



**Accreditation Council for
Graduate Medical Education**

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

Proposed new requirements, posted for review and comment June 14, 2018

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

3
4 **Common Program Requirements (Post-doctoral Education Program) are in BOLD**

5
6 Where applicable, text in italics describes the underlying philosophy of the requirements in that
7 section. These philosophic statements are not program requirements and are therefore not
8 citable.

9
10 **Introduction**

11
12 **Int.A.** *Graduate medical education in a medical-related field is the crucial step of*
13 *professional development between medical school or graduate school and*
14 *autonomous contributions to clinical care. It is in this vital phase of the*
15 *continuum of medical-related education that post-doctoral fellows learn to*
16 *contribute to optimal patient care under the supervision of faculty*
17 *members who not only instruct, but serve as role models of excellence,*
18 *compassion, professionalism, and scholarship.*

19
20 *This education transforms medical students or graduate students into*
21 *specialists who contribute to the care for the patient, family, and a diverse*
22 *community; create and integrate new knowledge into practice; and educate*
23 *future generations of specialists to serve the public. Practice patterns*
24 *established during graduate medical education persist many years later.*

25
26 *Graduate medical education in a medical-related field has as a core tenet*
27 *the graded authority and responsibility for patient care. The care of*
28 *patients is undertaken with appropriate faculty supervision and conditional*
29 *independence, allowing post-doctoral fellows to attain the knowledge,*
30 *skills, attitudes, and empathy required for autonomous practice. Graduate*
31 *medical education develops specialists who focus on excellence in*
32 *delivery of safe, equitable, affordable, quality care; and the health of the*
33 *populations they serve. Graduate medical education values the strength*
34 *that a diverse group of specialists brings to medical care.*

35
36 *This education occurs in clinical settings that establish the foundation for*
37 *practice-based and lifelong learning. The professional development of the*
38 *specialist, begun in pre-doctoral education, continues through faculty*
39 *modeling of the effacement of self-interest in a humanistic environment*
40 *that emphasizes joy in curiosity, problem-solving, academic rigor, and*
41 *discovery. This transformation is often physically, emotionally, and*
42 *intellectually demanding and occurs in a variety of clinical learning*
43 *environments committed to graduate medical education and the well-being*
44 *of patients, residents, post-doctoral fellows, fellows, faculty members,*
45 *students, and all members of the health care team.*

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47 **Int.B.** **Definition of Specialty**

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49 Laboratory genetics and genomics is a laboratory-based discipline of medical
50 genetics and genomics that focuses on analysis and interpretation of assays that
51 identify constitutional/germline and somatic/acquired genetic changes underlying

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

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62 **Int.C. Length of Educational Program**

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

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67 **I. Oversight**

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69 **I.A. Sponsoring Institution**

70
71 *The Sponsoring Institution is the organization or entity that assumes the*
72 *ultimate financial and academic responsibility for a program of graduate*
73 *medical education, consistent with the ACGME Institutional Requirements.*

74
75 *When the Sponsoring Institution is not a rotation site for the program, the*
76 *most commonly utilized site of clinical activity for the program is the*
77 *primary clinical site.*

78
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.

79
80 **I.A.1. The program must be sponsored by one ACGME-accredited**
81 **Sponsoring Institution.** ^(Core)

82
83 **I.B. Participating Sites**

84
85 *A participating site is an organization providing educational experiences or*
86 *educational assignments/rotations for post-doctoral fellows.*

87
88 **I.B.1. The program, with approval of its Sponsoring Institution, must**
89 **designate a primary clinical site.** ^(Core)

90
91 **I.B.1.a)** Institutions sponsoring laboratory genetics and genomics
92 programs should also sponsor ACGME-accredited programs in
93 medical genetics and genomics. ^(Core)

- 94
95 **I.B.2.** There must be a program letter of agreement (PLA) between the
96 program and each participating site that governs the relationship
97 between the program and the participating site providing a required
98 assignment. ^(Core)
99
- 100 **I.B.2.a)** The PLA must:
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- 102 I.B.2.a).(1) be renewed at least every 10 years; and, ^(Core)
103
- 104 I.B.2.a).(2) be approved by the designated institutional official
105 (DIO). ^(Core)
106
- 107 **I.B.3.** The program must monitor the clinical learning and working
108 environment at all participating sites. ^(Core)
109
- 110 **I.B.3.a)** At each participating site there must be one faculty member,
111 designated by the program director as the site director, who
112 is accountable for post-doctoral fellow education at that site,
113 in collaboration with the program director. ^(Core)
114

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

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116 **I.B.4.** The program director must submit any additions or deletions of
117 participating sites routinely providing an educational experience,
118 required for all post-doctoral fellows, of one month full time
119 equivalent (FTE) or more through the ACGME's Accreditation Data
120 System (ADS). ^(Core)
121
- 122 **I.C.** The program, in partnership with its Sponsoring Institution, must engage in
123 practices that focus on mission-driven, ongoing, systematic recruitment
124 and retention of a diverse and inclusive workforce of post-doctoral fellows,
125 residents and fellows (if present), faculty members, senior administrative

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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).

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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) cytogenetic and molecular genetic patient care services; (Core)

I.D.1.b).(3) appropriate instrumentation to perform cytogenetic and molecular genetic testing; and, (Core)

I.D.1.b).(4) 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.

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- 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).

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

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

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- 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)

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

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- I.F. 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)

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- I.F.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.

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II. Personnel

II.A. Program Director

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

202
203 **II.A.1.a)** The Sponsoring Institution's GMEC must approve a change in
204 program director. *(Core)*

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

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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 made responsible for the post-doctoral education program. This individual will have dedicated time for the leadership of the post-doctoral education program, and it is this individual's responsibility to communicate with the post-doctoral fellows, faculty members, DIO, GMEC, and the ACGME. The program director's nomination is reviewed and approved by the GMEC. Final approval of program directors resides with the Review Committee.

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

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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.

214
215 **II.A.2.** The program director must be provided with support adequate for
216 administration of the program based upon its size and configuration.
217 *(Core)*

218
219 **II.A.2.a)** The program director should be provided at least four hours per
220 week or 0.1 full time equivalent (FTE) protected time and financial
221 support for educational and administrative responsibilities to the
222 program. *(Core)*

223
224 **II.A.3.** **Qualifications of the program director:**

225
226 **II.A.3.a)** must include specialty expertise and at least three years of
227 documented educational and/or administrative experience, or
228 qualifications acceptable to the Review Committee; *(Core)*

229
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.

