

ACGME Program Requirements for Graduate Medical Education in Laboratory Genetics and Genomics

ACGME-approved focused revision: June 12, 2022; effective July 1, 2022

Contents

Introduction.....	3
Int.A. Preamble.....	3
Int.B. Definition of Specialty.....	3
Int.C. Length of Educational Program.....	4
I. Oversight.....	4
I.A. Sponsoring Institution.....	4
I.B. Participating Sites.....	4
I.C. Recruitment.....	6
I.D. Resources.....	6
I.E. Other Learners and Other Care Providers.....	7
II. Personnel.....	7
II.A. Program Director.....	8
II.B. Faculty.....	13
II.C. Program Coordinator.....	16
II.D. Other Program Personnel.....	17
III. Post-Doctoral Fellow Appointments.....	18
III.A. Eligibility Requirements.....	18
III.B. Number of Post-Doctoral Fellows.....	18
III.C. Post-Doctoral Fellow Transfers.....	18
IV. Educational Program.....	18
IV.A. Curriculum Components.....	19
IV.B. ACGME Competencies.....	20
IV.C. Curriculum Organization and Post-Doctoral Fellow Experiences.....	27
IV.D. Scholarship.....	30
V. Evaluation.....	32
V.A. Post-Doctoral Fellow Evaluation.....	32
V.B. Faculty Evaluation.....	35
V.C. Program Evaluation and Improvement.....	36
VI. The Learning and Working Environment.....	40
VI.A. Patient Safety, Quality Improvement, Supervision, and Accountability.....	41
VI.B. Professionalism.....	47
VI.C. Well-Being.....	49
VI.D. Fatigue Mitigation.....	52
VI.E. Clinical Responsibilities, Teamwork, and Transitions of Care.....	53
VI.F. Clinical Experience and Education.....	54

ACGME Program Requirements for Graduate Medical Education in Laboratory Genetics and Genomics

Common Program Requirements (Post-Doctoral Education Program) 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. *Graduate medical education in a medical-related field is the crucial step of professional development between medical school or graduate school and autonomous contributions to clinical care. It is in this vital phase of the continuum of medical-related education that post-doctoral fellows learn to contribute to optimal patient care under the supervision of faculty members who not only instruct, but serve as role models of excellence, compassion, professionalism, and scholarship.*

This education transforms medical students or graduate students into specialists who contribute to the care for the patient, family, and a diverse community; create and integrate new knowledge into practice; and educate future generations of specialists to serve the public. Practice patterns established during graduate medical education persist many years later.

Graduate medical education in a medical-related field has as a core tenet the graded authority and responsibility for patient care. The care of patients is undertaken with appropriate faculty supervision and conditional independence, allowing post-doctoral fellows to attain the knowledge, skills, attitudes, and empathy required for autonomous practice. Graduate medical education develops specialists who focus on excellence in delivery of safe, equitable, affordable, quality care; and the health of the populations they serve. Graduate medical education values the strength that a diverse group of specialists brings to medical care.

This education occurs in clinical settings that establish the foundation for practice-based and lifelong learning. The professional development of the specialist, begun in pre-doctoral education, continues through faculty modeling of the effacement of self-interest in a humanistic environment that emphasizes joy in curiosity, problem-solving, academic rigor, and discovery. This transformation is often physically, emotionally, and intellectually demanding and occurs in a variety of clinical learning environments committed to graduate medical education and the well-being of patients, residents, post-doctoral fellows, fellows, faculty members, students, and all members of the health care team.

Int.B. **Definition of Specialty**

Laboratory genetics and genomics is a laboratory-based discipline of medical genetics and genomics that focuses on analysis and interpretation of, and communication of results from, assays that identify constitutional/germline and

somatic/acquired genetic changes underlying human disease. These include chromosomal aneuploidies, genomic copy number variations, chromosomal rearrangements, changes in DNA sequence, DNA methylation and gene expression. Laboratory genetics and genomics programs provide post-doctoral education in the technical skills and the knowledge necessary to perform and interpret results that impact the diagnosis and management of human genetic diseases. Upon successful completion of such a program, these specialists can function as laboratory directors or technical supervisors of clinical laboratories, and as clinical consultants in the management of patients with a broad range of somatic or inherited disorders.

Int.C. Length of Educational Program

The educational program in laboratory genetics and genomics must be 24 months in length. ^{(Core)*}

I. Oversight

I.A. Sponsoring Institution

The Sponsoring Institution is the organization or entity that assumes the ultimate financial and academic responsibility for a program of graduate medical education, consistent with the ACGME Institutional Requirements.

When the Sponsoring Institution is not a rotation site for the program, the most commonly utilized site of clinical activity for the program is the primary clinical site.

Background and Intent: Participating sites will reflect the health care needs of the community and the educational needs of the post-doctoral fellows. A wide variety of organizations may provide a robust educational experience and, thus, Sponsoring Institutions and participating sites may encompass inpatient and outpatient settings including, but not limited to a university, a medical school, a teaching hospital, a nursing home, a school of public health, a health department, a public health agency, an organized health care delivery system, a medical examiner's office, an educational consortium, a teaching health center, a physician group practice, federally qualified health center, or an educational foundation.

I.A.1. The program must be sponsored by one ACGME-accredited Sponsoring Institution. ^(Core)

I.B. Participating Sites

A participating site is an organization providing educational experiences or educational assignments/rotations for post-doctoral fellows.

I.B.1. The program, with approval of its Sponsoring Institution, must designate a primary clinical site. ^(Core)

I.B.1.a) Institutions sponsoring laboratory genetics and genomics programs should also sponsor ACGME-accredited programs in medical genetics and genomics. ^(Core)

I.B.2. There must be a program letter of agreement (PLA) between the program and each participating site that governs the relationship between the program and the participating site providing a required assignment. ^(Core)

I.B.2.a) The PLA must:

I.B.2.a).(1) be renewed at least every 10 years; and, ^(Core)

I.B.2.a).(2) be approved by the designated institutional official (DIO). ^(Core)

I.B.3. The program must monitor the clinical learning and working environment at all participating sites. ^(Core)

I.B.3.a) At each participating site there must be one faculty member, designated by the program director as the site director, who is accountable for post-doctoral fellow education at that site, in collaboration with the program director. ^(Core)

Background and Intent: While all post-doctoral education programs must be sponsored by a single ACGME-accredited Sponsoring Institution, many programs will utilize other clinical settings to provide required or elective training experiences. At times it is appropriate to utilize community sites that are not owned by or affiliated with the Sponsoring Institution Some of these sites may be remote for geographic, transportation, or communication issues. When utilizing such sites the program must ensure the quality of the educational experience. The requirements under I.B.3. are intended to ensure that this will be the case.

Suggested elements to be considered in PLAs will be found in the ACGME Program Director's Guide to the Common Program Requirements. These include:

- **Identifying the faculty member(s) who will assume educational and supervisory responsibility for post-doctoral fellows**
- **Specifying the responsibilities for teaching, supervision, and formal evaluation of post-doctoral fellows**
- **Specifying the duration and content of the educational experience**
- **Stating the policies and procedures that will govern post-doctoral fellow education during the assignment**

I.B.4. The program director must submit any additions or deletions of participating sites routinely providing an educational experience, required for all post-doctoral fellows, of one month full time equivalent (FTE) or more through the ACGME's Accreditation Data System (ADS). ^(Core)

- I.C. The program, in partnership with its Sponsoring Institution, must engage in practices that focus on mission-driven, ongoing, systematic recruitment and retention of a diverse and inclusive workforce of post-doctoral fellows, residents and fellows (if present), faculty members, senior administrative staff members, and other relevant members of its academic community.**
(Core)

Background and Intent: It is expected that the Sponsoring Institution has, and programs implement, policies and procedures related to recruitment and retention of minorities underrepresented in medicine and medical leadership in accordance with the Sponsoring Institution's mission and aims. The program's annual evaluation must include an assessment of the program's efforts to recruit and retain a diverse workforce, as noted in V.C.1.c).(5).(c).

I.D. Resources

- I.D.1. The program, in partnership with its Sponsoring Institution, must ensure the availability of adequate resources for post-doctoral fellow education.** (Core)

I.D.1.a) All laboratories affiliated with the program must be Clinical Laboratory Improvement Amendments (CLIA)-certified. (Core)

I.D.1.b) Laboratory facilities and resources appropriate for the discipline must be available to post-doctoral fellows at on-site laboratories, including: (Core)

I.D.1.b).(1) education facilities, to include office space, meeting rooms, classrooms, and laboratory space; (Core)

I.D.1.b).(2) appropriate instrumentation to perform cytogenetic and molecular genetic testing; and, (Core)

I.D.1.b).(3) access to computer-based genomic-interpretive tools and systems. (Core)

- I.D.2. The program, in partnership with its Sponsoring Institution, must ensure healthy and safe learning and working environments that promote post-doctoral fellow well-being and provide for:** (Core)

I.D.2.a) access to food while on duty; (Core)

I.D.2.b) safe, quiet, clean, and private sleep/rest facilities available and accessible for post-doctoral fellows with proximity appropriate for safe patient care; (Core)

Background and Intent: Contributions to care of patients within a hospital or health system occur continually through the day and night. Such care requires that post-doctoral fellows function at their peak abilities, which requires the work environment to provide them with the ability to meet their basic needs within proximity of their clinical responsibilities. Access to food and rest are examples of these basic needs, which

must be met while post-doctoral fellows are working. Post-doctoral fellows should have access to refrigeration where food may be stored. Food should be available when post-doctoral fellows are required to be in the hospital overnight. Rest facilities are necessary, even when overnight call is not required, to accommodate the fatigued post-doctoral fellow.

- I.D.2.c) clean and private facilities for lactation that have refrigeration capabilities, with proximity appropriate for safe patient care; (Core)

Background and Intent: Sites must provide private and clean locations where post-doctoral fellows may lactate and store the milk within a refrigerator. These locations should be in close proximity to clinical responsibilities. It would be helpful to have additional support within these locations that may assist the post-doctoral fellow with the continued contributions to care of patients, such as a computer and a phone. While space is important, the time required for lactation is also critical for the well-being of the post-doctoral fellow and the fellow's family, as outlined in VI.C.1.d).(1).

- I.D.2.d) security and safety measures appropriate to the participating site; and, (Core)

- I.D.2.e) accommodations for post-doctoral fellows with disabilities consistent with the Sponsoring Institution's policy. (Core)

- I.D.3. Post-doctoral fellows must have ready access to specialty-specific and other appropriate reference material in print or electronic format. This must include access to electronic medical literature databases with full text capabilities. (Core)

- I.D.4. The program's educational and clinical resources must be adequate to support the number of post-doctoral fellows appointed to the program. (Core)

- I.E. The presence of other learners and other care providers, including, but not limited to, post-doctoral fellows from other programs, residents, subspecialty fellows, and advanced practice providers must enrich the appointed post-doctoral fellows' education. (Core)

- I.E.1. The program must report circumstances when the presence of other learners has interfered with the post-doctoral fellows' education to the DIO and Graduate Medical Education Committee (GMEC). (Core)

Background and Intent: The clinical learning environment has become increasingly complex and often includes care providers, students, and post-graduate residents and fellows from multiple disciplines. The presence of these specialists and their learners enriches the learning environment. Programs have a responsibility to monitor the learning environment to ensure that post-doctoral fellows' education is not compromised by the presence of other providers and learners.

II. Personnel

II.A. Program Director

II.A.1. There must be one faculty member appointed as program director with authority and accountability for the overall program, including compliance with all applicable program requirements. (Core)

II.A.1.a) The Sponsoring Institution's GMEC must approve a change in program director. (Core)

II.A.1.b) Final approval of the program director resides with the Review Committee. (Core)

Background and Intent: While the ACGME recognizes the value of input from numerous individuals in the management of a post-doctoral education program, a single individual must be designated as program director and have overall responsibility for the post-doctoral education program. The program director's nomination is reviewed and approved by the GMEC. Final approval of the program director resides with the applicable ACGME Review Committee.

II.A.1.c) The program must demonstrate retention of the program director for a length of time adequate to maintain continuity of leadership and program stability. (Core)

Background and Intent: The success of post-doctoral education program programs is generally enhanced by continuity in the program director position. The professional activities required of a program director are unique and complex and take time to master. All programs are encouraged to undertake succession planning to facilitate program stability when there is necessary turnover in the program director position.

