and documented educational and administrative experience acceptable to the Review Committee;**
- II.A.3.b) current certification in clinical biochemical genetics by the American Board of Medical Genetics, or specialty qualifications that are judged to be acceptable by the Review Committee; and,**
- II.A.3.c) current medical licensure and appropriate medical staff appointment.**
- II.A.4. 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.4.a) oversee and ensure the quality of didactic and clinical education in all sites that participate in the program;**
  - II.A.4.b) approve a local director at each participating site who is accountable for fellow education;**
  - II.A.4.c) approve the selection of program faculty as appropriate;**
  - II.A.4.d) evaluate program faculty and approve the continued participation of program faculty based on evaluation;**
  - II.A.4.e) monitor fellow supervision at all participating sites;**
  - II.A.4.f) prepare and submit all information required and requested by the ACGME, including but not limited to the program information forms and annual program fellow updates to the ADS, and ensure that the information submitted is accurate and complete;**
  - II.A.4.g) provide each fellow with documented semiannual evaluation of performance with feedback;**
  - II.A.4.h) ensure compliance with grievance and due process procedures as set forth in the Institutional Requirements and implemented by the sponsoring institution;**
  - II.A.4.i) provide verification of residency education for all fellows, including those who leave the program prior to completion;**
  - II.A.4.j) implement policies and procedures consistent with the institutional and program requirements for fellow duty hours and the working environment, including moonlighting, and, to that end, must:**

- II.A.4.j).(1)** distribute these policies and procedures to the fellows and faculty;
- II.A.4.j).(2)** monitor fellow duty hours, according to sponsoring institutional policies, with a frequency sufficient to ensure compliance with ACGME requirements
- II.A.4.j).(3)** adjust schedules as necessary to mitigate excessive service demands and/or fatigue; and,
- II.A.4.j).(4)** if applicable, monitor the demands of at-home call and adjust schedules as necessary to mitigate excessive service demands and/or fatigue.
- II.A.4.k)** monitor the need for and ensure the provision of back up support systems when patient care responsibilities are unusually difficult or prolonged;
- II.A.4.l)** comply with the sponsoring institution's written policies and procedures, including those specified in the Institutional Requirements, for selection, evaluation and promotion of fellows, disciplinary action, and supervision of fellows.
- II.A.4.m)** be familiar with and comply with ACGME and Review Committee policies and procedures as outlined in the ACGME Manual of Policies and Procedures;
- II.A.4.n)** obtain review and approval of the sponsoring institution's GMCC/DIO before submitting to the ACGME information or requests for the following:
  - II.A.4.n).(1)** all applications for ACGME accreditation of new programs;
  - II.A.4.n).(2)** changes in fellow complement;
  - II.A.4.n).(3)** major changes in program structure or length of training;
  - II.A.4.n).(4)** progress reports requested by the Review Committee;
  - II.A.4.n).(5)** responses to all proposed adverse actions;
  - II.A.4.n).(6)** requests for increases or any change to fellow duty hours;
  - II.A.4.n).(7)** voluntary withdrawals of ACGME-accredited programs;
  - II.A.4.n).(8)** requests for appeal of an adverse action;

- II.A.4.n).(9) **appeal presentations to a Board of Appeal or the ACGME; and,**
- II.A.4.n).(10) **proposals to ACGME for approval of innovative educational approaches.**
- II.A.4.o) **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.4.o).(1) **program citations; and,**
- II.A.4.o).(2) **request for changes in the program that would have significant impact, including financial, on the program or institution.**
- II.A.4.p) along with the faculty, organize clinical teaching conferences for the fellows. Attendance by the fellows and the faculty must be documented. These conferences must be distinct from the basic science lectures and didactic sessions. Clinical teaching conferences may include formal didactic sessions on clinical laboratory topics, medical genetics rounds, journal clubs, and follow-up conferences for metabolic clinics.

## **II.B. Faculty**

- II.B.1. **At each participating site, there must be a sufficient number of faculty with documented qualifications to instruct and supervise all fellows at that location.**
- The faculty must:**
- II.B.1.a) **devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities; and to demonstrate a strong interest in the education of fellows, and**
- II.B.1.b) **administer and maintain an educational environment conducive to educating fellows in each of the ACGME competency areas.**
- II.B.2. **The physician faculty must have current certification in the specialty by the American Board of Medical Genetics, or possess qualifications judged to be acceptable by the Review Committee.**
- II.B.3. **The physician faculty must possess current medical licensure and appropriate medical staff appointment.**
- II.B.4. **The nonphysician faculty must have appropriate qualifications in their field and hold appropriate institutional appointments.**

**II.B.5. The faculty must establish and maintain an environment of inquiry and scholarship with an active research component.**