- 230
231 **II.A.3.b)** must include current certification in the specialty for which
232 they are the program director by the American Board of
233 Medical Genetics and Genomics (ABMGG) or by the American
234 Osteopathic Board of _____ if available for their field of study,
235 or specialty qualifications that are acceptable to the Review
236 Committee; ^(Core)
237
- 238 **II.A.3.b).(1)** The program director must be certified by the ABMGG and
239 actively participating in the ABMGG Maintenance of
240 Certification (MOC) Program in clinical molecular genetics
241 and genomics, clinical cytogenetics and genomics,
242 laboratory genetics and genomics, or medical genetics and
243 genomics. ^(Core)
244
- 245 **II.A.3.b).(2)** If the program director is certified by the ABMGG in only
246 clinical molecular genetics and genomics or only clinical
247 cytogenetics and genomics, there must be an associate
248 program director with certification in the complementary
249 specialty area, or laboratory genetics and genomics. ^(Core)
250
- 251 **II.A.3.c)** must include appropriate medical staff or institutional
252 appointment; and, ^(Core)
253
- 254 **II.A.3.d)** must include ongoing contributions to clinical care. ^(Core)
255

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.

- 256
257 **II.A.3.e)** The program director should be a full-time faculty member, and
258 must be based at the primary clinical site. ^{(Detail) †}
259
- 260 **II.A.4. Program Director Responsibilities**
261
262 **The program director must have responsibility, authority, and**
263 **accountability for: administration and operations; teaching and**
264 **scholarly activity; post-doctoral fellow recruitment and selection,**
265 **evaluation, and promotion of post-doctoral fellows, and disciplinary**

266 action; supervision of post-doctoral fellows; and post-doctoral
267 fellow education in the context of contributions to patient care. (Core)

268
269 **II.A.4.a) The program director must:**

270
271 **II.A.4.a).(1) be a role model of professionalism; (Core)**
272

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.

273
274 **II.A.4.a).(2) design and conduct the program in a fashion**
275 **consistent with the needs of the community, the**
276 **mission(s) of the Sponsoring Institution, and the**
277 **mission(s) of the program; (Core)**
278

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.

279
280 **II.A.4.a).(3) administer and maintain a learning environment**
281 **conducive to educating the post-doctoral fellows in**
282 **each of the ACGME Competency domains; (Core)**
283

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.

284
285 **II.A.4.a).(4) develop and oversee a process to evaluate candidates**
286 **prior to approval as program faculty members for**
287 **participation in the post-doctoral education program**
288 **and at least annually thereafter, as outlined in V.B.;**
289 **(Core)**

290
291 **II.A.4.a).(5) have the authority to approve program faculty**
292 **members for participation in the post-doctoral**
293 **education program at all sites; (Core)**
294

- 295 II.A.4.a).(6) have the authority to remove program faculty
 296 members from participation in the post-doctoral
 297 education program at all sites; ^(Core)
 298
 299 II.A.4.a).(7) have the authority to remove post-doctoral fellows
 300 from supervising interactions and/or learning
 301 environments that do not meet the standards of the
 302 program; ^(Core)
 303

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 only controls who is teaching the post-doctoral fellows.

- 304
 305 II.A.4.a).(8) submit accurate and complete information required
 306 and requested by the DIO, GMEC, and ACGME; ^(Core)
 307
 308 II.A.4.a).(9) provide applicants who are offered an interview with
 309 information related to the applicant's eligibility for the
 310 relevant board certification examination(s); ^(Core)
 311
 312 II.A.4.a).(10) provide a learning and working environment in which
 313 post-doctoral fellows have the opportunity to raise
 314 concerns and provide feedback in a confidential
 315 manner as appropriate, without fear of intimidation or
 316 retaliation; ^(Core)
 317
 318 II.A.4.a).(11) ensure the program's compliance with the Sponsoring
 319 Institution's policies and procedures related to
 320 grievances and due process; ^(Core)
 321
 322 II.A.4.a).(12) ensure the program's compliance with the Sponsoring
 323 Institution's policies and procedures for due process
 324 when action is taken to suspend or dismiss, not to
 325 promote, or not to renew the appointment of a post-
 326 doctoral fellow; ^(Core)
 327

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.

- 328
 329 II.A.4.a).(13) ensure the program's compliance with the Sponsoring
 330 Institution's policies and procedures on employment
 331 and non-discrimination; ^(Core)
 332

- 333 **II.A.4.a).(13).(a)** **Post-doctoral fellows must not be required to**
 334 **sign a non-competition guarantee or restrictive**
 335 **covenant. (Core)**
- 336
- 337 **II.A.4.a).(14)** **document verification of program completion for all**
 338 **graduating post-doctoral fellows within 30 days; (Core)**
- 339
- 340 **II.A.4.a).(15)** **provide verification of an individual post-doctoral**
 341 **fellow’s completion upon the post-doctoral fellow’s**
 342 **request, within 30 days; and, (Core)**
 343

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.

- 344
- 345 **II.A.4.a).(16)** **obtain review and approval of the Sponsoring**
 346 **Institution’s DIO before submitting information or**
 347 **requests to the ACGME, as required in the Institutional**
 348 **Requirements and outlined in the ACGME Program**
 349 **Director’s Guide to the Common Program**
 350 **Requirements. (Core)**

351 **II.B. Faculty**

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

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368 ***Faculty members ensure that patients receive the level of care expected***
 369 ***from a specialist in the field. They recognize and respond to the needs of***
 370 ***the patients, post-doctoral fellows, community, and institution. Faculty***
 371 ***members provide appropriate levels of supervision to promote patient***
 372 ***safety. Faculty members create an effective learning environment by acting***
 373 ***in a professional manner and attending to the well-being of the post-***
 374 ***doctoral fellows and themselves.***
 375

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 or salary support.

- 376
377 **II.B.1.** At each participating site, there must be a sufficient number of
378 faculty members with competence to instruct and supervise all post-
379 doctoral fellows at that location. ^(Core)
380
381 **II.B.2.** Faculty members must:
382
383 **II.B.2.a)** be role models of professionalism; ^(Core)
384
385 **II.B.2.b)** demonstrate commitment to the delivery of safe, quality,
386 cost-effective, patient-centered care; ^(Core)
387

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.

- 388
389 **II.B.2.c)** demonstrate a strong interest in the education of post-
390 doctoral fellows; ^(Core)
391
392 **II.B.2.d)** devote sufficient time to the educational program to fulfill
393 their supervisory and teaching responsibilities; ^(Core)
394
395 **II.B.2.e)** administer and maintain an educational environment
396 conducive to educating post-doctoral fellows; ^(Core)
397
398 **II.B.2.f)** regularly participate in organized clinical discussions,
399 rounds, journal clubs, and conferences; and, ^(Core)
400
401 **II.B.2.g)** pursue faculty development designed to enhance their skills
402 at least annually; ^(Core)
403

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.