II.A.2. The program director and, as applicable, the program's leadership team, must be provided with support adequate for administration of the program based upon its size and configuration. (Core)

II.A.2.a) Program leadership, in aggregate, must be provided with support equal to a dedicated minimum of 20 percent time. This may be time spent by the program director only or divided among the program director and one or more associate (or assistant) program directors. Programs with seven or more approved post-doctoral fellow positions must provide a minimum of 20 percent time and an additional two percent time for each approved position. At a minimum, the program director must be provided with the salary support required to devote 10 percent FTE of non-clinical time to the administration of the program. (Core)

Specialty-Specific Background and Intent: The additional two percent time is for each approved post-doctoral fellow position in the program, not just the approved post-doctoral fellow positions over seven. For example, a program with an approved complement of seven post-doctoral fellow positions must be provided at least 34 percent time for program leadership. A program approved for 10 post-doctoral fellow positions must be provided with at least 40 percent time for program leadership; and a program approved for 18 post-doctoral fellow positions must be provided with at least 56 percent time for program leadership.

Background and Intent: To achieve successful graduate medical education, individuals serving as education and administrative leaders of post-doctoral education programs, as well as those significantly engaged in the education, supervision, evaluation, and mentoring of post-doctoral fellows, must have sufficient dedicated professional time to perform the vital activities required to sustain an accredited program.

The ultimate outcome of graduate medical education is excellence in post-doctoral fellow education and patient care.

The program director and, as applicable, the program leadership team, devote a portion of their professional effort to the oversight and management of the post-doctoral education program, as defined in II.A.4.-II.A.4.a).(16). Both provision of support for the time required for the leadership effort and flexibility regarding how this support is provided are important. Programs, in partnership with their Sponsoring Institutions, may provide support for this time in a variety of ways. Examples of support may include, but are not limited to, salary support, supplemental compensation, educational value units, or relief of time from other professional duties.

Program directors and, as applicable, members of the program leadership team, who are new to the role may need to devote additional time to program oversight and management initially as they learn and become proficient in administering the program. It is suggested that during this initial period the support described above be increased as needed.

In addition, it is important to remember that the dedicated time and support requirement for ACGME activities is a *minimum*, recognizing that, depending on the unique needs of the program, additional support may be warranted.

II.A.3. Qualifications of the program director:

II.A.3.a) must include specialty expertise and at least three years of documented educational and/or administrative experience, or qualifications acceptable to the Review Committee; ^(Core)

Background and Intent: Leading a program requires knowledge and skills that are established during post-doctoral education and subsequently further developed. The time period from completion of post-doctoral education until assuming the role of program director allows the individual to cultivate leadership abilities while becoming professionally established. The three-year period is intended for the individual's professional maturation.

The broad allowance for educational and/or administrative experience recognizes that strong leaders arise through diverse pathways. These areas of expertise are important when identifying and appointing a program director. The choice of a program director should be informed by the mission of the program and the needs of the community.

In certain circumstances, the program and Sponsoring Institution may propose and the Review Committee may accept a candidate for program director who fulfills these goals but does not meet the three-year minimum.

II.A.3.b) must include current certification in the specialty for which they are the program director by the American Board of Medical Genetics and Genomics (ABMGG) if available for their field of study, or specialty qualifications that are acceptable to the Review Committee; ^(Core)

[Note that while the Common Program Requirements deem certification by a certifying board of the American Osteopathic Association (AOA) acceptable, there is no AOA board that offers certification in this specialty]

II.A.3.b).(1) The program director must be certified by the ABMGG and actively participating in the ABMGG's Maintenance of Continuing Certification (MOC) program in clinical molecular genetics and genomics, clinical cytogenetics and genomics, or laboratory genetics and genomics the specialty(ies) in which they are certified. ^(Core)

II.A.3.b).(2) If the program director is certified by the ABMGG in only clinical molecular genetics and genomics or only clinical cytogenetics and genomics, there must be an associate program director with certification in the complementary specialty area, or laboratory genetics and genomics. ^(Core)

II.A.3.c) must include appropriate medical staff or institutional appointment; and, ^(Core)

II.A.3.d) must include ongoing contributions to clinical care. ^(Core)

Background and Intent: A program director is a role model for faculty members and post-doctoral fellows. The program director must participate in contributing to clinical care consistent with the specialty. This activity will allow the program director to role model the Core Competencies for the faculty members and post-doctoral fellows.

II.A.3.e) The program director should be a full-time faculty member, and must be based at the primary clinical site. ^{(Detail)†}

II.A.4. Program Director Responsibilities

The program director must have responsibility, authority, and accountability for: administration and operations; teaching and scholarly activity; post-doctoral fellow recruitment and selection,

evaluation, and promotion of post-doctoral fellows, and disciplinary action; supervision of post-doctoral fellows; and post-doctoral fellow education in the context of contributions to patient care. ^(Core)

II.A.4.a) The program director must:

II.A.4.a).(1) be a role model of professionalism; ^(Core)

Background and Intent: The program director, as the leader of the program, must serve as a role model to post-doctoral fellows in addition to fulfilling the technical aspects of the role. As post-doctoral fellows are expected to demonstrate compassion, integrity, and respect for others, they must be able to look to the program director as an exemplar. It is of utmost importance, therefore, that the program director model outstanding professionalism, high quality patient care contributions, educational excellence, and a scholarly approach to work. The program director creates an environment where respectful discussion is welcome, with the goal of continued improvement of the educational experience.

II.A.4.a).(2) design and conduct the program in a fashion consistent with the needs of the community, the mission(s) of the Sponsoring Institution, and the mission(s) of the program; ^(Core)

Background and Intent: The mission of institutions participating in graduate medical education is to improve the health of the public. Each community has health needs that vary based upon location and demographics. Programs must understand the social determinants of health of the populations they serve and incorporate them in the design and implementation of the program curriculum, with the ultimate goal of addressing these needs and health disparities.

II.A.4.a).(3) administer and maintain a learning environment conducive to educating the post-doctoral fellows in each of the ACGME Competency domains; ^(Core)

Background and Intent: The program director may establish a leadership team to assist in the accomplishment of program goals. Post-doctoral education programs can be highly complex. In a complex organization, the leader typically has the ability to delegate authority to others, yet remains accountable. The leadership team may include physician and non-physician personnel with varying levels of education, training, and experience.

II.A.4.a).(4) develop and oversee a process to evaluate candidates prior to approval as program faculty members for participation in the post-doctoral education program and at least annually thereafter, as outlined in V.B.; ^(Core)

II.A.4.a).(5) have the authority to approve program faculty members for participation in the post-doctoral education program at all sites; ^(Core)

II.A.4.a).(6) have the authority to remove program faculty members from participation in the post-doctoral education program at all sites; ^(Core)

II.A.4.a).(7) have the authority to remove post-doctoral fellows from supervising interactions and/or learning environments that do not meet the standards of the program; ^(Core)

Background and Intent: The program director has the responsibility to ensure that all who educate post-doctoral fellows effectively role model the Core Competencies. Working with a post-doctoral fellow is a privilege that is earned through effective teaching and professional role modeling. This privilege may be removed by the program director when the standards of the clinical learning environment are not met.

There may be faculty in a department who are not part of the educational program, and the program director controls who is teaching the post-doctoral fellows.

II.A.4.a).(8) submit accurate and complete information required and requested by the DIO, GMEC, and ACGME; ^(Core)

II.A.4.a).(9) provide applicants who are offered an interview with information related to the applicant's eligibility for the relevant board certification examination(s); ^(Core)

II.A.4.a).(10) provide a learning and working environment in which post-doctoral fellows have the opportunity to raise concerns and provide feedback in a confidential manner as appropriate, without fear of intimidation or retaliation; ^(Core)

II.A.4.a).(11) ensure the program's compliance with the Sponsoring Institution's policies and procedures related to grievances and due process; ^(Core)

II.A.4.a).(12) ensure the program's compliance with the Sponsoring Institution's policies and procedures for due process when action is taken to suspend or dismiss, not to promote, or not to renew the appointment of a post-doctoral fellow; ^(Core)

Background and Intent: A program does not operate independently of its Sponsoring Institution. It is expected that the program director will be aware of the Sponsoring Institution's policies and procedures, and will ensure they are followed by the program's leadership, faculty members, support personnel, and post-doctoral fellows.

II.A.4.a).(13) ensure the program's compliance with the Sponsoring Institution's policies and procedures on employment and non-discrimination; ^(Core)

- II.A.4.a).(13).(a) Post-doctoral fellows must not be required to sign a non-competition guarantee or restrictive covenant. ^(Core)
- II.A.4.a).(14) document verification of program completion for all graduating post-doctoral fellows within 30 days; ^(Core)
- II.A.4.a).(15) provide verification of an individual post-doctoral fellow's completion upon the post-doctoral fellow's request, within 30 days; and, ^(Core)

Background and Intent: Primary verification of graduate medical education in a medical-related field is important to credentialing of specialists for further training and practice. Such verification must be accurate and timely. Sponsoring Institution and program policies for record retention are important to facilitate timely documentation of post-doctoral fellows who have previously completed the program. Post-doctoral fellows who leave the program prior to completion also require timely documentation of their summative evaluation.

- II.A.4.a).(16) obtain review and approval of the Sponsoring Institution's DIO before submitting information or requests to the ACGME, as required in the Institutional Requirements and outlined in the ACGME Program Director's Guide to the Common Program Requirements. ^(Core)

II.B. Faculty

Faculty members are a foundational element of graduate medical education – faculty members teach post-doctoral fellows how to contribute to care for patients. Faculty members provide an important bridge allowing post-doctoral fellows to grow and become prepared to provide clinical care, ensuring that patients receive the highest quality of care. They are role models for future generations of specialists by demonstrating compassion, commitment to excellence in teaching and patient care, professionalism, and a dedication to lifelong learning. Faculty members experience the pride and joy of fostering the growth and development of future colleagues. The care they provide is enhanced by the opportunity to teach. By employing a scholarly approach to patient care, faculty members, through the graduate medical education system, improve the health of the individual and the population.

Faculty members ensure that patients receive the level of care expected from a specialist in the field. They recognize and respond to the needs of the patients, post-doctoral fellows, community, and institution. Faculty members provide appropriate levels of supervision to promote patient safety. Faculty members create an effective learning environment by acting in a professional manner and attending to the well-being of the post-doctoral fellows and themselves.

Background and Intent: “Faculty” refers to the entire teaching force responsible for educating post-doctoral fellows. The term “faculty,” including “core faculty,” does not imply or require an academic appointment.

- II.B.1. At each participating site, there must be a sufficient number of faculty members with competence to instruct and supervise all post-doctoral fellows at that location. (Core)**
- II.B.2. Faculty members must:**
 - II.B.2.a) be role models of professionalism; (Core)**
 - II.B.2.b) demonstrate commitment to the delivery of safe, quality, cost-effective, patient-centered care; (Core)**

Background and Intent: Patients have the right to expect quality, cost-effective care with patient safety at its core. The foundation for meeting this expectation is formed during post-doctoral education. Faculty members model these goals and continually strive for improvement in care and cost, embracing a commitment to the care of the patient and the community they serve.

- II.B.2.c) demonstrate a strong interest in the education of post-doctoral fellows; (Core)**
- II.B.2.d) devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities; (Core)**
- II.B.2.e) administer and maintain an educational environment conducive to educating post-doctoral fellows; (Core)**
- II.B.2.f) regularly participate in organized clinical discussions, rounds, journal clubs, and conferences; and, (Core)**
- II.B.2.g) pursue faculty development designed to enhance their skills at least annually; (Core)**

Background and Intent: Faculty development is intended to describe structured programming developed for the purpose of enhancing transference of knowledge, skill, and behavior from the educator to the learner. Faculty development may occur in a variety of configurations (lecture, workshop, etc.) using internal and/or external resources. Programming is typically needs-based (individual or group) and may be specific to the institution or the program. Faculty development programming is to be reported for the post-doctoral education program faculty in the aggregate.

- II.B.2.g).(1) as educators; (Core)**
- II.B.2.g).(2) in quality improvement and patient safety; (Core)**
- II.B.2.g).(3) in fostering their own and their post-doctoral fellows’ well-being; and, (Core)**

II.B.2.g).(4) as contributors to patient care based on their practice-based learning and improvement efforts. (Core)

Background and Intent: Practice-based learning serves as the foundation for the practice of medicine. Through a systematic analysis of one's participation in care and review of the literature, one is able to make adjustments that improve patient outcomes and care. Thoughtful consideration to practice-based analysis improves quality of care, as well as patient safety. This allows faculty members to serve as role models for post-doctoral fellows in practice-based learning.