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

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

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

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

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

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

**II.B.5.c) Faculty should encourage and support fellows in scholarly activities.**

## **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.C.1. Fellows must have regular opportunities to work with nurses and nutritionists who are involved in the provision of clinical metabolic disease services.**

## **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. Participating sites should have a medical biochemical genetics laboratory which provides an appropriate volume and variety of biochemical genetics-related services and has an adequate number of qualified staff. This staff should include a laboratory director certified in Biochemical Genetics by the American Board of Medical Genetics.**

**II.D.2. Participating sites must provide a sufficient number and variety of inpatients and outpatients to permit fellows to gain experience with the presentation, natural history, and chronic treatment of a wide range of inborn errors of metabolism.**

- II.D.3. Adequate space and equipment must be available to meet the educational goals of the program. In addition to space for patient care activities, this requires meeting rooms, classrooms, office space, research facilities, and facilities for record storage and retrieval.
- II.D.4. Office and laboratory space must be provided for the fellows for both patient-care work and participation in scholarly activities.
- II.D.5. Fellows must have the opportunity to care for a number of patients sufficient to permit them to develop an understanding of the wide variety of inborn errors of metabolism. These patients must be seen in both outpatient and inpatient settings.

## **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**

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

### **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. Programs must develop an active plan for recruitment of fellows. Innovative strategies for recruitment and retention of fellows should be implemented.

### **III.C. Fellow Transfers**

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

- III.C.2. **A program director must provide timely verification of residency education and summative performance evaluations for fellows who leave the program prior to completion.**

### **III.D. Appointment of Fellows and Other Learners**

**The presence of other learners (including, but not limited to, fellows from other specialties, subspecialty fellows, PhD students, and nurse practitioners) in the program must not interfere with the appointed fellows' education. The program director must report the presence of other learners to the DIO and GMEC in accordance with sponsoring institution guidelines.**

### **IV. Educational Program**

#### **IV.A. The curriculum must contain the following educational components:**

**IV.A.1. Overall educational goals for the program, which the program must distribute to fellows and faculty annually;**

**IV.A.2. Competency-based goals and objectives for each assignment at each educational level, which the program must distribute to fellows and faculty annually, in either written or electronic form. These should be reviewed by the fellow at the start of each rotation;**

**IV.A.3. Regularly scheduled didactic sessions; and,**

**IV.A.4. Delineation of fellow responsibilities for patient care, progressive responsibility for patient management, and supervision of fellows over the continuum of the program.**

#### **IV.A.5. ACGME Competencies**

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

##### **IV.A.5.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. Fellows:**

**IV.A.5.a).(1) will gather essential and accurate information about the patient using the following clinical skills:**

**IV.A.5.a).(1).(a) medical interviewing, including the taking and interpretation of a complete family history (including construction of a pedigree);**

**IV.A.5.a).(1).(b) physical examination; and,**

**IV.A.5.a).(1).(c) diagnostic studies, including the interpretation of laboratory data generated from biochemical and molecular genetic analyses.**

- IV.A.5.a).(2) will make informed decisions about diagnostic and therapeutic interventions based on patient and family information and preferences, up-to-date scientific evidence, and clinical judgment by:
- IV.A.5.a).(2).(a) demonstrating effective and appropriate clinical problem-solving skills;
- IV.A.5.a).(2).(b) understanding the limits of one's knowledge and expertise; and,
- IV.A.5.a).(2).(c) appropriate use of consultants and referrals.
- IV.A.5.a).(3) are to develop and carry out patient management plans including description of medication, dietary supplements, and other dietary plans;
- IV.A.5.a).(4) are to counsel and educate patients and their families;
- IV.A.5.a).(5) are to work with health care professionals, including those from other disciplines and especially a medical nutritionist, to provide patient-focused care; and,
- IV.A.5.a).(6) are to be given properly supervised responsibility for patient care commensurate with the fellow's ability to develop mature clinical judgment. This can be achieved only if the fellow is involved in the decision-making process and in the continuity of patient care. Fellows must be given the responsibility for direct patient care in all settings, including planning and management, both diagnostic and therapeutic, subject to review and approval by the attending physician.

**IV.A.5.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:**

- IV.A.5.b).(1) are expected to learn the following about inborn errors of metabolism (IEM):
- IV.A.5.b).(1).(a) the genetic basis of disease and their patterns of inheritance;
- IV.A.5.b).(1).(b) the principles of diagnosis based on appropriate use of clinical laboratory testing;
- IV.A.5.b).(1).(c) the molecular and metabolic mechanisms of disease;