- 404
405 **II.B.2.g).(1)** as educators; ^(Core)
406
407 **II.B.2.g).(2)** in quality improvement and patient safety; ^(Core)
408
409 **II.B.2.g).(3)** in fostering their own and their post-doctoral fellows'
410 well-being; and, ^(Core)

411
412 II.B.2.g).(4) as contributors to patient care based on their practice-
413 based learning and improvement efforts. (Core)
414

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.

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416 **II.B.3. Faculty Qualifications**

417
418 **II.B.3.a) Faculty members must have appropriate qualifications in**
419 **their field and hold appropriate institutional appointments.**
420 (Core)

421
422 II.B.3.a).(1) Faculty members must have current certification in the
423 discipline by the ABMGG or possess qualifications judged
424 acceptable to the Review Committee. (Core)

425
426 **II.B.3.b) Faculty members must:**

427
428 II.B.3.b).(1) **have current certification in the specialty by the**
429 **American Board of Medical Genetics and Genomics or**
430 **American Osteopathic Board of _____, if available for**
431 **their field of study, or possess qualifications judged**
432 **acceptable to the Review Committee.** (Core)

433
434 II.B.3.c) Faculty members responsible for post-doctoral fellow education in
435 clinical molecular genetics and genomics must have current
436 ABMGG certification in clinical molecular genetics and genomics
437 or laboratory genetics and genomics. (Core)

438
439 II.B.3.d) Faculty members responsible for post-doctoral fellow education in
440 clinical cytogenetics and genomics must have current ABMGG
441 certification in clinical cytogenetics and genomics or laboratory
442 genetics and genomics. (Core)

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444 **II.B.4. Core Faculty**

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446 **Core faculty members must have a significant role in the education**
447 **and supervision of post-doctoral fellows and must devote a**
448 **significant portion of their entire effort to post-doctoral fellow**
449 **education and/or administration, and must, as a component of their**
450 **activities, teach, evaluate, and provide formative feedback to post-**
451 **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 and in assessing post-doctoral fellows’

progress toward achievement of competence in 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, including completion of the annual ACGME Faculty Survey.

453
454 **II.B.4.a)** Core faculty members must be designated by the program
455 director. ^(Core)
456

457 **II.B.4.b)** Core faculty members must complete the annual ACGME
458 Faculty Survey. ^(Core)
459

460 **II.B.4.c)** The program must have at least 3 core faculty members. ^(Core)
461

462 **II.C. Program Coordinator**
463

464 **II.C.1.** There must be a program coordinator. ^(Core)
465

466 **II.C.2.** The program coordinator must be provided with support adequate
467 for administration of the program based upon its size and
468 configuration. ^(Core)
469

470 **II.C.2.a)** At a minimum, the program coordinator must be supported at 20
471 percent FTE for administrative time. ^(Core)
472

Background and Intent: Each program requires a lead administrative person, frequently referred to as a program coordinator, administrator, or as titled by the institution. This person will frequently manage the day-to-day operations of the program and serve as an important liaison with 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 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. Program coordinators are expected to develop unique knowledge of the ACGME and Program Requirements, policies, and procedures. Program coordinators assist the program director in accreditation efforts, 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.

473
474 **II.D. Other Program Personnel**
475

476 The program, in partnership with its Sponsoring Institution, must jointly
477 ensure the availability of necessary personnel for the effective
478 administration of the program. ^(Core)
479

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.

480
481 II.D.1. Genetic counselors, nurses, dieticians, lab technologists, and other health
482 care professionals who are involved in the provision of clinical and
483 medical genetics and genomics services should be available to
484 collaborate on a regular basis with post-doctoral fellows. ^(Detail)
485

486 **III. Post-Doctoral Fellow Appointments**

487
488 **III.A. Eligibility Requirements**

489
490 **III.A.1. An applicant must meet one of the following qualifications to be**
491 **eligible for appointment to an ACGME-accredited program:** ^(Core)
492

493 **III.A.1.a) graduation from a medical school in the United States or**
494 **Canada, accredited by the Liaison Committee on Medical**
495 **Education (LCME); graduation from a college of osteopathic**
496 **medicine in the United States, accredited by the American**
497 **Osteopathic Association Commission on Osteopathic College**
498 **Accreditation (AOACOCA); or graduation from an accredited**
499 **doctoral program in a clinically related discipline; or,** ^(Core)
500

501 III.A.1.a).(1) Post-doctoral fellows entering laboratory genetics and
502 genomics programs must hold an MD, DO, or PhD (or
503 equivalent) degree. ^(Core)
504

505 III.A.1.a).(1).(a) The PhD (or equivalent) degree must be in either
506 genetics or a related field. ^(Core)
507

508 **III.A.1.b) graduation from a medical school outside of the United**
509 **States or Canada, and holding a currently valid certificate**
510 **from the Educational Commission for Foreign Medical**
511 **Graduates (ECFMG) prior to appointment.** ^(Core)
512

513 **III.B. The program director must not appoint more post-doctoral fellows than**
514 **approved by the Review Committee.** ^(Core)
515

516 **III.B.1. All complement increases must be approved by the Review**
517 **Committee.** ^(Core)
518

519 **III.C. Post-Doctoral Fellow Transfers**

520
521 **The program must obtain verification of previous educational experiences**
522 **and a summative competency-based performance evaluation prior to**
523 **acceptance of a transferring post-doctoral fellow, and Milestones**
524 **evaluations upon matriculation.** ^(Core)
525

526 IV. Educational Program

527
528 *The ACGME accreditation system is designed to encourage excellence and*
529 *innovation in graduate medical education regardless of the organizational*
530 *affiliation, size, or location of the program.*

531
532 *The educational program must support the development of knowledgeable, skillful*
533 *specialists who contribute to compassionate care.*

534
535 *In addition, the program is expected to define its specific program aims consistent*
536 *with the overall mission of its Sponsoring Institution, the needs of the community*
537 *it serves and that its graduates will serve, and the distinctive capabilities of*
538 *specialists it intends to graduate. While programs must demonstrate substantial*
539 *compliance with the Common and specialty-specific Program Requirements, it is*
540 *recognized that within this framework, programs may place different emphasis on*
541 *research, leadership, public health, etc. It is expected that the program aims will*
542 *reflect the nuanced program-specific goals for it and its graduates.*

543
544 IV.A. The curriculum must contain the following educational components: ^(Core)

545
546 IV.A.1. a set of program aims consistent with the Sponsoring Institution's
547 mission, the needs of the community it serves, and the desired
548 distinctive capabilities of its graduates; ^(Core)

549
550 IV.A.1.a) The program's aims must be made available to program
551 applicants, post-doctoral fellows, and faculty members. ^(Core)

552
553 IV.A.2. competency-based goals and objectives for each educational
554 experience designed to promote progress on a trajectory to
555 autonomous practice. These must be distributed, reviewed, and
556 available to post-doctoral fellows and faculty members; ^(Core)

557

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.