II.B.3. Faculty Qualifications

II.B.3.a) Faculty members must have appropriate qualifications in their field and hold appropriate institutional appointments. (Core)

II.B.3.a).(1) Faculty members must have current certification in the discipline by the ABMGG or possess qualifications judged acceptable to the Review Committee. (Core)

II.B.3.a).(2) Associate program directors must be actively participating in the ABMGG MOC program in the specialty in which they are certified. (Core)

II.B.3.b) Faculty members must:

II.B.3.b).(1) have current certification in the specialty by the American Board of Medical Genetics and Genomics, if available for their field of study, or possess qualifications judged acceptable to the Review Committee. (Core)

[Note that while the Common Program Requirements deem certification by a certifying board of the American Osteopathic Association (AOA) acceptable, there is no AOA board that offers certification in this specialty]

II.B.3.c) Faculty members responsible for post-doctoral fellow education in clinical molecular genetics and genomics must have current ABMGG certification in clinical molecular genetics and genomics or laboratory genetics and genomics. (Core)

II.B.3.d) Faculty members responsible for post-doctoral fellow education in clinical cytogenetics and genomics must have current ABMGG certification in clinical cytogenetics and genomics or laboratory genetics and genomics. (Core)

II.B.4. Core Faculty

Core faculty members must have a significant role in the education and supervision of post-doctoral fellows and must devote a significant portion of their entire effort to post-doctoral fellow education and/or administration, and must, as a component of their activities, teach, evaluate, and provide formative feedback to post-doctoral fellows. ^(Core)

Background and Intent: Core faculty members are critical to the success of post-doctoral fellow education. They support the program leadership in developing, implementing, and assessing curriculum, mentoring post-doctoral fellows, and assessing post-doctoral fellows' progress toward achievement of competence in and the independent practice of the specialty. Core faculty members should be selected for their broad knowledge of and involvement in the program, permitting them to effectively evaluate the program. Core faculty members may also be selected for their specific expertise and unique contribution to the program. Core faculty members are engaged in a broad range of activities, which may vary across programs and specialties. Core faculty members provide clinical teaching and supervision of post-doctoral fellows, and also participate in non-clinical activities related to post-doctoral fellow education and program administration. Examples of these non-clinical activities include, but are not limited to, interviewing and selecting post-doctoral fellow applicants, providing didactic instruction, mentoring post-doctoral fellows, simulation exercises, completing the annual ACGME Faculty Survey, and participating on the program's Clinical Competency Committee, Program Evaluation Committee, and other GME committees.

- II.B.4.a) Core faculty members must be designated by the program director. ^(Core)
- II.B.4.b) Core faculty members must complete the annual ACGME Faculty Survey. ^(Core)
- II.B.4.c) The program must have at least three core faculty members. ^(Core)

II.C. Program Coordinator

- II.C.1. There must be a program coordinator. ^(Core)
- II.C.2. The program coordinator must be provided with dedicated time and support adequate for administration of the program based upon its size and configuration. ^(Core)
 - II.C.2.a) ~~At a minimum, t~~The program coordinator(s) must be provided with supported equal to at a dedicated minimum of 40 30 percent FTE time for the administration of the program. Programs with seven or more approved post-doctoral fellow positions must be provided with an additional two percent time for each approved position. If the Sponsoring Institution also sponsors an ACGME-accredited clinical biochemical genetics program, the 10 percent FTE for administrative time can be shared between both programs. ^(Core)

Background and Intent: The requirement does not address the source of funding required to provide the specified salary support.

Each program requires a lead administrative person, frequently referred to as a program coordinator, administrator, or as otherwise titled by the institution. This person will frequently manage the day-to-day operations of the program and serve as an important liaison and facilitator between the learners, faculty and other staff members, and the ACGME. Individuals serving in this role are recognized as program coordinators by the ACGME.

The program coordinator is a key member of the leadership team and is critical to the success of the program. As such, the program coordinator must possess skills in leadership and personnel management appropriate to the complexity of the program. Program coordinators are expected to develop in-depth knowledge of the ACGME and Program Requirements, including policies and procedures. Program coordinators assist the program director in meeting accreditation requirements, educational programming, and support of post-doctoral fellows.

Programs, in partnership with their Sponsoring Institutions, should encourage the professional development of their program coordinators and avail them of opportunities for both professional and personal growth. Programs with fewer post-doctoral fellows may not require a full-time coordinator; one coordinator may support more than one program.

The minimum required dedicated time and support specified in II.C.2.a) is inclusive of activities directly related to administration of the accredited program. It is understood that coordinators often have additional responsibilities, beyond those directly related to program administration, including, but not limited to, departmental administrative responsibilities, medical school clerkships, planning lectures that are not solely intended for the accredited program, and mandatory reporting for entities other than the ACGME. Assignment of these other responsibilities will necessitate consideration of allocation of additional support so as not to preclude the coordinator from devoting the time specified above solely to administrative activities that support the accredited program.

In addition, it is important to remember that the dedicated time and support requirement for ACGME activities is a minimum, recognizing that, depending on the unique needs of the program, additional support may be warranted.

II.D. Other Program Personnel

The program, in partnership with its Sponsoring Institution, must jointly ensure the availability of necessary personnel for the effective administration of the program. ^(Core)

Background and Intent: Multiple personnel may be required to effectively administer a program. These may include staff members with clerical skills, project managers, education experts, and staff members to maintain electronic communication for the program. These personnel may support more than one program in more than one discipline.

- II.D.1. Genetic counselors, nurses, dietitians, lab technologists, and other health care professionals who are involved in the provision of clinical and medical genetics and genomics services should be available to collaborate on a regular basis with post-doctoral fellows. ^(Detail)

III. Post-Doctoral Fellow Appointments

III.A. Eligibility Requirements

- III.A.1. **An applicant must meet one of the following qualifications to be eligible for appointment to an ACGME-accredited program:** ^(Core)

- III.A.1.a) **graduation from a medical school in the United States or Canada, accredited by the Liaison Committee on Medical Education (LCME); graduation from a college of osteopathic medicine in the United States, accredited by the American Osteopathic Association Commission on Osteopathic College Accreditation (AOACOCA); or graduation from an accredited doctoral program in a clinically related discipline; or,** ^(Core)

- III.A.1.a).(1) Post-doctoral fellows entering laboratory genetics and genomics programs must hold an MD, DO, or PhD (or equivalent) degree. ^(Core)

- III.A.1.a).(1).(a) The PhD (or equivalent) degree must be in either genetics or a related field. ^(Core)

- III.A.1.b) **graduation from a medical school outside of the United States or Canada, and holding a currently valid certificate from the Educational Commission for Foreign Medical Graduates (ECFMG) prior to appointment.** ^(Core)

- III.B. **The program director must not appoint more post-doctoral fellows than approved by the Review Committee.** ^(Core)

- III.B.1. **All complement increases must be approved by the Review Committee.** ^(Core)

III.C. Post-Doctoral Fellow Transfers

The program must obtain verification of previous educational experiences and a summative competency-based performance evaluation prior to acceptance of a transferring post-doctoral fellow, and Milestones evaluations upon matriculation. ^(Core)

IV. Educational Program

The ACGME accreditation system is designed to encourage excellence and innovation in graduate medical education regardless of the organizational affiliation, size, or location of the program.

The educational program must support the development of knowledgeable, skillful specialists who contribute to compassionate care.

In addition, the program is expected to define its specific program aims consistent with the overall mission of its Sponsoring Institution, the needs of the community it serves and that its graduates will serve, and the distinctive capabilities of specialists it intends to graduate. While programs must demonstrate substantial compliance with the Common and specialty-specific Program Requirements, it is recognized that within this framework, programs may place different emphasis on research, leadership, public health, etc. It is expected that the program aims will reflect the nuanced program-specific goals for it and its graduates.

IV.A. The curriculum must contain the following educational components: (Core)

IV.A.1. a set of program aims consistent with the Sponsoring Institution’s mission, the needs of the community it serves, and the desired distinctive capabilities of its graduates; (Core)

IV.A.1.a) The program’s aims must be made available to program applicants, post-doctoral fellows, and faculty members. (Core)

IV.A.2. competency-based goals and objectives for each educational experience designed to promote progress on a trajectory to autonomous practice. These must be distributed, reviewed, and available to post-doctoral fellows and faculty members; (Core)

Background and Intent: The trajectory to autonomous practice is documented by Milestones evaluation. The Milestones detail the progress of a post-doctoral fellow in attaining skill in each competency domain. They are developed by each specialty group and allow evaluation based on observable behaviors. Milestones are considered formative and should be used to identify learning needs. This may lead to focused or general curricular revision in any given program or to individualized learning plans for any specific post-doctoral fellow.

IV.A.3. delineation of post-doctoral fellow responsibilities for patient care, progressive responsibility for contributions to patient care, and graded supervision; (Core)

Background and Intent: These responsibilities may generally be described by year in the program and specifically by Milestones progress as determined by the Clinical Competency Committee. This approach encourages the transition to competency-based education. An advanced learner may be granted more responsibility and a learner needing more time to accomplish a certain task may do so in a focused rather than global manner.

IV.A.4. a broad range of structured didactic activities; (Core)

IV.A.4.a) Post-doctoral fellows must be provided with protected time to participate in core didactic activities. (Core)

Background and Intent: It is intended that post-doctoral fellows will participate in structured didactic activities. It is recognized that there may be circumstances in which this is not possible. Programs should define core didactic activities for which time is protected and the circumstances in which post-doctoral fellows may be excused from these didactic activities. Didactic activities may include, but are not limited to, lectures, conferences, courses, labs, asynchronous learning, simulations, drills, case discussions, grand rounds, didactic teaching, and education in critical appraisal of medical evidence.

- IV.A.5. advancement of post-doctoral fellows' knowledge of ethical principles foundational to medical professionalism; and, ^(Core)
- IV.A.6. advancement in the post-doctoral fellows' knowledge of the basic principles of scientific inquiry, including how research is designed, conducted, evaluated, explained to patients, and applied to patient care. ^(Core)

IV.B. **ACGME Competencies**

Background and Intent: The Competencies provide a conceptual framework describing the required domains for a trusted specialist to enter autonomous practice. These Competencies are core to the practice of all specialists, although the specifics are further defined by each specialty. The developmental trajectories in each of the Competencies are articulated through the Milestones for each specialty.

- IV.B.1. The program must integrate the following ACGME Competencies into the curriculum: ^(Core)
- IV.B.1.a) **Professionalism**
- Post-doctoral fellows must demonstrate a commitment to professionalism and an adherence to ethical principles. ^(Core)
- IV.B.1.a).(1) Post-doctoral fellows must demonstrate competence in:
- IV.B.1.a).(1).(a) compassion, integrity, and respect for others; ^(Core)
- IV.B.1.a).(1).(b) responsiveness to patient care needs that supersedes self-interest; ^(Core)

Background and Intent: This includes the recognition that under certain circumstances, the interests of the patient may be best served by transitioning care to another provider. Examples include fatigue, conflict or duality of interest, not connecting well with a patient, or when another specialist would be better for the situation based on skill set or knowledge base.

- IV.B.1.a).(1).(c) respect for patient privacy and autonomy; ^(Core)

- IV.B.1.a).(1).(d) **accountability to patients, society, and the profession;** ^(Core)
- IV.B.1.a).(1).(e) **respect and responsiveness to diverse patient populations, including but not limited to diversity in gender, age, culture, race, religion, disabilities, national origin, socioeconomic status, and sexual orientation;** ^(Core)
- IV.B.1.a).(1).(f) **ability to recognize and develop a plan for one's own personal and professional well-being; and,** ^(Core)
- IV.B.1.a).(1).(g) **appropriately disclosing and addressing conflict or duality of interest.** ^(Core)

IV.B.1.b) Patient Care and Procedural Skills

Background and Intent: Quality patient care is safe, effective, timely, efficient, patient-centered, equitable, and designed to improve population health, while reducing per capita costs. (See the Institute of Medicine [IOM]'s *Crossing the Quality Chasm: A New Health System for the 21st Century*, 2001 and Berwick D, Nolan T, Whittington J. *The Triple Aim: care, cost, and quality. Health Affairs. 2008; 27(3):759-769.*) In addition, there should be a focus on improving the specialist's well-being as a means to improve patient care and reduce burnout among residents, post-doctoral fellows, fellows, and practicing specialists.

These organizing principles inform the Common Program Requirements across all Competency domains. Specific content is determined by the Review Committees with input from the appropriate professional societies, certifying boards, and the community.