- IV.A.5.b).(1).(d) the rational principles of treatment based on knowledge of the mechanisms of disease:
- IV.A.5.b).(1).(d).(i) management of acute metabolic crises;
- IV.A.5.b).(1).(d).(ii) long term care with emphasis on reduction of metabolic injury and nutritional imbalances; and,
- IV.A.5.b).(1).(d).(iii) enzyme replacement and organ transplant therapies.
- IV.A.5.b).(1).(e) the genetic epidemiology of inborn errors of metabolism and the application of that knowledge to newborn screening;
- IV.A.5.b).(1).(f) principles of operation in clinical biochemical genetics diagnostic laboratories; and,
- IV.A.5.b).(1).(g) the limits of current knowledge about IEM and the general strategies for biomedical research on these disorders.
- IV.A.5.b).(2) will participate formally, through lectures or other didactic sessions, in the equivalent of a one-semester graduate level course in biochemical genetics, including but not limited to population and newborn screening, disorders of amino acid metabolism, disorders of fatty acid oxidation, mitochondrial disorders, lysosomal storage diseases and lipidoses, acute management of IEM, enzyme replacement therapy, galactosemia, glycogen storage diseases, peroxisomal disorders and other IEM. (An introductory medical genetics course for clinical genetics specialists does not satisfy this requirement);
- IV.A.5.b).(3) should have research seminars as part of the training experience, but these will not be considered an acceptable alternative to the basic science didactic component; and,
- IV.A.5.b).(4) must spend a minimum of four weeks in the laboratory so that they will be able to develop their abilities to understand an appropriate variety of laboratory methods. Fellows' education must include participation in the working conferences of laboratories as well as ongoing discussion of laboratory data during other clinical conferences. The medical biochemical genetics laboratory must be an integral component of each program.

**IV.A.5.c)**

**Practice-based Learning and Improvement**

**Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Fellows are expected to develop skills and habits to be able to meet the following goals:**

**IV.A.5.c).(1)**

**identify strengths, deficiencies, and limits in one's knowledge and expertise;**

**IV.A.5.c).(2)**

**set learning and improvement goals;**

**IV.A.5.c).(3)**

**identify and perform appropriate learning activities;**

**IV.A.5.c).(4)**

**systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement;**

**IV.A.5.c).(5)**

**incorporate formative evaluation feedback into daily practice;**

**IV.A.5.c).(6)**

**locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems;**

**IV.A.5.c).(7)**

**use information technology to optimize learning; and,**

**IV.A.5.c).(8)**

**participate in the education of patients, families, students, fellows and other health professionals.**

**IV.A.5.c).(9)**

**critical evaluation of the published medical literature on IEM in books, journals, and public databases;**

**IV.A.5.c).(10)**

**appropriate use of external consultation through professional associations;**

**IV.A.5.c).(11)**

**regular review of diagnostic and treatment guidelines; and,**

**IV.A.5.c).(12)**

**principles of clinical research on diagnosis, treatment, and outcomes.**

**IV.A.5.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. Fellows are expected to:**

- IV.A.5.d).(1) **communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;**
- IV.A.5.d).(2) **communicate effectively with physicians, other health professionals, and health related agencies;**
- IV.A.5.d).(3) **work effectively as a member or leader of a health care team or other professional group;**
- IV.A.5.d).(4) **act in a consultative role to other physicians and health professionals; and,**
- IV.A.5.d).(5) **maintain comprehensive, timely, and legible medical records, if applicable.**
- IV.A.5.d).(6) **counsel families about the genetic basis of IEM including availability of diagnostic, carrier, and presymptomatic genetic testing**
- IV.A.5.d).(7) **teach caregivers about long term monitoring and treatment of IEM, with special emphasis on nutrition**
- IV.A.5.d).(8) **teach patients and families about lifelong care of their condition, especially nutritional support and interventions**

**IV.A.5.e) Professionalism**

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

- IV.A.5.e).(1) **compassion, integrity, and respect for others;**
- IV.A.5.e).(2) **responsiveness to patient needs that supersedes self-interest;**
- IV.A.5.e).(3) **respect for patient privacy and autonomy;**
- IV.A.5.e).(4) **accountability to patients, society and the profession; and,**
- IV.A.5.e).(5) **sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.**

**IV.A.5.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. Fellow are expected to:**

- IV.A.5.f).(1) work effectively in various health care delivery settings and systems relevant to their clinical specialty;**
- IV.A.5.f).(2) coordinate patient care within the health care system relevant to their clinical specialty;**
- IV.A.5.f).(3) incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate;**
- IV.A.5.f).(4) advocate for quality patient care and optimal patient care systems;**
- IV.A.5.f).(5) work in interprofessional teams to enhance patient safety and improve patient care quality; and**
- IV.A.5.f).(6) participate in identifying system errors and implementing potential systems solutions.**
- IV.A.5.f).(7) make use of state resources in newborn screening for IEM;**
- IV.A.5.f).(8) make use of local, national, and international resources for specialized laboratory testing;**
- IV.A.5.f).(9) establish medical insurance coverage for specialized formulas and nutritional supplements;**
- IV.A.5.f).(10) oversee team management of patients through on-call responsibilities and sign-outs; and,**
- IV.A.5.f).(11) oversee operation of a treatment team including nursing, nutrition and medical trainees.**

#### **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.**
- IV.B.2. Fellows should participate in scholarly activity.**
- IV.B.3. The sponsoring institution and program should allocate adequate educational resources to facilitate fellow involvement in scholarly activities.**

**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 during each rotation or similar educational assignment, and document this evaluation at completion of the assignment.