558
559 IV.A.3. delineation of post-doctoral fellow responsibilities for patient care,
560 progressive responsibility for contributions to patient care, and
561 graded supervision; ^(Core)

562

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.

563

- 564 IV.A.4. a broad range of structured didactic activities; ^(Core)
565
566 IV.A.4.a) Post-doctoral fellows must be provided with protected time to
567 participate in core didactic activities. ^(Core)
568

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.

- 569
570 IV.A.5. advancement of post-doctoral fellows' knowledge of ethical
571 principles foundational to medical professionalism; and, ^(Core)
572
573 IV.A.6. advancement in the post-doctoral fellows' knowledge of the basic
574 principles of scientific inquiry, including how research is designed,
575 conducted, evaluated, explained to patients, and applied to patient
576 care. ^(Core)
577
578 IV.B. ACGME Competencies
579

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.

- 580
581 IV.B.1. The program must integrate the following ACGME Competencies
582 into the curriculum: ^(Core)
583
584 IV.B.1.a) Professionalism
585
586 Post-doctoral fellows must demonstrate a commitment to
587 professionalism and an adherence to ethical principles. ^(Core)
588
589 IV.B.1.a).(1) Post-doctoral fellows must demonstrate competence
590 in:
591
592 IV.B.1.a).(1).(a) compassion, integrity, and respect for others;
593 ^(Core)
594
595 IV.B.1.a).(1).(b) responsiveness to patient care needs that
596 supersedes self-interest; ^(Core)
597

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.

- 598
599 IV.B.1.a).(1).(c) respect for patient privacy and autonomy; ^(Core)
600
601 IV.B.1.a).(1).(d) accountability to patients, society, and the
602 profession; ^(Core)
603
604 IV.B.1.a).(1).(e) respect and responsiveness to a diverse patient
605 populations, including but not limited to
606 diversity in gender, age, culture, race, religion,
607 disabilities, national origin, socioeconomic
608 status, and sexual orientation; ^(Core)
609
610 IV.B.1.a).(1).(f) ability to recognize and develop a plan for one's
611 own personal and professional well-being; and,
612 ^(Core)
613
614 IV.B.1.a).(1).(g) appropriately disclosing and addressing
615 conflict or duality of interest. ^(Core)
616
617 IV.B.1.b) Patient Care and Procedural Skills
618

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.

- 619
620 IV.B.1.b).(1) **Post-doctoral fellows must be able to contribute to**
621 **patient care in a way that is that is compassionate,**
622 **appropriate, and effective for the treatment of health**
623 **problems and the promotion of health. ^(Core)**
624
625 IV.B.1.b).(1).(a) Post-doctoral fellows must demonstrate:
626
627 IV.B.1.b).(1).(a).(i) competence in pre-analytic laboratory skills,
628 including collection and analysis of
629 appropriate specimen types; ^(Core)
630
631 IV.B.1.b).(1).(a).(ii) competence in analytic laboratory skills,
632 including: ^(Core)
633

634	IV.B.1.b).(1).(a).(iii)	application of bioinformatics tools for
635		interpretation of clinical results, to include:
636		(Core)
637		
638	IV.B.1.b).(1).(a).(iii).(a)	use of acceptable nomenclature and
639		practice guidelines for chromosomal
640		and genomic variant classification;
641		and, (Core)
642		
643	IV.B.1.b).(1).(a).(iii).(b)	use of bioinformatics pipelines and
644		database resources for analysis and
645		interpretation of chromosome
646		analysis and genomic sequence
647		data. (Core)
648		
649	IV.B.1.b).(1).(a).(iv)	cell culture and karyotyping; (Core)
650		
651	IV.B.1.b).(1).(a).(v)	fluorescence in situ hybridization (FISH)
652		techniques; (Core)
653		
654	IV.B.1.b).(1).(a).(vi)	manual and automated techniques for
655		nucleic acid isolation; (Core)
656		
657	IV.B.1.b).(1).(a).(vii)	microarray analysis; (Core)
658		
659	IV.B.1.b).(1).(a).(viii)	principles and techniques associated with
660		Southern blot analysis; (Core)
661		
662	IV.B.1.b).(1).(a).(ix)	real-time and multi-plex techniques for
663		polymerase chain reaction (PCR) analysis
664		of nucleic acids; and, (Core)
665		
666	IV.B.1.b).(1).(a).(x)	targeted variant analysis and gene variant
667		detection using Sanger sequencing, next-
668		generation sequencing, and identity testing.
669		(Core)
670		
671	IV.B.1.b).(1).(b)	competence in post-analytic reporting skills; and,
672		(Core)
673		
674	IV.B.1.b).(1).(c)	knowledge of quality control and quality assurance.
675		(Core)
676		
677	IV.B.1.b).(2)	Post-doctoral fellows must be able to perform all
678		procedures considered essential for the area of
679		practice. (Core)
680		
681	IV.B.1.c)	Medical Knowledge
682		
683		Post-doctoral fellows must demonstrate knowledge of
684		established and evolving biomedical, clinical, epidemiological

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

687
688 IV.B.1.c).(1) Post-doctoral fellows must demonstrate:

689
690 IV.B.1.c).(1).(a) knowledge and use of scientific evidence, current
691 medical information, and practice standards for the
692 purpose of patient care, including: (Core)

693
694 IV.B.1.c).(1).(a).(i) results from molecular and cytogenetics-
695 based genomics laboratories; (Outcome) ‡

696
697 IV.B.1.c).(1).(a).(ii) quantitative risk assessment; and, (Core)

698
699 IV.B.1.c).(1).(a).(iii) bioinformatics. (Core)

700
701 IV.B.1.c).(1).(b) competence in their knowledge of:

702
703 IV.B.1.c).(1).(b).(i) Mendelian and non-Mendelian genetics;
704 (Core)

705
706 IV.B.1.c).(1).(b).(ii) population and quantitative genetics; and,
707 (Core)

708
709 IV.B.1.c).(1).(b).(iii) genomics. (Core)

710
711 IV.B.1.c).(1).(c) knowledge of general principles of cell and
712 molecular biology, as it relates to the field of
713 medical genetics and genomics; and, (Core)

714
715 IV.B.1.c).(1).(d) knowledge of principles of cytogenetics and clinical
716 molecular genetics as they relate to the field of
717 laboratory genetics and genomics. (Core)

718
719 **IV.B.1.d) Practice-based Learning and Improvement**

720
721 **Post-doctoral fellows must demonstrate the ability to**
722 **investigate and evaluate their contributions to the care of**
723 **patients, to appraise and assimilate scientific evidence, and**
724 **to continuously improve patient care based on constant self-**
725 **evaluation and lifelong learning.** (Core)

726

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.