- IV.B.1.b).(1) **Post-doctoral fellows must be able to contribute to patient care in a way that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.** ^(Core)
- IV.B.1.b).(1).(a) Post-doctoral fellows must demonstrate:
- IV.B.1.b).(1).(a).(i) competence in pre-analytic laboratory skills, including collection of appropriate specimen types; ^(Core)
- IV.B.1.b).(1).(a).(ii) competence in analytic laboratory skills used for various specimen types: ^(Core)
- IV.B.1.b).(1).(a).(iii) application of bioinformatics tools for interpretation of clinical results, including: ^(Core)

- IV.B.1.b).(1).(a).(iii).(a) use of acceptable nomenclature and practice guidelines for chromosomal and genomic variant classification; and, ^(Core)
- IV.B.1.b).(1).(a).(iii).(b) understanding of the application of bioinformatics pipelines and database resources for analysis and interpretation of chromosome analysis and genomic sequence data. ^(Core)
- IV.B.1.b).(1).(a).(iv) cell culture, slide preparation, and karyotyping; ^(Core)
- IV.B.1.b).(1).(a).(v) fluorescence in situ hybridization (FISH) techniques; ^(Core)
- IV.B.1.b).(1).(a).(vi) principles and techniques for manual and automated techniques for nucleic acid isolation; ^(Core)
- IV.B.1.b).(1).(a).(vii) microarray analysis and subsequent data processing; ^(Core)
- IV.B.1.b).(1).(a).(viii) polymerase chain reaction (PCR), including real-time and multiplex triplet repeat primed, digital droplet, and size analysis of nucleic acids; ^(Core)
- IV.B.1.b).(1).(a).(ix) targeted variant analysis and gene variant detection using Sanger sequencing, next-generation sequencing, and identity testing; ^(Core)
- IV.B.1.b).(1).(a).(x) competence in post-analytic reporting skills; and, ^(Core)
- IV.B.1.b).(1).(a).(xi) knowledge of quality control, quality management, quality improvement, and quality assurance. ^(Core)
- IV.B.1.b).(2) Post-doctoral fellows must be able to perform all procedures considered essential for the area of practice. ^(Core)**

IV.B.1.c) Medical Knowledge

Post-doctoral fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological

and social-behavioral sciences, as well as the application of this knowledge in their contributions to patient care. ^(Core)

- IV.B.1.c).(1) Post-doctoral fellows must demonstrate:
- IV.B.1.c).(1).(a) knowledge and use of scientific evidence, current medical information, and practice standards for the purpose of patient care, including: ^(Core)
- IV.B.1.c).(1).(a).(i) evaluation of results from molecular and cytogenetics-based genomics laboratories; ^(Core)
- IV.B.1.c).(1).(a).(ii) quantitative risk assessment; and, ^(Core)
- IV.B.1.c).(1).(a).(iii) application of bioinformatics. ^(Core)
- IV.B.1.c).(1).(b) competence in their knowledge of:
- IV.B.1.c).(1).(b).(i) Mendelian and non-Mendelian genetics; ^(Core)
- IV.B.1.c).(1).(b).(ii) population and quantitative genetics; and, ^(Core)
- IV.B.1.c).(1).(b).(iii) genomics. ^(Core)
- IV.B.1.c).(1).(c) knowledge of general principles of cell and molecular biology, as it relates to the field of medical genetics and genomics; and, ^(Core)
- IV.B.1.c).(1).(d) knowledge of principles of cytogenetics and clinical molecular genetics as they relate to the field of laboratory genetics and genomics. ^(Core)

IV.B.1.d)

Practice-based Learning and Improvement

Post-doctoral fellows must demonstrate the ability to investigate and evaluate their contributions to the care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. ^(Core)

Background and Intent: Practice-based learning and improvement is one of the defining characteristics of being a specialist. It is the ability to investigate and evaluate the care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

The intention of this Competency is to help a specialist develop the habits of mind required to continuously pursue quality improvement, well past the completion of post-doctoral education.

- IV.B.1.d).(1)** Post-doctoral fellows must demonstrate competence in:
- IV.B.1.d).(1).(a)** identifying strengths, deficiencies, and limits in one's knowledge and expertise; ^(Core)
 - IV.B.1.d).(1).(b)** setting learning and improvement goals; ^(Core)
 - IV.B.1.d).(1).(c)** identifying and performing appropriate learning activities; ^(Core)
 - IV.B.1.d).(1).(d)** systematically analyzing their contributions to care using quality improvement methods, and implementing changes with the goal of practice improvement; ^(Core)
 - IV.B.1.d).(1).(e)** incorporating feedback and formative evaluation into daily practice; ^(Core)
 - IV.B.1.d).(1).(f)** locating, appraising, and assimilating evidence from scientific studies related to their patients' health problems; and, ^(Core)
 - IV.B.1.d).(1).(g)** using information technology to optimize learning. ^(Core)
- IV.B.1.e)** **Interpersonal and Communication Skills**
- Post-doctoral fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. ^(Core)
- IV.B.1.e).(1)** Post-doctoral fellows must demonstrate competence in:
- IV.B.1.e).(1).(a)** communicating effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds; ^(Core)
 - IV.B.1.e).(1).(b)** communicating effectively with physicians, other health professionals, and health-related agencies; ^(Core)

- IV.B.1.e).(1).(c) working effectively as a member or leader of a health care team or other professional group; ^(Core)
- IV.B.1.e).(1).(d) educating patients, families, students, and other health professionals; ^(Core)
- IV.B.1.e).(1).(e) acting in a consultative role to other physicians and health professionals; and, ^(Core)
- IV.B.1.e).(1).(f) maintaining comprehensive, timely, and legible medical records, if applicable. ^(Core)
- IV.B.1.e).(2) Post-doctoral fellows must learn to communicate, through collaborators in care or directly, with patients and families, to partner with them to assess their care goals. ^(Core)

Background and Intent: When there are no more medications or interventions that can achieve a patient's goals or provide meaningful improvements in quality or length of life, a discussion about the patient's goals, values, and choices surrounding the end of life is one of the most important conversations that can occur. Post-doctoral fellows must learn to participate effectively and compassionately in contributing to these meaningful human interactions, for the sake of their patients and themselves.

Programs may teach this skill through direct clinical experience, simulation, or other means of active learning.

- IV.B.1.e).(3) Post-doctoral fellows must generate comprehensive and timely laboratory reports. ^(Core)

IV.B.1.f) Systems-based Practice

Post-doctoral fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, including the social determinants of health, as well as the ability to effectively collaborate with other providers and use resources to provide optimal health care. ^(Core)

- IV.B.1.f).(1) Post-doctoral fellows must demonstrate competence in:

- IV.B.1.f).(1).(a) working effectively in various health care delivery settings and systems relevant to their clinical specialty; ^(Core)

Background and Intent: Medical practice occurs in the context of an increasingly complex clinical care environment where optimal patient care requires attention to compliance with external and internal administrative and regulatory requirements.

- IV.B.1.f).(1).(a).(i) Post-doctoral fellows must:

- IV.B.1.f).(1).(a).(i).(a) actively participate in interactions with external regulatory agencies, including any inspections of the labs during their training; ^(Core)
- IV.B.1.f).(1).(a).(i).(b) demonstrate knowledge of the function and interaction of laboratory information systems, electronic health records, and billing systems; and, ^(Core)
- IV.B.1.f).(1).(a).(i).(c) demonstrate expertise in their knowledge of basic economic and business principles needed to function effectively in the practice setting. ^(Core)
- IV.B.1.f).(1).(b) helping to coordinate patient care across the health care continuum and beyond as relevant to their specialty; ^(Core)**

Background and Intent: Every patient deserves to be treated as a whole person. Therefore it is recognized that any one component of the health care system does not meet the totality of the patient's needs. An appropriate transition plan requires coordination and forethought by an interdisciplinary team. The patient benefits from proper care and the system benefits from proper use of resources.

- IV.B.1.f).(1).(c) **advocating for quality patient care and optimal patient care systems; ^(Core)**
- IV.B.1.f).(1).(d) **working in interprofessional teams to enhance patient safety and improve patient care quality; ^(Core)**
- IV.B.1.f).(1).(e) **participating in identifying system errors and implementing potential systems solutions; ^(Core)**
- IV.B.1.f).(1).(f) **incorporating considerations of value, cost awareness, delivery and payment, and risk-benefit analysis in patient and/or population-based care as appropriate; ^(Core)**
- IV.B.1.f).(1).(g) **understanding health care finances and its impact on individual patients' health decisions; ^(Core)**
- IV.B.1.f).(1).(h) participating in external quality assurance activities; and, ^(Core)

IV.B.1.f).(1).(i) participating in laboratory quality management including quality control and quality assurance. (Core)

IV.B.1.f).(2) Post-doctoral fellows must learn to advocate for patients within the health care system, directly or through collaboration with other providers, to achieve the patient's and family's care goals. (Core)

IV.C. Curriculum Organization and Post-Doctoral Fellow Experiences

IV.C.1. The curriculum must be structured to optimize post-doctoral fellow educational experiences, the length of these experiences, and supervisory continuity. (Core)

IV.C.1.a) The program must ensure:

IV.C.1.a).(1) adequate supervision during times of transition and hand-offs; (Core)

IV.C.1.a).(2) continuity of supervision at all participating sites; and, (Core)

IV.C.1.a).(3) exposure to and sufficient time in specialty clinics for residents. (Core)

Background and Intent: In some specialties, frequent rotational transitions, inadequate continuity of faculty member supervision, and dispersed patient care locations within the hospital or medical system, have adversely affected optimal post-doctoral fellow education and effective team-based care. The need for collaborative patient care continuity varies from specialty to specialty and by clinical situation, and may be addressed by the individual Review Committee.

IV.C.2. A program in laboratory genetics and genomics must provide the necessary formal education and clinical laboratory-based experience to allow post-doctoral fellows to develop the knowledge, skills, and professional attitudes required for the practice in the field. (Core)

IV.C.2.a) The 24 months of laboratory genetics and genomics education and training must include:

IV.C.2.a).(1) a two-week rotation in clinical biochemical genetics; (Core)

IV.C.2.a).(2) didactic course work and other educational opportunities; (Core)

IV.C.2.a).(3) eight months of constitutional/germline testing, including exposure to: (Core)

IV.C.2.a).(3).(a) prenatal/carrier testing and non-invasive prenatal testing; and, (Core)

- IV.C.2.a).(3).(b) postnatal (perinatal, pediatric, and adult non-obstetric) testing. ^(Core)
- IV.C.2.a).(4) eight months of experience in cancer testing with a focus on somatic analysis; and, ^(Core)
- IV.C.2.a).(5) 40 hours (the equivalent of 10 half days) in genetics and genomics clinics to gain clinical exposure. ^(Core)
- IV.C.2.b) Time spent in a specific clinical area of concentration must not exceed six months. ^(Core)
- IV.C.2.b).(1) Content of this concentration area must be determined with the program director no later than the beginning of the post-doctoral fellow's final year in the program, and must include a documented, structured, written plan based on the post-doctoral fellow's career goals. ^(Core)
- IV.C.2.c) Post-doctoral education must be integrated across cytogenetics and molecular genetics throughout the program. ^(Core)
- IV.C.2.d) Development of clinical laboratory methods or tests should be a component of training. ^(Detail)
- IV.C.3. Direct Patient Experience in Medical Genetics and Genomics
- IV.C.3.a) Post-doctoral fellows must have direct exposure to the clinical evaluation of patients, medical decision making, and genetic counseling. ^(Core)
- IV.C.3.a).(1) Post-doctoral fellows must participate in a minimum of 10 patient case conferences and the equivalent of 10 half-day clinics (i.e., 40 hours). ^(Core)
- IV.C.3.a).(2) Exposure to pre-conception/prenatal, neonatal/perinatal, pediatric, and adult non-obstetric patients with a variety of clinical indications should be included in the clinic experience. ^(Core)
- IV.C.4. Didactic Education
- The didactic curriculum must include:
- IV.C.4.a) clinical teaching conferences, to include formal sessions on clinical laboratory topics, medical genetics and genomics rounds, journal clubs, and follow-up conferences for genetic clinics; and, ^(Core)
- IV.C.4.b) lectures or other didactic sessions, on the following topics including: ^(Core)

- IV.C.4.b).(1) basic mechanisms of inheritance, including sex chromosomes, autosomes, and mitochondrial DNA; (Core)
- IV.C.4.b).(2) basic molecular biology techniques pertinent to clinical testing; (Core)
- IV.C.4.b).(3) Bayesian analysis and other methods of genetic risk assessment; (Core)
- IV.C.4.b).(4) behavior of genes in a population, including Hardy Weinberg equilibria of alleles; (Core)
- IV.C.4.b).(5) bioinformatic approaches to interpreting molecular test results, including methods to assign causation to novel findings; (Core)
- IV.C.4.b).(6) the cell cycle and molecular genetics of cancer; (Core)
- IV.C.4.b).(7) DNA, RNA, and protein chemistry, including DNA repair; (Core)
- IV.C.4.b).(8) gene expression and mechanisms of regulation of genes and genomes, including epigenetic regulation; (Core)
- IV.C.4.b).(9) genetic counseling; (Core)
- IV.C.4.b).(10) genetic linkage, mapping, and association studies; (Core)
- IV.C.4.b).(11) human embryology and development; (Core)
- IV.C.4.b).(12) inheritance of complex traits and genetic variation; (Core)
- IV.C.4.b).(13) mechanisms of chromosomal rearrangement; (Core)
- IV.C.4.b).(14) molecular organization of the genome, including molecular evolution mechanisms; (Core)
- IV.C.4.b).(15) principles of biochemical genetics and metabolism; and, (Core)
- IV.C.4.b).(16) principles of replication, recombination, and segregation of alleles during meiosis. (Core)
- IV.C.5. Research seminars should be provided as part of the educational experience. (Core)
- IV.C.6. Other Educational Opportunities
- Post-doctoral fellows should participate in a minimum of 20 hours over a period of 24 months in other educational opportunities, such as seminars,

journal clubs, rotations in a clinical chemistry laboratory, topics of which should broadly relate to medical genetics and genomics. ^(Detail)

IV.D. Scholarship

Medicine is both an art and a science. This requires the ability to think critically, evaluate the literature, appropriately assimilate new knowledge, and practice lifelong learning. The program and faculty must create an environment that fosters the acquisition of such skills through post-doctoral fellow participation in scholarly activities. Scholarly activities may include discovery, integration, application, and teaching.