**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);

**V.A.1.b).(3)** document progressive fellow performance improvement appropriate to educational level; and,

**V.A.1.b).(4)** 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**

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.2.a)** document the fellow's performance during the final period of education, and

**V.A.2.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.B.3.** This evaluation must include at least annual written confidential evaluations by the fellows.

**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;

**V.C.1.b)** faculty development;

**V.C.1.c)** graduate performance, including performance of program graduates on the certification examination; and,

**V.C.1.d)** program quality. Specifically;

**V.C.1.d).(1)** Fellows and faculty must have the opportunity to evaluate the program confidentially and in writing at least annually; and,

**V.C.1.d).(2)** The program must use the results of Fellows' assessments of the program together with other program evaluation results to improve the program.

**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. Principles**

**VI.A.1.** The program must be committed to and be responsible for promoting patient safety and fellow well-being and to providing a supportive educational environment.

**VI.A.2.** The learning objectives of the program must not be compromised by excessive reliance on fellows to fulfill service obligations.

**VI.A.3.** Didactic and clinical education must have priority in the allotment of fellows' time and energy.

**VI.A.4. Duty hour assignments must recognize that faculty and fellows collectively have responsibility for the safety and welfare of patients.**

**VI.B. Supervision of Fellows**

**The program must ensure that qualified faculty provide appropriate supervision of fellows in patient care activities.**

**VI.C. Fatigue**

**Faculty and fellows must be educated to recognize the signs of fatigue and sleep deprivation and must adopt and apply policies to prevent and counteract its potential negative effects on patient care and learning.**

**VI.D. Duty Hours (the terms in this section are defined in the ACGME Glossary and apply to all programs)**

**Duty hours are defined as all clinical and academic activities related to the program; i.e., patient care (both inpatient and outpatient), administrative duties relative to patient care, the provision for transfer of patient care, time spent in-house during call activities, and scheduled activities, such as conferences. Duty hours do not include reading and preparation time spent away from the duty site.**

**VI.D.1. Duty hours must be limited to 80 hours per week, averaged over a 4-week period, inclusive of all in-house call activities.**

**VI.D.2. Fellows must be provided with 1 day in 7 free from all educational and clinical responsibilities, averaged over a 4-week period, inclusive of call.**

**VI.D.3. Adequate time for rest and personal activities must be provided. This should consist of a 10-hour time period provided between all daily duty periods and after in-house call.**

**VI.E. On-call Activities**

**VI.E.1. In-house call must occur no more frequently than every third night, averaged over a 4-week period.**

**VI.E.2. Continuous on-site duty, including in-house call, must not exceed 24 consecutive hours. Fellows may remain on duty for up to 6 additional hours to participate in didactic activities, transfer care of patients, conduct outpatient clinics, and maintain continuity of medical and surgical care.**

**VI.E.3. No new patients may be accepted after 24 hours of continuous duty.**

**VI.E.4. At-home call (or pager call)**

**VI.E.4.a) The frequency of at-home call is not subject to the every-third- night, or 24+6 limitation. However at-home call must not be so frequent as to preclude rest and reasonable personal time for each fellow.**

**VI.E.4.b) Fellows taking at-home call must be provided with 1 day in 7 completely free from all educational and clinical responsibilities, averaged over a 4-week period.**

**VI.E.4.c) When fellows are called into the hospital from home, the hours fellows spend in-house are counted toward the 80-hour limit.**

**VI.F. Moonlighting**

**VI.F.1. Moonlighting must not interfere with the ability of the fellow to achieve the goals and objectives of the educational program.**

**VI.F.2. Internal moonlighting must be considered part of the 80-hour weekly limit on duty hours.**

**VI.G. Duty Hours 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. 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.2. Prior to submitting the request to the Review Committee, the program director must obtain approval of the institution's GMEC and DIO.**

**VII. Experimentation and Innovation**

**Requests for experimentation or innovative projects that may deviate from the institutional, common and specialty specific program requirements must be approved in advance by the Review Committee. In preparing requests, the program director must follow Procedures for Approving Proposals for Experimentation or Innovative Projects located in the ACGME Manual on Policies and Procedures. Once a Review Committee approves a project, the sponsoring institution and program are jointly responsible for the quality of education offered to fellows for the duration of such a project.**

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