727		
728	IV.B.1.d).(1)	Post-doctoral fellows must demonstrate competence
729		in:
730		
731	IV.B.1.d).(1).(a)	identifying strengths, deficiencies, and limits in
732		one’s knowledge and expertise; ^(Core)
733		
734	IV.B.1.d).(1).(b)	setting learning and improvement goals; ^(Core)
735		
736	IV.B.1.d).(1).(c)	identifying and performing appropriate learning
737		activities; ^(Core)
738		
739	IV.B.1.d).(1).(d)	systematically analyzing their contributions to
740		care using quality improvement methods, and
741		implementing changes with the goal of practice
742		improvement; ^(Core)
743		
744	IV.B.1.d).(1).(e)	incorporating feedback and formative
745		evaluation into daily practice; ^(Core)
746		
747	IV.B.1.d).(1).(f)	locating, appraising, and assimilating evidence
748		from scientific studies related to their patients’
749		health problems; and, ^(Core)
750		
751	IV.B.1.d).(1).(g)	using information technology to optimize
752		learning. ^(Core)
753		
754	IV.B.1.e)	Interpersonal and Communication Skills
755		
756		Post-doctoral fellows must demonstrate interpersonal and
757		communication skills that result in the effective exchange of
758		information and collaboration with patients, their families,
759		and health professionals. ^(Core)
760		
761	IV.B.1.e).(1)	Post-doctoral fellows must demonstrate competence
762		in:
763		
764	IV.B.1.e).(1).(a)	communicating effectively with patients,
765		families, and the public, as appropriate, across
766		a broad range of socioeconomic and cultural
767		backgrounds; ^(Core)
768		
769	IV.B.1.e).(1).(b)	communicating effectively with physicians,
770		other health professionals, and health-related
771		agencies; ^(Core)
772		
773	IV.B.1.e).(1).(c)	working effectively as a member or leader of a
774		health care team or other professional group;
775		^(Core)
776		

- 777 **IV.B.1.e).(1).(d)** educating patients, families, students, and
778 other health professionals; ^(Core)
779
780 **IV.B.1.e).(1).(e)** acting in a consultative role to other physicians
781 and health professionals; and, ^(Core)
782
783 **IV.B.1.e).(1).(f)** maintaining comprehensive, timely, and legible
784 medical records, if applicable. ^(Core)
785
786 **IV.B.1.e).(2)** **Post-doctoral fellows must learn to communicate,**
787 **through collaborators in care or directly, with patients**
788 **and families, to partner with them to assess their care**
789 **goals.** ^(Core)
790

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.

- 791
792 **IV.B.1.e).(3)** Post-doctoral fellows must generate comprehensive and
793 timely laboratory reports. ^(Core)
794
795 **IV.B.1.f)** **Systems-based Practice**
796
797 **Post-doctoral fellows must demonstrate an awareness of and**
798 **responsiveness to the larger context and system of health**
799 **care, including the social determinants of health, as well as**
800 **the ability to effectively collaborate with other providers and**
801 **use resources to provide optimal health care.** ^(Core)
802
803 **IV.B.1.f).(1)** **Post-doctoral fellows must demonstrate competence**
804 **in:**
805
806 **IV.B.1.f).(1).(a)** **working effectively in various health care**
807 **delivery settings and systems relevant to their**
808 **clinical specialty;** ^(Core)
809

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.

- 810
811 **IV.B.1.f).(1).(a).(i)** Post-doctoral fellows must:
812
813 **IV.B.1.f).(1).(a).(i).(a)** participate in interactions with
814 external regulatory agencies; ^(Core)
815

816 IV.B.1.f).(1).(a).(i).(b) demonstrate knowledge of the
817 function and interaction of laboratory
818 information systems, electronic
819 health records, and billing systems;
820 and, (Core)
821
822 IV.B.1.f).(1).(a).(i).(c) demonstrate expertise in their
823 knowledge of basic economic and
824 business principles needed to
825 function effectively in the practice
826 setting. (Core)
827
828 **IV.B.1.f).(1).(b) helping to coordinate patient care across the**
829 **health care continuum and beyond as relevant**
830 **to their specialty;** (Core)
831

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.

832
833 **IV.B.1.f).(1).(c) advocating for quality patient care and optimal**
834 **patient care systems;** (Core)
835
836 **IV.B.1.f).(1).(d) working in interprofessional teams to enhance**
837 **patient safety and improve patient care quality;**
838 (Core)
839
840 **IV.B.1.f).(1).(e) participating in identifying system errors and**
841 **implementing potential systems solutions;** (Core)
842
843 **IV.B.1.f).(1).(f) incorporating considerations of value, cost**
844 **awareness, delivery and payment, and risk-**
845 **benefit analysis in patient and/or population-**
846 **based care as appropriate;** (Core)
847
848 **IV.B.1.f).(1).(g) understanding health care finances and its**
849 **impact on individual patients' health decisions;**
850 (Core)
851
852 **IV.B.1.f).(1).(h) participating in external quality assurance activities;**
853 **and,** (Core)
854
855 **IV.B.1.f).(1).(i) participating in laboratory quality management**
856 **including quality control and quality assurance.** (Core)
857
858 **IV.B.1.f).(2) Post-doctoral fellows must learn to advocate for**
859 **patients within the health care system, directly or**
860 **through collaboration with other providers, to achieve**
861 **the patient's and family's care goals.** (Core)

862
863 **IV.C. Curriculum Organization and Post-Doctoral Fellow Experiences**
864
865 **IV.C.1. The curriculum must be structured to optimize post-doctoral fellow**
866 **educational experiences, the length of these experiences, and**
867 **supervisory continuity.** ^(Core)
868

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.

869
870 IV.C.2. A program in laboratory genetics and genomics must provide the
871 necessary formal education and clinical laboratory-based experience to
872 allow post-doctoral fellows to develop the knowledge, skills, and
873 professional attitudes required for the practice in the field. ^(Core)
874
875 IV.C.2.a) Didactic Teaching
876
877 IV.C.2.a).(1) Post-doctoral education must include classroom exposure
878 to courses in the principles and applications of human
879 genetics. ^(Core)
880
881 IV.C.2.a).(2) Post-doctoral fellows must participate in a comprehensive
882 and organized course in basic human medical genetics.
883 ^(Core)
884
885 IV.C.2.b) Post-doctoral fellows must be provided with the following
886 experiences in laboratory genetics and genomics:
887
888 IV.C.2.b).(1) a two-week rotation in clinical biochemical genetics; ^(Core)
889
890 IV.C.2.b).(2) didactic course work; ^(Core)
891
892 IV.C.2.b).(3) eight months of constitutional/germline testing, including
893 exposure to: ^(Core)
894
895 IV.C.2.b).(3).(a) prenatal/carrier testing and non-invasive prenatal
896 testing; and, ^(Core)
897
898 IV.C.2.b).(3).(b) postnatal (perinatal, pediatric, and adult non-
899 obstetric) testing. ^(Core)
900
901 IV.C.2.b).(4) eight months of experience in cancers, with a focus on
902 somatic analysis. ^(Core)
903
904 IV.C.2.b).(5) 40 hours (the equivalent of 10 half-days) in genetics and
905 genomics clinics to gain clinical exposure; ^(Core)
906