The ACGME recognizes the diversity of post-doctoral education programs and anticipates that programs prepare specialists for a variety of roles, including contributors to clinical care, scientists, and educators. It is expected that the program's scholarship will reflect its mission(s) and aims, and the needs of the community it serves. For example, some programs may concentrate their scholarly activity on quality improvement, population health, and/or teaching, while other programs might choose to utilize more classic forms of biomedical research as the focus for scholarship.

IV.D.1. Program Responsibilities

- IV.D.1.a) The program must demonstrate evidence of scholarly activities consistent with its mission(s) and aims. ^(Core)
- IV.D.1.b) The program, in partnership with its Sponsoring Institution, must allocate adequate resources to facilitate post-doctoral fellow and faculty involvement in scholarly activities. ^(Core)
- IV.D.1.c) The program must advance post-doctoral fellows' knowledge and practice of the scholarly approach to evidence-based contributions to patient care. ^(Core)

Background and Intent: The scholarly approach can be defined as a synthesis of teaching, learning, and research with the aim of encouraging curiosity and critical thinking based on an understanding of physiology, pathophysiology, diagnostic testing, differential diagnosis, treatments, treatment alternatives, efficiency of care, and patient safety. While some faculty members are responsible for fulfilling the traditional elements of scholarship through research, integration, dissemination of new knowledge, and teaching, all faculty members are responsible for advancing post-doctoral fellows' scholarly approach to contributions to patient care.

Elements of a scholarly approach to patient care include:

- **Asking meaningful questions to stimulate post-doctoral fellows to utilize learning resources to identify appropriate testing and interpretation of clinical investigation, and contribute to a differential diagnosis, a diagnostic algorithm, and treatment plan**

- Challenging the evidence that the post-doctoral fellows use to reach their medical contributions so that they understand the benefits and limits of the medical literature
- When appropriate, dissemination of scholarly learning in a peer-reviewed manner (publication or presentation)
- Improving post-doctoral fellow learning by encouraging them to teach using a scholarly approach

The scholarly approach to patient care begins with curiosity, is grounded in the principles of evidence-based medicine, expands the knowledge base through dissemination, and develops the habits of lifelong learning by encouraging post-doctoral fellows to be scholarly teachers.

IV.D.2. Faculty Scholarly Activity

IV.D.2.a) Among their scholarly activity, programs must demonstrate accomplishments in at least three of the following domains:
(Core)

- Research in basic science, education, translational science, patient care, or population health
- Peer-reviewed grants
- Quality improvement and/or patient safety initiatives
- Systematic reviews, meta-analyses, review articles, chapters in medical textbooks, or case reports
- Creation of curricula, evaluation tools, didactic educational activities, or electronic educational materials
- Contribution to professional committees, educational organizations, or editorial boards
- Innovations in education

IV.D.2.b) The program must demonstrate dissemination of scholarly activity within and external to the program by the following methods:

Background and Intent: For the purposes of education, metrics of scholarly activity represent one of the surrogates for the program's effectiveness in the creation of an environment of inquiry that advances the post-doctoral fellows' scholarly approach to their contributions to patient care. The Review Committee will evaluate the dissemination of scholarship for the program as a whole, not for individual faculty members, for a five-year interval, for both core and non-core faculty members, with the goal of assessing the effectiveness of the creation of such an environment. The ACGME recognizes that there may be differences in scholarship requirements between different specialties and between programs in the same specialty or field.

IV.D.2.b).(1) faculty participation in grand rounds, posters, workshops, quality improvement presentations, podium presentations, grant leadership, non-peer-reviewed print/electronic resources, articles or

publications, book chapters, textbooks, webinars, service on professional committees, or serving as a journal reviewer, journal editorial board member, or editor. ^{(Outcome)‡}

IV.D.3. Post-Doctoral Fellow Scholarly Activity

IV.D.3.a) Post-doctoral fellows must participate in scholarship. ^(Core)

IV.D.3.a).(1) Each post-doctoral fellow must demonstrate scholarship through at least one scientific presentation, abstract, or publication. ^(Core)

V. Evaluation

V.A. Post-Doctoral Fellow Evaluation

V.A.1. Feedback and Evaluation

Background and Intent: Feedback is ongoing information provided regarding aspects of one's performance, knowledge, or understanding. The faculty empower post-doctoral fellows to provide much of that feedback themselves in a spirit of continuous learning and self-reflection. Feedback from faculty members in the context of routine clinical care should be frequent, and need not always be formally documented.

Formative and summative evaluation have distinct definitions. Formative evaluation is *monitoring post-doctoral fellow learning* and providing ongoing feedback that can be used by post-doctoral fellows to improve their learning in the context of provision of patient care or other educational opportunities. More specifically, formative evaluations help:

- post-doctoral fellows identify their strengths and weaknesses and target areas that need work
- program directors and faculty members recognize where post-doctoral fellows are struggling and address problems immediately

Summative evaluation is *evaluating a post-doctoral fellow's learning* by comparing the post-doctoral fellows against the goals and objectives of the rotation and program, respectively. Summative evaluation is utilized to make decisions about promotion to the next level of training, or program completion.

End-of-rotation and end-of-year evaluations have both summative and formative components. Information from a summative evaluation can be used formatively when post-doctoral fellows or faculty members use it to guide their efforts and activities in subsequent rotations and to successfully complete the post-doctoral education program.

Feedback, formative evaluation, and summative evaluation compare intentions with accomplishments, enabling the transformation of a neophyte specialist to one with growing expertise.

V.A.1.a) Faculty members must directly observe, evaluate, and frequently provide feedback on post-doctoral fellow performance during each rotation or similar educational assignment. ^(Core)

Background and Intent: Faculty members should provide feedback frequently throughout the course of each rotation. Post-doctoral fellows require feedback from faculty members to reinforce well-performed duties and tasks, as well as to correct deficiencies. This feedback will allow for the development of the learner as they strive to achieve the Milestones. More frequent feedback is strongly encouraged for post-doctoral fellows who have deficiencies that may result in a poor final rotation evaluation.

V.A.1.b) Evaluation must be documented at the completion of the assignment. ^(Core)

V.A.1.b).(1) For block rotations of greater than three months in duration, evaluation must be documented at least every three months. ^(Core)

V.A.1.b).(2) Longitudinal experiences must be evaluated at least every three months and at completion. ^(Core)

V.A.1.c) The program must provide an objective performance evaluation based on the Competencies and the specialty-specific Milestones, and must: ^(Core)

V.A.1.c).(1) use multiple evaluators (e.g., faculty members, peers, patients, self, and other professional staff members); and, ^(Core)

V.A.1.c).(2) provide that information to the Clinical Competency Committee for its synthesis of progressive post-doctoral fellow performance and improvement toward unsupervised practice. ^(Core)

V.A.1.d) The program director or their designee, with input from the Clinical Competency Committee, must:

V.A.1.d).(1) meet with and review with each post-doctoral fellow their documented semi-annual evaluation of performance, including progress along the specialty-specific Milestones; ^(Core)

V.A.1.d).(2) assist post-doctoral fellows in developing individualized learning plans to capitalize on their strengths and identify areas for growth; and, ^(Core)

V.A.1.d).(3) develop plans for post-doctoral fellows failing to progress, following institutional policies and procedures. ^(Core)

Background and Intent: Learning is an active process that requires effort from the teacher and the learner. Faculty members evaluate a post-doctoral fellow's performance at least at the end of each assignment. The program director or their designee will review those evaluations, including their progress on the Milestones, at a minimum of every six months. Post-doctoral fellows should be encouraged to reflect upon the evaluation, using the information to reinforce well-performed tasks or knowledge or to modify deficiencies in knowledge or practice. Working together with the faculty members, post-doctoral fellows should develop an individualized learning plan.

Post-doctoral fellows who are experiencing difficulties with achieving progress along the Milestones may require intervention to address specific deficiencies. Such intervention, documented in an individual remediation plan developed by the program director or a faculty mentor and the post-doctoral fellow, will take a variety of forms based on the specific learning needs of the post-doctoral fellow. However, the ACGME recognizes that there are situations which require more significant intervention that may alter the time course of post-doctoral fellow progression. To ensure due process, it is essential that the program director follow institutional policies and procedures.

- V.A.1.e) At least annually, there must be a summative evaluation of each post-doctoral fellow that includes their readiness to progress to the next year of the program, if applicable. (Core)
- V.A.1.f) The evaluations of a post-doctoral fellow's performance must be accessible for review by the post-doctoral fellow. (Core)
- V.A.2. Final Evaluation
- V.A.2.a) The program director must provide a final evaluation for each post-doctoral fellow upon completion of the program. (Core)
- V.A.2.a).(1) The specialty-specific Milestones, and, when applicable, the specialty-specific Case Logs, must be used as tools to ensure post-doctoral fellows are able to engage in autonomous practice upon completion of the program. (Core)
- V.A.2.a).(2) The final evaluation must:
- V.A.2.a).(2).(a) become part of the post-doctoral fellow's permanent record maintained by the institution, and must be accessible for review by the post-doctoral fellow in accordance with institutional policy; (Core)
- V.A.2.a).(2).(b) verify that the post-doctoral fellow has demonstrated the knowledge, skills, and behaviors necessary to enter autonomous practice; (Core)

V.A.2.a).(2).(c) consider recommendations from the Clinical Competency Committee; and, ^(Core)

V.A.2.a).(2).(d) be shared with the post-doctoral fellow upon completion of the program. ^(Core)

V.A.3. A Clinical Competency Committee must be appointed by the program director. ^(Core)

V.A.3.a) At a minimum, the Clinical Competency Committee must include three members of the program faculty, at least one of whom is a core faculty member. ^(Core)

V.A.3.a).(1) Additional members must be faculty members from the same program or other programs, or other health professionals who have extensive contact and experience with the program's post-doctoral fellows. ^(Core)

Background and Intent: The requirements regarding the Clinical Competency Committee do not preclude or limit a program director's participation on the Clinical Competency Committee. The intent is to leave flexibility for each program to decide the best structure for its own circumstances, but a program should consider: its program director's other roles as post-doctoral fellow advocate, advisor, and confidante; the impact of the program director's presence on the other Clinical Competency Committee members' discussions and decisions; the size of the program faculty; and other program-relevant factors. The program director has final responsibility for post-doctoral fellow evaluation and promotion decisions.

Program faculty may include more than the physician faculty members, such as other physicians and non-physicians who teach and evaluate the program's post-doctoral fellows. There may be additional members of the Clinical Competency Committee. Chief residents who have completed core residency programs in their specialty may be members of the Clinical Competency Committee.