907	IV.C.2.c)	Time spent in a specific clinical area of concentration must not exceed six months. ^(Core)
908		
909		
910	IV.C.2.c).(1)	Content of this concentration area must be determined with the program director no later than the end of the post-doctoral fellow's first year in the program, and must include a documented, structured, written plan based on the post-doctoral fellow's career goals. ^(Core)
911		
912		
913		
914		
915		
916	IV.C.2.d)	Post-doctoral education must be integrated across cytogenetics and molecular genetics throughout the program. ^(Core)
917		
918		
919	IV.C.3.	Direct Patient Experience in Medical Genetics and Genomics
920		
921	IV.C.3.a)	The post-doctoral fellow must have direct experience with the clinical evaluation of patients, medical decision-making, and genetic counseling. ^(Detail)
922		
923		
924		
925	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)
926		
927		
928		
929	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)
930		
931		
932		
933		
934	IV.C.4.	Development of clinical laboratory methods or tests should be a component of training. ^(Detail)
935		
936		
937	IV.C.5.	Other Educational Opportunities
938		
939		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, rotation in a clinical chemistry laboratory, etc., topics of which should broadly relate to medical genetics and genomics education. ^(Detail)
940		
941		
942		
943		
944		
945	IV.C.6.	The didactic curriculum must include:
946		
947	IV.C.6.a)	clinical teaching conferences, including formal sessions on clinical laboratory topics, medical genetics and genomics rounds, journal clubs, and follow-up conferences for genetic clinics; and, ^(Core)
948		
949		
950		
951	IV.C.6.b)	lectures or other didactic sessions, on the following topics: ^(Core)
952		
953	IV.C.6.b).(1)	basic mechanisms of inheritance, including sex chromosomes, autosomes, and mitochondrial DNA; ^(Core)
954		
955		
956	IV.C.6.b).(2)	basic molecular biology techniques pertinent to clinical testing and understanding genetic research; ^(Core)
957		

- 958
 959 IV.C.6.b).(3) Bayesian analysis and other methods of genetic risk
 960 assessment; ^(Core)
 961
 962 IV.C.6.b).(4) behavior of genes in a population, including Hardy
 963 Weinberg equilibria of alleles; ^(Core)
 964
 965 IV.C.6.b).(5) bioinformatic approaches to interpreting molecular test
 966 results, including methods to assign causation to novel
 967 findings; ^(Core)
 968
 969 IV.C.6.b).(6) the cell cycle and molecular genetics of cancer; ^(Core)
 970
 971 IV.C.6.b).(7) DNA, RNA, and protein chemistry, including DNA repair;
 972 ^(Core)
 973
 974 IV.C.6.b).(8) gene expression and mechanisms of regulation of genes
 975 and genomes, including epigenetic regulation; ^(Core)
 976
 977 IV.C.6.b).(9) genetic counseling; ^(Core)
 978
 979 IV.C.6.b).(10) genetic linkage, mapping, and association studies; ^(Core)
 980
 981 IV.C.6.b).(11) human embryology and development; ^(Core)
 982
 983 IV.C.6.b).(12) inheritance of complex traits and genetic variation; ^(Core)
 984
 985 IV.C.6.b).(13) mechanisms of chromosomal rearrangement; ^(Core)
 986
 987 IV.C.6.b).(14) molecular organization of the genome, including molecular
 988 evolution mechanisms; ^(Core)
 989
 990 IV.C.6.b).(15) principles of biochemical genetics and metabolism; and,
 991 ^(Core)
 992
 993 IV.C.6.b).(16) principles of replication, recombination, and segregation of
 994 alleles during meiosis. ^(Core)
 995
 996 IV.C.7. Research seminars should be provided as part of the educational
 997 experience. ^(Core)
 998

999 **IV.D. Scholarship**

1000
 1001 ***Medicine is both an art and a science. This requires the ability to think***
 1002 ***critically, evaluate the literature, appropriately assimilate new knowledge,***
 1003 ***and practice lifelong learning. The program and faculty must create an***
 1004 ***environment that fosters the acquisition of such skills through post-***
 1005 ***doctoral fellow participation in scholarly activities. Scholarly activities may***
 1006 ***include discovery, integration, application, and teaching.***
 1007

1008 *The ACGME recognizes the diversity of post-doctoral education programs*
1009 *and anticipates that programs prepare specialists for a variety of roles,*
1010 *including contributors to clinical care, scientists, and educators. It is*
1011 *expected that the program's scholarship will reflect its mission(s) and*
1012 *aims, and the needs of the community it serves. For example, some*
1013 *programs may concentrate their scholarly activity on quality improvement,*
1014 *population health, and/or teaching, while other programs might choose to*
1015 *utilize more classic forms of biomedical research as the focus for*
1016 *scholarship.*

1017
1018 **IV.D.1. Program Responsibilities**

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1020 **IV.D.1.a) The program must demonstrate evidence of scholarly**
1021 **activities consistent with its mission(s) and aims. ^(Core)**

1022
1023 **IV.D.1.b) The program, in partnership with its Sponsoring Institution,**
1024 **must allocate adequate resources to facilitate post-doctoral**
1025 **fellow and faculty involvement in scholarly activities. ^(Core)**

1026
1027 **IV.D.1.c) The program must advance post-doctoral fellows' knowledge**
1028 **and practice of the scholarly approach to evidence-based**
1029 **contributions to patient care. ^(Core)**

1030

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.

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1032 **IV.D.2. Faculty Scholarly Activity**

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1034 **IV.D.2.a) Among their scholarly activity, programs must demonstrate**
1035 **accomplishments in at least three of the following domains:**
1036 **(Core)**

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- 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

1050
1051 **IV.D.2.b) The program must demonstrate dissemination of scholarly**
1052 **activity within and external to the program by the following**
1053 **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.

1055
1056 **IV.D.2.b).(1) faculty participation in grand rounds, posters,**
1057 **workshops, quality improvement presentations,**
1058 **podium presentations, grant leadership, non-peer-**
1059 **reviewed print/electronic resources, articles or**
1060 **publications, book chapters, textbooks, webinars,**
1061 **service on professional committees, or serving as a**
1062 **journal reviewer, journal editorial board member, or**
1063 **editor. (Outcome)**

1064
1065 **IV.D.3. Post-Doctoral Fellow Scholarly Activity**

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1067 **IV.D.3.a) Post-doctoral fellows must participate in scholarship. (Core)**

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1069 **IV.D.3.a).(1) Each post-doctoral fellow must demonstrate scholarship**
1070 **through submission of at least one scientific presentation,**
1071 **abstract, or publication. (Core)**

1072

1073 V. Evaluation
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1075 V.A. Post-Doctoral Fellow Evaluation
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1077 V.A.1. Feedback and Evaluation
1078

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.