V.A.3.b) The Clinical Competency Committee must:

V.A.3.b).(1) review all post-doctoral fellow evaluations at least semi-annually; ^(Core)

V.A.3.b).(2) determine each post-doctoral fellow's progress on achievement of the specialty-specific Milestones; and, ^(Core)

V.A.3.b).(3) meet prior to the post-doctoral fellows' semi-annual evaluations and advise the program director regarding each post-doctoral fellow's progress. ^(Core)

V.B. Faculty Evaluation

- V.B.1.** The program must have a process to evaluate each faculty member's performance as it relates to the educational program at least annually. ^(Core)

Background and Intent: The program director is responsible for the education program and for whom delivers it. While the term "faculty" may be applied to specialists within a given institution for other reasons, it is applied to post-doctoral education program faculty members only through approval by a program director. The development of the faculty improves the education, clinical, and research aspects of a program. Faculty members have a strong commitment to the post-doctoral fellow and desire to provide optimal education and work opportunities. Faculty members must be provided feedback on their contribution to the mission of the program. All faculty members who interact with post-doctoral fellows desire feedback on their education, clinical care, and research. If a faculty member does not interact with post-doctoral fellows, feedback is not required. With regard to the diverse operating environments and configurations, the post-doctoral education program director may need to work with others to determine the effectiveness of the program's faculty performance with regard to their role in the educational program. All teaching faculty members should have their educational efforts evaluated by the post-doctoral fellows in a confidential and anonymous manner. Other aspects for the feedback may include research or clinical productivity, review of patient outcomes, or peer review of scholarly activity. The process should reflect the local environment and identify the necessary information. The feedback from the various sources should be summarized and provided to the faculty on an annual basis by a member of the leadership team of the program.

- V.B.1.a)** This evaluation must include a review of the faculty member's clinical teaching abilities, engagement with the educational program, participation in faculty development related to their skills as an educator and clinical specialist, professionalism, and scholarly activities. ^(Core)
- V.B.1.b)** This evaluation must include written, confidential evaluations by the post-doctoral fellows. ^(Core)
- V.B.2.** Faculty members must receive feedback on their evaluations at least annually. ^(Core)
- V.B.3.** Results of the faculty educational evaluations should be incorporated into program-wide faculty development plans. ^(Core)

Background and Intent: The quality of the faculty's teaching and clinical care is a determinant of the quality of the program and the quality of the post-doctoral fellows' future contributions to clinical care. Therefore, the program has the responsibility to evaluate and improve the program faculty members' teaching, scholarship, professionalism, and quality care contributions. This section mandates annual review of the program's faculty members for this purpose, and can be used as input into the Annual Program Evaluation.

V.C. Program Evaluation and Improvement

- V.C.1.** The program director must appoint the Program Evaluation Committee to conduct and document the Annual Program Evaluation as part of the program’s continuous improvement process. ^(Core)
- V.C.1.a)** The Program Evaluation Committee must be composed of at least two program faculty members, at least one of whom is a core faculty member, and at least one post-doctoral fellow. ^(Core)
- V.C.1.b)** Program Evaluation Committee responsibilities must include:
- V.C.1.b).(1)** acting as an advisor to the program director, through program oversight; ^(Core)
- V.C.1.b).(2)** review of the program’s self-determined goals and progress toward meeting them; ^(Core)
- V.C.1.b).(3)** guiding ongoing program improvement, including development of new goals, based upon outcomes; and, ^(Core)
- V.C.1.b).(4)** review of the current operating environment to identify strengths, challenges, opportunities, and threats as related to the program’s mission and aims. ^(Core)

Background and Intent: In order to achieve its mission and train quality specialists, a program must evaluate its performance and plan for improvement in the Annual Program Evaluation. Performance of post-doctoral fellows and faculty members is a reflection of program quality, and can use metrics that reflect the goals that a program has set for itself. The Program Evaluation Committee utilizes outcome parameters and other data to assess the program’s progress toward achievement of its goals and aims.

- V.C.1.c)** The Program Evaluation Committee should consider the following elements in its assessment of the program:
- V.C.1.c).(1)** curriculum; ^(Core)
- V.C.1.c).(2)** outcomes from prior Annual Program Evaluation(s); ^(Core)
- V.C.1.c).(3)** ACGME letters of notification, including citations, Areas for Improvement, and comments; ^(Core)
- V.C.1.c).(4)** quality and safety of patient care; ^(Core)
- V.C.1.c).(5)** aggregate post-doctoral fellow and faculty:
- V.C.1.c).(5).(a)** well-being; ^(Core)

- V.C.1.c).(5).(b) recruitment and retention; ^(Core)
- V.C.1.c).(5).(c) workforce diversity; ^(Core)
- V.C.1.c).(5).(d) engagement in quality improvement and patient safety; ^(Core)
- V.C.1.c).(5).(e) scholarly activity; ^(Core)
- V.C.1.c).(5).(f) ACGME Resident and Faculty Surveys; and, ^(Core)
- V.C.1.c).(5).(g) written evaluations of the program. ^(Core)
- V.C.1.c).(6) aggregate post-doctoral fellow:
- V.C.1.c).(6).(a) achievement of the Milestones; ^(Core)
- V.C.1.c).(6).(b) in-training examinations (where applicable); ^(Core)
- V.C.1.c).(6).(c) board pass and certification rates; and, ^(Core)
- V.C.1.c).(6).(d) graduate performance. ^(Core)
- V.C.1.c).(7) aggregate faculty:
- V.C.1.c).(7).(a) evaluation; and, ^(Core)
- V.C.1.c).(7).(b) professional development. ^(Core)
- V.C.1.d) The Program Evaluation Committee must evaluate the program's mission and aims, strengths, areas for improvement, and threats. ^(Core)
- V.C.1.e) The annual review, including the action plan, must:
- V.C.1.e).(1) be distributed to and discussed with the members of the teaching faculty and the post-doctoral fellows; and, ^(Core)
- V.C.1.e).(2) be submitted to the DIO. ^(Core)
- V.C.2. The program must complete a Self-Study prior to its 10-Year Accreditation Site Visit. ^(Core)
- V.C.2.a) A summary of the Self-Study must be submitted to the DIO. ^(Core)

<p>Background and Intent: Outcomes of the documented Annual Program Evaluation can be integrated into the 10-year Self-Study process. The Self-Study is an objective,</p>
--

comprehensive evaluation of the post-doctoral education program, with the aim of improving it. Underlying the Self-Study is this longitudinal evaluation of the program and its learning environment, facilitated through sequential Annual Program Evaluations that focus on the required components, with an emphasis on program strengths and self-identified areas for improvement. Details regarding the timing and expectations for the Self-Study and the 10-Year Accreditation Site Visit are provided in the *ACGME Manual of Policies and Procedures*. Additionally, a description of the [Self-Study process](#), as well as information on how to prepare for the [10-Year Accreditation Site Visit](#), is available on the ACGME website.

- V.C.3.** *One goal of ACGME-accredited education is to educate specialists who seek and achieve board certification. One measure of the effectiveness of the educational program is the ultimate certifying exam pass rate.*
- The program director should encourage all eligible program graduates to take the certifying examination offered by the applicable American Board of Medical Specialties (ABMS) member board or American Osteopathic Association (AOA) certifying board.*
- V.C.3.a)** For specialties in which the ABMS member board and/or AOA certifying board offer(s) an annual written exam, in the preceding three years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that specialty.
(Outcome)
- V.C.3.b)** For specialties in which the ABMS member board and/or AOA certifying board offer(s) a biennial written exam, in the preceding six years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that specialty.
(Outcome)
- V.C.3.c)** For specialties in which the ABMS member board and/or AOA certifying board offer(s) an annual oral exam, in the preceding three years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that specialty.
(Outcome)
- V.C.3.d)** For specialties in which the ABMS member board and/or AOA certifying board offer(s) a biennial oral exam, in the preceding six years, the program's aggregate pass rate of those taking the examination for the first time must be higher than the bottom fifth percentile of programs in that specialty. (Outcome)
- V.C.3.e)** For each of the exams referenced in V.C.3.a)-d), any program whose graduates over the time period specified in the requirement have achieved an 80 percent pass rate will have

met this requirement, no matter the percentile rank of the program for pass rate in that specialty. ^(Outcome)

Background and Intent: Setting a single standard for pass rate that works across specialties is not supportable based on the heterogeneity of the psychometrics of different examinations. By using a percentile rank, the performance of the lower five percent (fifth percentile) of programs can be identified and set on a path to curricular and test preparation reform.

There are specialties where there is a very high board pass rate that could leave successful programs in the bottom five percent (fifth percentile) despite admirable performance. These high-performing programs should not be cited, and V.C.3.e) is designed to address this.

V.C.3.f) Programs must report, in ADS, board certification status annually for the cohort of board-eligible post-doctoral fellows that graduated seven years earlier. ^(Core)

Background and Intent: It is essential that post-doctoral education programs demonstrate knowledge and skill transfer to their post-doctoral fellows. One measure of that is the qualifying or initial certification exam pass rate. Another important parameter of the success of the program is the ultimate board certification rate of its graduates. Graduates are eligible for up to seven years from post-doctoral education program graduation for initial certification. The ACGME will calculate a rolling three-year average of the ultimate board certification rate at seven years post-graduation, and the Review Committees will monitor it.

The Review Committees will track the rolling seven-year certification rate as an indicator of program quality. Programs are encouraged to monitor their graduates' performance on board certification examinations.

In the future, the ACGME may establish parameters related to ultimate board certification rates.

VI. The Learning and Working Environment

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

- *Excellence in the safety and quality of contributions to care of patients by post-doctoral fellows today*
- *Excellence in the safety and quality of care rendered to patients by today's post-doctoral 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 specialists*

- *the joy of curiosity, problem-solving, intellectual rigor, and discovery*
- *Commitment to the well-being of the students, post-doctoral fellows, faculty members, and all members of the health care team*

Background and Intent: The revised requirements are intended to provide greater flexibility within an established framework, allowing programs and post-doctoral fellows more discretion to structure clinical education in a way that best supports the above principles of professional development. With this increased flexibility comes the responsibility for programs and post-doctoral fellows to adhere to the 80-hour maximum weekly limit (unless a rotation-specific exception is granted by a Review Committee), and to utilize flexibility in a manner that optimizes patient safety, post-doctoral fellow education, and post-doctoral fellow well-being. The requirements are intended to support the development of a sense of professionalism by encouraging post-doctoral fellows to make decisions based on patient needs and their own well-being, without fear of jeopardizing their program's accreditation status. In addition, the proposed requirements eliminate the burdensome documentation requirement for post-doctoral fellows to justify clinical and educational work hour variations.

Clinical and educational work hours represent only one part of the larger issue of conditions of the learning and working environment, and Section VI has now been expanded to include greater attention to patient safety and post-doctoral fellow and faculty member well-being. The requirements are intended to support programs and post-doctoral fellows as they strive for excellence, while also ensuring ethical, humanistic training. Ensuring that flexibility is used in an appropriate manner is a shared responsibility of the program and post-doctoral fellows. With this flexibility comes a responsibility for post-doctoral fellows and faculty members to recognize the need to hand off their contributions to care of patients to another provider when a post-doctoral fellow is too fatigued to provide safe, high quality care and for programs to ensure that post-doctoral fellows remain within the 80-hour maximum weekly limit.

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

VI.A.1. Patient Safety and Quality Improvement

All specialists share responsibility for contributing to patient safety and enhancing quality of patient care. Graduate medical education in a medical-related field must prepare post-doctoral fellows to provide the highest level of clinical care with continuous focus on the safety, individual needs, and humanity of patients. It is the right of each patient to receive contributions to their care by post-doctoral 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.

Post-doctoral fellows must demonstrate the ability to analyze the contributions to care they provide, understand their roles within health care teams, and play an active role in system improvement processes. Graduating post-doctoral fellows will apply these skills

to critique their future unsupervised contributions to care and effect quality improvement measures.

It is necessary for post-doctoral 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, post-doctoral fellows, 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)

Background and Intent: Optimal patient safety occurs in the setting of a coordinated interprofessional learning and working environment.

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) Post-doctoral fellows, 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) Post-doctoral 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) **Post-Doctoral 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 specialists to model, and for post-doctoral fellows to develop and apply.*
- VI.A.1.a).(4).(a) All post-doctoral fellows must receive training in how to disclose adverse events. (Core)
- VI.A.1.a).(4).(b) Post-doctoral 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) Post-doctoral 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)

Post-doctoral 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)

Post-doctoral 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 specialist is ultimately responsible for the care of the patient, every specialist 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 contributions to patient care.

Supervision in the setting of graduate medical education provides safe and effective contributions to care of patients; ensures each post-doctoral fellow's development of the skills, knowledge, and attitudes required to enter the unsupervised participation in care; 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 specialist 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 post-doctoral fellows, faculty members, other

members of the health care team, and patients.
(Core)

VI.A.2.a).(1).(b)

Post-doctoral fellows and faculty members must ensure patients are informed of the specialist involved in their care, and of their respective roles in contributing to patient care.
(Core)

VI.A.2.b)

Supervision may be exercised through a variety of methods. For many aspects of patient care, the supervising specialist may be a more advanced post-doctoral fellow or physician fellow. Other portions of care provided by the post-doctoral fellow can be adequately supervised by the appropriate availability of the supervising faculty member, fellow, or senior post-doctoral fellow, either on site or by means of telecommunication technology. Some activities require the physical presence of the supervising faculty member. In some circumstances, supervision may include post-hoc review of post-doctoral fellow-delivered care with feedback.

Background and Intent: Appropriate supervision is essential for patient safety and high-quality teaching. Supervision is also contextual. There is tremendous diversity of fellow patient interactions, education and training locations, and fellow skills and abilities even at the same level of the educational program. The degree of supervision is expected to evolve progressively as a fellow gains more experience, even with the same patient condition or procedure. All fellows have a level of supervision commensurate with their level of autonomy in practice; this level of supervision may be enhanced based on factors such as patient safety, complexity, acuity, urgency, risk of serious adverse events, or other pertinent variables.

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

The program must demonstrate that the appropriate level of supervision in place for all post-doctoral fellows is based on each post-doctoral 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.b).(2)

The program must define when physical presence of a supervising specialist is required. (Core)

VI.A.2.c)

Levels of Supervision

To promote appropriate post-doctoral 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:

VI.A.2.c).(1).(a)	the supervising specialist is physically present with the post-doctoral fellow during the key portions of the interactions around patient care; or, ^(Core)
VI.A.2.c).(1).(a).(i)	Post-doctoral fellows must initially be supervised directly, only as described in VI.A.2.c).(1).(a). ^(Core)
VI.A.2.c).(1).(a).(ii)	Hands-on wet lab work performed by post-doctoral fellows must be done under direct supervision where the supervising specialist is physically present. ^(Core)
VI.A.2.c).(1).(b)	the supervising specialist and/or patient is not physically present with the post-doctoral fellow and the supervising specialist is concurrently monitoring the patient care through appropriate telecommunication technology. ^(Core)
VI.A.2.c).(1).(b).(i)	Direct supervision through appropriate telecommunication technology must be limited to:
VI.A.2.c).(1).(b).(i).(a)	discussions with faculty members, staff members, and other health care professionals regarding report interpretations; ^(Core)
VI.A.2.c).(1).(b).(i).(b)	clinic appointments held via telehealth methods; and, ^(Core)
VI.A.2.c).(1).(b).(i).(c)	remotely viewing laboratory data in the course of interpreting results and issuing reports. ^(Core)
VI.A.2.c).(2)	Indirect Supervision: the supervising specialist is not providing physical or concurrent visual or audio supervision but is immediately available to the post-doctoral fellow for guidance and is available to provide appropriate direct supervision. ^(Core)
VI.A.2.c).(3)	Oversight – the supervising specialist is available to provide review of post-doctoral fellow involvement in 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 contributions to patient care delegated to each post-doctoral

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

- VI.A.2.d).(1)** **The program director must evaluate each post-doctoral fellow’s abilities based on specific criteria, guided by the Milestones.** ^(Core)
- VI.A.2.d).(2)** **Faculty members functioning as supervising specialists must delegate portions of care involvement to post-doctoral fellows based on contributions to care needed and the skills of each post-doctoral fellow.** ^(Core)
- VI.A.2.d).(3)** **Senior post-doctoral fellows should serve in a supervisory role to junior post-doctoral fellows in recognition of their progress toward independence, based on the contributions to care needed for each patient and the skills of the individual post-doctoral fellow or fellow.** ^(Detail)
- VI.A.2.e)** **Programs must set guidelines for circumstances and events in which post-doctoral fellows must communicate with the supervising faculty member(s).** ^(Core)
- VI.A.2.e).(1)** **Each post-doctoral fellow must know the limits of their scope of authority, and the circumstances under which the post-doctoral fellow is permitted to act with conditional independence.** ^(Outcome)

Background and Intent: The ACGME Glossary of Terms defines conditional independence as: Graded, progressive responsibility for patient care with defined oversight.
--

- VI.A.2.f)** **Faculty supervision assignments must be of sufficient duration to assess the knowledge and skills of each post-doctoral fellow and to delegate to the post-doctoral fellow the appropriate level of involvement in patient care authority and responsibility.** ^(Core)
- VI.B. Professionalism**
- VI.B.1.** **Programs, in partnership with their Sponsoring Institutions, must educate post-doctoral fellows and faculty members concerning the professional responsibilities of specialists, 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 post-doctoral fellows to fulfill non-specialist obligations; and, ^(Core)

Background and Intent: Routine reliance on post-doctoral fellows to fulfill non-specialist obligations increases work compression for post-doctoral fellows and does not provide an optimal educational experience. Non-specialist obligations are those duties which in most institutions are performed by nursing and allied health professionals, transport services, or clerical staff. Examples of such obligations include transport of patients from the wards or units for procedures elsewhere in the hospital; routine blood drawing for laboratory tests; routine monitoring of patients when off the ward; and clerical duties, such as scheduling. While it is understood that post-doctoral fellows may be expected to do any of these things on occasion when the need arises, these activities should not be performed by post-doctoral fellows routinely and must be kept to a minimum to optimize post-doctoral fellow education.

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

Background and Intent: The Common Program Requirements do not define “manageable patient care responsibilities” as this is variable by specialty. Review Committees will provide further detail regarding patient care responsibilities in the applicable specialty-specific Program Requirements and accompanying FAQs. However, all programs, regardless of specialty, should carefully assess how the assignment of contributions to patient care responsibilities can affect work compression, especially at the entry level.

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. Post-doctoral fellows and faculty members must demonstrate an understanding of their personal role in the:

VI.B.4.a) contributions to 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)

Background and Intent: This requirement emphasizes that responsibility for reporting unsafe conditions and adverse events is shared by all members of the team and is not solely the responsibility of the post-doctoral fellow.

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

Background and Intent: This requirement emphasizes the professional responsibility of faculty members and post-doctoral fellows to arrive for work adequately rested and ready to contribute to the care of patients. It is also the responsibility of faculty members, post-doctoral fellows, and other members of the care team to be observant, to intervene, and/or to escalate their concern about post-doctoral fellow and faculty

member fitness for work, depending on the situation, and in accordance with institutional policies.

- 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 contributions to 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 post-doctoral 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 their role in that patient's care to another qualified and rested provider. (Outcome)
- VI.B.6. Programs, in partnership with their Sponsoring Institutions, must provide a professional, equitable, respectful, and civil environment that is free from discrimination, sexual and other forms of harassment, mistreatment, abuse, or coercion of students, post-doctoral fellows, faculty, and staff. (Core)
- VI.B.7. Programs, in partnership with their Sponsoring Institutions, should have a process for education of post-doctoral fellows and faculty regarding unprofessional behavior and a confidential process for reporting, investigating, and addressing such concerns. (Core)

VI.C. Well-Being

Psychological, emotional, and physical well-being are critical in the development of the competent, caring, and resilient specialist and require proactive attention to life inside and outside of medicine. Well-being requires that specialists retain the joy in medicine while managing their own real-life stresses. Self-care and responsibility to support other members of the health care team are important components of professionalism; they are also skills that must be modeled, learned, and nurtured in the context of other aspects of post-doctoral education.

Post-doctoral fellows and faculty members are at risk for burnout and depression. Programs, in partnership with their Sponsoring Institutions, have the same responsibility to address well-being as other aspects of post-doctoral fellow competence. Specialists and all members of the health care team share responsibility for the well-being of each other. For

example, a culture which encourages covering for colleagues after an illness without the expectation of reciprocity reflects the ideal of professionalism. A positive culture in a clinical learning environment models constructive behaviors, and prepares post-doctoral fellows with the skills and attitudes needed to thrive throughout their careers.

Background and Intent: The ACGME is committed to addressing well-being for individuals and as it relates to the learning and working environment. The creation of a learning and working environment with a culture of respect and accountability for specialist well-being is crucial to specialists' ability to deliver the safest, best possible care to patients. The ACGME is leveraging its resources in four key areas to support the ongoing focus on physician well-being: education, influence, research, and collaboration. Information regarding the ACGME's ongoing efforts in this area is available on the ACGME website: www.acgme.org/physicianwellbeing.

The ACGME also created a repository for well-being materials, assessments, presentations, and more on the [Well-Being Tools and Resources page](#) in Learn at ACGME for programs seeking to develop or strengthen their own well-being initiatives. There are many activities that programs can implement now to assess and support specialist well-being. These include the distribution and analysis of culture of safety surveys, ensuring the availability of counseling services, and paying attention to the safety of the entire health care team.

- VI.C.1.** The responsibility of the program, in partnership with the Sponsoring Institution, to address well-being must include:
- VI.C.1.a)** efforts to enhance the meaning that each post-doctoral fellow finds in the experience of being a specialist, including protecting time with patients, minimizing non-specialist 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 post-doctoral fellow well-being; ^(Core)
 - VI.C.1.c)** evaluating workplace safety data and addressing the safety of post-doctoral fellows and faculty members; ^(Core)

Background and Intent: This requirement emphasizes the responsibility shared by the Sponsoring Institution and its programs to gather information and utilize systems that monitor and enhance post-doctoral fellow and faculty member safety, including physical safety. Issues to be addressed include, but are not limited to, monitoring of workplace injuries, physical or emotional violence, vehicle collisions, and emotional well-being after adverse events.

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

Background and Intent: Well-being includes having time away from work to engage with family and friends, as well as to attend to personal needs and to one's own health, including adequate rest, healthy diet, and regular exercise.

VI.C.1.d).(1)

Post-doctoral fellows must be given the opportunity to attend medical, mental health, and dental care appointments, including those scheduled during their working hours. ^(Core)

Background and Intent: The intent of this requirement is to ensure that post-doctoral fellows have the opportunity to access medical and dental care, including mental health care, at times that are appropriate to their individual circumstances. Post-doctoral fellows must be provided with time away from the program as needed to access care, including appointments scheduled during their working hours.

VI.C.1.e)

attention to post-doctoral fellow and faculty member burnout, depression, and substance use disorder. The program, in partnership with its Sponsoring Institution, must educate faculty members and post-doctoral fellows in identification of the symptoms of burnout, depression, and substance use disorder, including means to assist those who experience these conditions. Post-doctoral 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)

Background and Intent: Programs and Sponsoring Institutions are encouraged to review materials in order to create systems for identification of burnout, depression, and substance use disorder. Materials and more information are available in Learn at ACGME (<https://dl.acgme.org/pages/well-being-tools-resources>).

VI.C.1.e).(1)

encourage post-doctoral fellows and faculty members to alert the program director or other designated personnel or programs when they are concerned that another post-doctoral fellow, resident, fellow, or faculty member may be displaying signs of burnout, depression, a substance use disorder, suicidal ideation, or potential for violence; ^(Core)

Background and Intent: Individuals experiencing burnout, depression, a substance use disorder, and/or suicidal ideation are often reluctant to reach out for help due to the stigma associated with these conditions, and are concerned that seeking help may have a negative impact on their career. Recognizing that specialists are at increased risk in these areas, it is essential that post-doctoral fellows and faculty members are able to report their concerns when another post-doctoral fellow or faculty member displays signs of any of these conditions, so that the program director or other designated personnel, such as the department chair, may assess the situation and intervene as necessary to facilitate access to appropriate care. Post-doctoral fellows and faculty members must know which personnel, in addition to the program director, have been designated with this responsibility; those personnel and the program director should be

familiar with the institution's impaired specialist policy and any employee health, employee assistance, and/or wellness programs within the institution. In cases of specialist impairment, the program director or designated personnel should follow the policies of their institution for reporting.

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)

Background and Intent: The intent of this requirement is to ensure that post-doctoral fellows have immediate access at all times to a mental health professional (psychiatrist, psychologist, Licensed Clinical Social Worker, Primary Mental Health Nurse Practitioner, or Licensed Professional Counselor) for urgent or emergent mental health issues. In-person, telemedicine, or telephonic means may be utilized to satisfy this requirement. Care in the Emergency Department may be necessary in some cases, but not as the primary or sole means to meet the requirement.

The reference to affordable counseling is intended to require that financial cost not be a barrier to obtaining care.