- 1079
1080 V.A.1.a) Faculty members must directly observe, evaluate, and
1081 frequently provide feedback on post-doctoral fellow
1082 performance during each rotation or similar educational
1083 assignment. ^(Core)
1084

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.

1085

- 1086 **V.A.1.b)** **Evaluation must be documented at the completion of the**
1087 **assignment.** (Core)
1088
1089 V.A.1.b).(1) **For block rotations of greater than three months in**
1090 **duration, evaluation must be documented at least**
1091 **every three months.** (Core)
1092
1093 V.A.1.b).(2) **Longitudinal experiences must be evaluated at least**
1094 **every three months and at completion.** (Core)
1095
1096 **V.A.1.c)** **The program must provide an objective performance**
1097 **evaluation based on the Competencies and the specialty-**
1098 **specific Milestones, and must:** (Core)
1099
1100 V.A.1.c).(1) **use multiple evaluators (e.g., faculty members, peers,**
1101 **patients, self, and other professional staff members);**
1102 **and,** (Core)
1103
1104 V.A.1.c).(2) **provide that information to the Clinical Competency**
1105 **Committee for its synthesis of progressive post-**
1106 **doctoral fellow performance and improvement toward**
1107 **unsupervised practice.** (Core)
1108
1109 **V.A.1.d)** **The program director or their designee, with input from the**
1110 **Clinical Competency Committee, must:**
1111
1112 V.A.1.d).(1) **meet with and review with each post-doctoral fellow**
1113 **their documented semi-annual evaluation of**
1114 **performance, including progress along the specialty-**
1115 **specific Milestones;** (Core)
1116
1117 V.A.1.d).(2) **assist post-doctoral fellows in developing**
1118 **individualized learning plans to capitalize on their**
1119 **strengths and identify areas for growth; and,** (Core)
1120
1121 V.A.1.d).(3) **develop plans for post-doctoral fellows failing to**
1122 **progress, following institutional policies and**
1123 **procedures.** (Core)
1124

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.

- 1125
 1126 **V.A.1.e)** At least annually, there must be a summative evaluation of
 1127 each post-doctoral fellow that includes their readiness to
 1128 progress to the next year of the program, if applicable. ^(Core)
 1129
 1130 **V.A.1.f)** The evaluations of a post-doctoral fellow’s performance must
 1131 be accessible for review by the post-doctoral fellow. ^(Core)
 1132
 1133 **V.A.2.** Final Evaluation
 1134
 1135 **V.A.2.a)** The program director must provide a final evaluation for each
 1136 post-doctoral fellow upon completion of the program. ^(Core)
 1137
 1138 **V.A.2.a).(1)** The specialty-specific Milestones, and, when
 1139 applicable, the specialty-specific Case Logs, must be
 1140 used as tools to ensure post-doctoral fellows are able
 1141 to engage in autonomous practice upon completion of
 1142 the program. ^(Core)
 1143
 1144 **V.A.2.a).(2)** The final evaluation must:
 1145
 1146 **V.A.2.a).(2).(a)** become part of the post-doctoral fellow’s
 1147 permanent record maintained by the institution,
 1148 and must be accessible for review by the post-
 1149 doctoral fellow in accordance with institutional
 1150 policy; ^(Core)
 1151
 1152 **V.A.2.a).(2).(b)** verify that the post-doctoral fellow has
 1153 demonstrated the knowledge, skills, and
 1154 behaviors necessary to enter autonomous
 1155 practice; ^(Core)
 1156
 1157 **V.A.2.a).(2).(c)** consider recommendations from the Clinical
 1158 Competency Committee; and, ^(Core)
 1159
 1160 **V.A.2.a).(2).(d)** be shared with the post-doctoral fellow upon
 1161 completion of the program. ^(Core)
 1162
 1163 **V.A.3.** A Clinical Competency Committee must be appointed by the
 1164 program director. ^(Core)
 1165
 1166 **V.A.3.a)** At a minimum, the Clinical Competency Committee must
 1167 include three members of the program faculty, at least one of
 1168 whom is a core faculty member. ^(Core)

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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.

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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.

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- 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 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.

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- 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)*

- 1229
1230 V.C.1.b).(2) review of the program’s self-determined goals and
1231 progress toward meeting them; ^(Core)
1232
1233 V.C.1.b).(3) guiding ongoing program improvement, including
1234 development of new goals, based upon outcomes;
1235 and, ^(Core)
1236
1237 V.C.1.b).(4) review of the current operating environment to identify
1238 strengths, challenges, opportunities, and threats as
1239 related to the program’s mission and aims. ^(Core)
1240

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.

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1242 **V.C.1.c) The Program Evaluation Committee should consider the**
1243 **following elements in its assessment of the program:**
1244
1245 V.C.1.c).(1) curriculum; ^(Core)
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1247 V.C.1.c).(2) outcomes from prior Annual Program Evaluation(s);
1248 ^(Core)
1249
1250 V.C.1.c).(3) ACGME letters of notification, including citations,
1251 Areas for Improvement, and comments; ^(Core)
1252
1253 V.C.1.c).(4) quality and safety of patient care; ^(Core)
1254
1255 V.C.1.c).(5) aggregate post-doctoral fellow and faculty:
1256
1257 **V.C.1.c).(5).(a) well-being; ^(Core)**
1258
1259 **V.C.1.c).(5).(b) recruitment and retention; ^(Core)**
1260
1261 **V.C.1.c).(5).(c) workforce diversity; ^(Core)**
1262
1263 **V.C.1.c).(5).(d) engagement in quality improvement and patient**
1264 **safety; ^(Core)**
1265
1266 **V.C.1.c).(5).(e) scholarly activity; ^(Core)**
1267
1268 **V.C.1.c).(5).(f) ACGME Resident and Faculty Surveys; and,**
1269 **^(Core)**
1270
1271 **V.C.1.c).(5).(g) written evaluations of the program. ^(Core)**
1272