VI.C.2. There are circumstances in which post-doctoral fellows may be unable to attend work, including but not limited to fatigue, illness, family emergencies, and parental leave. Each program must allow an appropriate length of absence for post-doctoral fellows unable to perform their patient care responsibilities. ^(Core)

VI.C.2.a) The program must have policies and procedures in place to ensure coverage of their contributions to patient care. ^(Core)

VI.C.2.b) These policies must be implemented without fear of negative consequences for the post-doctoral fellow who is or was unable to provide the clinical work. ^(Core)

Background and Intent: Post-doctoral fellows may need to extend their length of training depending on length of absence and specialty board eligibility requirements. Teammates should assist colleagues in need and equitably reintegrate them upon return.

VI.D. Fatigue Mitigation

VI.D.1. Programs must:

VI.D.1.a) educate all faculty members and post-doctoral fellows to recognize the signs of fatigue and sleep deprivation; ^(Core)

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

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

Background and Intent: Contributing to medical care is physically and mentally demanding. Night shifts, even for those who have had enough rest, cause fatigue. Experiencing fatigue in a supervised environment during training prepares post-doctoral fellows for managing fatigue in practice. It is expected that programs adopt fatigue mitigation processes and ensure that there are no negative consequences and/or stigma for using fatigue mitigation strategies.

This requirement emphasizes the importance of adequate rest before and after clinical responsibilities. Strategies that may be used include, but are not limited to, strategic napping; the judicious use of caffeine; availability of other caregivers; time management to maximize sleep off-duty; learning to recognize the signs of fatigue, and self-monitoring performance and/or asking others to monitor performance; remaining active to promote alertness; maintaining a healthy diet; using relaxation techniques to fall asleep; maintaining a consistent sleep routine; exercising regularly; increasing sleep time before and after call; and ensuring sufficient sleep recovery periods.

VI.D.2. Each program must ensure continuity of involvement with patient care, consistent with the program's policies and procedures referenced in VI.C.2–VI.C.2.b), in the event that a post-doctoral fellow may be unable to perform their role in patient care 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 post-doctoral 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 care contributions for each post-doctoral fellow must be based on PGY level, patient safety, post-doctoral fellow ability, severity and complexity of patient illness/condition, and available support services. (Core)

Background and Intent: The changing clinical care environment of medicine has meant that work compression due to high complexity has increased stress on post-doctoral fellows. Faculty members and program directors need to make sure post-doctoral fellows function in an environment that allows them to safely contribute to patient care and have a sense of post-doctoral fellow well-being. Some Review Committees have addressed this by setting limits on care assignments, and it is an essential

responsibility of the program director to monitor post-doctoral fellow workload. Workload should be distributed among the post-doctoral fellow team and interdisciplinary teams to minimize work compression.

VI.E.2. Teamwork

Post-doctoral fellows must contribute to 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 involvement, 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 post-doctoral 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 post-doctoral fellows currently responsible for care. ^(Core)

VI.E.3.e) Each program must ensure continuity of patient care contributions, consistent with the program's policies and procedures referenced in VI.C.2–VI.C.2.b), in the event that a post-doctoral 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 post-doctoral fellows with educational and clinical experience opportunities, as well as reasonable opportunities for rest and personal activities.

Background and Intent: In the new requirements, the terms “clinical experience and education,” “clinical and educational work,” and “clinical and educational work hours” replace the terms “duty hours,” “duty periods,” and “duty.” These changes have been made in response to concerns that the previous use of the term “duty” in reference to

number of hours worked may have led some to conclude that post-doctoral fellows' duty to "clock out" on time superseded their duty to their patients.

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)

Background and Intent: Programs and post-doctoral fellows have a shared responsibility to ensure that the 80-hour maximum weekly limit is not exceeded. While the requirement has been written with the intent of allowing post-doctoral fellows to remain beyond their scheduled work periods to contribute to patient care or participate in an educational activity, these additional hours must be accounted for in the allocated 80 hours when averaged over four weeks.

Scheduling

While the ACGME acknowledges that, on rare occasions, a post-doctoral fellow may work in excess of 80 hours in a given week, all programs and post-doctoral fellows utilizing this flexibility will be required to adhere to the 80-hour maximum weekly limit when averaged over a four-week period. Programs that regularly schedule post-doctoral fellows to work 80 hours per week and still permit post-doctoral fellows to remain beyond their scheduled work period are likely to exceed the 80-hour maximum, which would not be in substantial compliance with the requirement. These programs should adjust schedules so that post-doctoral fellows are scheduled to work fewer than 80 hours per week, which would allow post-doctoral fellows to remain beyond their scheduled work period when needed without violating the 80-hour requirement. Programs may wish to consider using night float and/or making adjustments to the frequency of in-house call to ensure compliance with the 80-hour maximum weekly limit.

Oversight

With increased flexibility introduced into the Requirements, programs permitting this flexibility will need to account for the potential for post-doctoral fellows to remain beyond their assigned work periods when developing schedules, to avoid exceeding the 80-hour maximum weekly limit, averaged over four weeks. The ACGME Review Committees will strictly monitor and enforce compliance with the 80-hour requirement. Where violations of the 80-hour requirement are identified, programs will be subject to citation and at risk for an adverse accreditation action.

Work from Home

While the requirement specifies that clinical work done from home must be counted toward the 80-hour maximum weekly limit, the expectation remains that scheduling be structured so that post-doctoral fellows are able to complete most work on site during scheduled clinical work hours without requiring them to take work home. The new requirements acknowledge the changing landscape of medicine, including electronic health records, and the resulting increase in the amount of work post-doctoral fellows choose to do from home. The requirement provides flexibility for post-doctoral fellows to do this while ensuring that the time spent by post-doctoral fellows completing clinical work from home is accomplished within the 80-hour weekly maximum. Types of work

from home that must be counted include using an electronic health record and taking calls from home. Reading done in preparation for the following day's cases, studying, and research done from home do not count toward the 80 hours. Post-doctoral fellow decisions to leave the hospital before their clinical work has been completed and to finish that work later from home should be made in consultation with the post-doctoral fellow's supervisor. In such circumstances, post-doctoral fellows should be mindful of their professional responsibility to complete work in a timely manner and to maintain patient confidentiality.

During the public comment period many individuals raised questions and concerns related to this change. Some questioned whether minute by minute tracking would be required; in other words, if a post-doctoral fellow spends three minutes on a phone call and then a few hours later spends two minutes on another call, will the post-doctoral fellow need to report that time. Others raised concerns related to the ability of programs and institutions to verify the accuracy of the information reported by post-doctoral fellows. The new requirements are not an attempt to micromanage this process. Post-doctoral fellows are to track the time they spend on clinical contributions from home and to report that time to the program. Decisions regarding whether to report infrequent phone calls of very short duration will be left to the individual post-doctoral fellow. Programs will need to factor in time post-doctoral fellows are spending on clinical work at home when schedules are developed to ensure that post-doctoral fellows are not working in excess of 80 hours per week, averaged over four weeks. There is no requirement that programs assume responsibility for documenting this time. Rather, the program's responsibility is ensuring that post-doctoral fellows report their time from home and that schedules are structured to ensure that post-doctoral fellows are not working in excess of 80 hours per week, averaged over four weeks.

PGY-1 and PGY-2 Post-Doctoral Fellows

Post-doctoral fellows may not have the experience to make decisions about when it is appropriate to utilize flexibility or may feel pressured to use it when unnecessary. Programs are responsible for ensuring that post-doctoral fellows are provided with manageable workloads that can be accomplished during scheduled work hours. This includes ensuring that a post-doctoral fellow's assignments are manageable, that post-doctoral fellows have appropriate support from their clinical collaborators, and that these post-doctoral fellows are not overburdened with clerical work and/or other non-specialist duties.

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

VI.F.2.b) Post-doctoral fellows should have eight hours off between scheduled clinical work and education periods. ^(Detail)

VI.F.2.b).(1) There may be circumstances when post-doctoral fellows choose to stay to contribute to the care of 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)

Background and Intent: While it is expected that post-doctoral fellow schedules will be structured to ensure that post-doctoral fellows are provided with a minimum of eight hours off between scheduled work periods, it is recognized that post-doctoral fellows may choose to remain beyond their scheduled time, or return to the clinical site during this time-off period, to care for a patient. The requirement preserves the flexibility for post-doctoral fellows to make those choices. It is also noted that the 80-hour weekly limit (averaged over four weeks) is a deterrent for scheduling fewer than eight hours off between clinical and education work periods, as it would be difficult for a program to design a schedule that provides fewer than eight hours off without violating the 80-hour rule.

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

Background and Intent: Post-doctoral fellows have a responsibility to return to work rested, and thus are expected to use this time away from work to get adequate rest. In support of this goal, post-doctoral fellows are encouraged to prioritize sleep over other discretionary activities.

VI.F.2.d) **Post-doctoral 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)

Background and Intent: The requirement provides flexibility for programs to distribute days off in a manner that meets program and post-doctoral fellow needs. It is strongly recommended that post-doctoral fellows' preference regarding how their days off are distributed be considered as schedules are developed. It is desirable that days off be distributed throughout the month, but some post-doctoral fellows may prefer to group their days off to have a "golden weekend," meaning a consecutive Saturday and Sunday free from work. The requirement for one free day in seven should not be interpreted as precluding a golden weekend. Where feasible, schedules may be designed to provide post-doctoral fellows with a weekend, or two consecutive days, free of work. The applicable Review Committee will evaluate the number of consecutive days of work and determine whether they meet educational objectives. Programs are encouraged to distribute days off in a fashion that optimizes post-doctoral fellow well-being, and educational and personal goals. It is noted that a day off is defined in the ACGME Glossary of Terms as "one (1) continuous 24-hour period free from all administrative, clinical, and educational activities."

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

VI.F.3.a) **Clinical and educational work periods for post-doctoral 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 post-doctoral fellow education. ^(Core)

VI.F.3.a).(1).(a) Additional patient care responsibilities must not be assigned to a post-doctoral fellow during this time. ^(Core)

Background and Intent: The additional time referenced in VI.F.3.a).(1) should not be used for contributions to the care of new patients. It is essential that the post-doctoral fellow continue to function as a member of the team in an environment where other members of the team can assess post-doctoral fellow fatigue, and that supervision for post-call post-doctoral fellows is provided. This 24 hours and up to an additional four hours must occur within the context of 80-hour weekly limit, averaged over four weeks.

VI.F.4. Clinical and Educational Work Hour Exceptions

VI.F.4.a) In rare circumstances, after handing off all other responsibilities, a post-doctoral 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 help 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)

Background and Intent: This requirement is intended to provide post-doctoral fellows with some control over their schedules by providing the flexibility to voluntarily remain beyond the scheduled responsibilities under the circumstances described above. It is important to note that a post-doctoral fellow may remain to attend a conference, or return for a conference later in the day, only if the decision is made voluntarily. Post-doctoral fellows must not be required to stay. Programs allowing post-doctoral fellows to remain or return beyond the scheduled work and clinical education period must ensure that the decision to remain is initiated by the post-doctoral fellow and that post-doctoral fellows are not coerced. This additional time must be counted toward the 80-hour maximum weekly limit.

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

The Review Committee for Medical Genetics and Genomics will not consider requests for exceptions to the 80-hour limit to a post-doctoral fellow's work week.

VI.F.5. Moonlighting

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

VI.F.5.b) Time spent by post-doctoral 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.5.c) PGY-1 post-doctoral fellows are not permitted to moonlight. (Core)

Background and Intent: For additional clarification of the expectations related to moonlighting, please refer to the Common Program Requirement FAQs (available at <http://www.acgme.org/What-We-Do/Accreditation/Common-Program-Requirements>).

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)

Background and Intent: The requirement for no more than six consecutive nights of night float was removed to provide programs with increased flexibility in scheduling.

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

Post-doctoral 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 post-doctoral 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 post-doctoral fellow. (Core)

VI.F.8.b)

Post-doctoral fellows are permitted to return to the hospital while on at-home call to provide contributions to care directly for new or established patients. These hours of inpatient patient care must be included in the 80-hour maximum weekly limit. ^(Detail)

Background and Intent: This requirement has been modified to specify that clinical work done from home when a post-doctoral fellow is taking at-home call must count toward the 80-hour maximum weekly limit. This change acknowledges the often significant amount of time post-doctoral fellows devote to clinical activities when taking at-home call, and ensures that taking at-home call does not result in post-doctoral fellows routinely working more than 80 hours per week. At-home call activities that must be counted include responding to phone calls and other forms of communication, as well as documentation, such as entering notes in an electronic health record. Activities such as reading about the next day's case, studying, or research activities do not count toward the 80-hour weekly limit.

In their evaluation of post-doctoral education programs, Review Committees will look at the overall impact of at-home call on post-doctoral fellow rest and personal time.

***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 with or applying for Osteopathic Recognition, the Osteopathic Recognition Requirements also apply (www.acgme.org/OsteopathicRecognition).