- 1273 V.C.1.c).(6) **aggregate post-doctoral fellow:**
1274
1275 **V.C.1.c).(6).(a)** **achievement of the Milestones;** ^(Core)
1276
1277 **V.C.1.c).(6).(b)** **in-training examinations (where applicable);**
1278 ^(Core)
1279
1280 **V.C.1.c).(6).(c)** **board pass and certification rates; and,** ^(Core)
1281
1282 **V.C.1.c).(6).(d)** **graduate performance.** ^(Core)
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1284 V.C.1.c).(7) **aggregate faculty:**
1285
1286 **V.C.1.c).(7).(a)** **evaluation; and,** ^(Core)
1287
1288 **V.C.1.c).(7).(b)** **professional development.** ^(Core)
1289
1290 **V.C.1.d)** **The Program Evaluation Committee must evaluate the**
1291 **program’s mission and aims, strengths, areas for**
1292 **improvement, and threats.** ^(Core)
1293
1294 **V.C.1.e)** **The annual review, including the action plan, must:**
1295
1296 V.C.1.e).(1) **be distributed to and discussed with the members of**
1297 **the teaching faculty and the post-doctoral fellows;**
1298 **and,** ^(Core)
1299
1300 V.C.1.e).(2) **be submitted to the DIO.** ^(Core)
1301
1302 **V.C.2.** **The program must complete a Self-Study prior to its 10-Year**
1303 **Accreditation Site Visit.** ^(Core)
1304
1305 **V.C.2.a)** **A summary of the Self-Study must be submitted to the DIO.**
1306 ^(Core)
1307

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

- 1308
1309 **V.C.3.** ***One goal of ACGME-accredited education is to educate specialists***
1310 ***who seek and achieve board certification. One measure of the***
1311 ***effectiveness of the educational program is the ultimate certifying***
1312 ***exam pass rate.***

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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.

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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.

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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.

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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

1414		<i>attitudes of its personnel toward safety in order to</i>
1415		<i>identify areas for improvement.</i>
1416		
1417	VI.A.1.a).(1).(a)	The program, its faculty, post-doctoral fellows,
1418		residents, and fellows must actively participate
1419		in patient safety systems and contribute to a
1420		culture of safety. ^(Core)
1421		
1422	VI.A.1.a).(1).(b)	The program must have a structure that
1423		promotes safe, interprofessional, team-based
1424		care. ^(Core)
1425		
1426	VI.A.1.a).(2)	Education on Patient Safety
1427		
1428		Programs must provide formal educational activities
1429		that promote patient safety-related goals, tools, and
1430		techniques. ^(Core)
1431		

<p>Background and Intent: Optimal patient safety occurs in the setting of a coordinated interprofessional learning and working environment.</p>
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1432		
1433	VI.A.1.a).(3)	Patient Safety Events
1434		
1435		<i>Reporting, investigation, and follow-up of adverse</i>
1436		<i>events, near misses, and unsafe conditions are pivotal</i>
1437		<i>mechanisms for improving patient safety, and are</i>
1438		<i>essential for the success of any patient safety</i>
1439		<i>program. Feedback and experiential learning are</i>
1440		<i>essential to developing true competence in the ability</i>
1441		<i>to identify causes and institute sustainable systems-</i>
1442		<i>based changes to ameliorate patient safety</i>
1443		<i>vulnerabilities.</i>
1444		
1445	VI.A.1.a).(3).(a)	Post-doctoral fellows, residents, fellows, faculty
1446		members, and other clinical staff members
1447		must:
1448		
1449	VI.A.1.a).(3).(a).(i)	know their responsibilities in reporting
1450		patient safety events at the clinical site;
1451		^(Core)
1452		
1453	VI.A.1.a).(3).(a).(ii)	know how to report patient safety
1454		events, including near misses, at the
1455		clinical site; and, ^(Core)
1456		
1457	VI.A.1.a).(3).(a).(iii)	be provided with summary information
1458		of their institution’s patient safety
1459		reports. ^(Core)
1460		
1461	VI.A.1.a).(3).(b)	Post-doctoral fellows must participate as team
1462		members in real and/or simulated

1463		interprofessional clinical patient safety
1464		activities, such as root cause analyses or other
1465		activities that include analysis, as well as
1466		formulation and implementation of actions. ^(Core)
1467		
1468	VI.A.1.a).(4)	Post-Doctoral Fellow Education and Experience in
1469		Disclosure of Adverse Events
1470		
1471		<i>Patient-centered care requires patients, and when</i>
1472		<i>appropriate families, to be apprised of clinical</i>
1473		<i>situations that affect them, including adverse events.</i>
1474		<i>This is an important skill for faculty specialists to</i>
1475		<i>model, and for post-doctoral fellows to develop and</i>
1476		<i>apply.</i>
1477		
1478	VI.A.1.a).(4).(a)	All post-doctoral fellows must receive training
1479		in how to disclose adverse events. ^(Core)
1480		
1481	VI.A.1.a).(4).(b)	Post-doctoral fellows should have the
1482		opportunity to participate in the disclosure of
1483		patient safety events, real or simulated. ^(Detail)
1484		
1485	VI.A.1.b)	Quality Improvement
1486		
1487	VI.A.1.b).(1)	Education in Quality Improvement
1488		
1489		<i>A cohesive model of health care includes quality-</i>
1490		<i>related goals, tools, and techniques that are necessary</i>
1491		<i>in order for health care professionals to achieve</i>
1492		<i>quality improvement goals.</i>
1493		
1494	VI.A.1.b).(1).(a)	Post-doctoral fellows must receive training and
1495		experience in quality improvement processes,
1496		including an understanding of health care
1497		disparities. ^(Core)
1498		
1499	VI.A.1.b).(2)	Quality Metrics
1500		
1501		<i>Access to data is essential to prioritizing activities for</i>
1502		<i>care improvement and evaluating success of</i>
1503		<i>improvement efforts.</i>
1504		
1505	VI.A.1.b).(2).(a)	Post-doctoral fellows and faculty members
1506		must receive data on quality metrics and
1507		benchmarks related to their patient populations.
1508		^(Core)
1509		
1510	VI.A.1.b).(3)	Engagement in Quality Improvement Activities
1511		

1512 *Experiential learning is essential to developing the*
1513 *ability to identify and institute sustainable systems-*
1514 *based changes to improve patient care.*

1515
1516 **VI.A.1.b).(3).(a)** Post-doctoral fellows must have the
1517 opportunity to participate in interprofessional
1518 quality improvement activities. ^(Core)

1519
1520 **VI.A.1.b).(3).(a).(i)** This should include activities aimed at
1521 reducing health care disparities. ^(Detail)

1522
1523 **VI.A.2. Supervision and Accountability**

1524
1525 **VI.A.2.a)** *Although the attending specialist is ultimately responsible for*
1526 *the care of the patient, every specialist shares in the*
1527 *responsibility and accountability for their efforts in the*
1528 *provision of care. Effective programs, in partnership with*
1529 *their Sponsoring Institutions, define, widely communicate,*
1530 *and monitor a structured chain of responsibility and*
1531 *accountability as it relates to the supervision of all*
1532 *contributions to patient care.*

1533
1534 *Supervision in the setting of graduate medical education*
1535 *provides safe and effective contributions to care of patients;*
1536 *ensures each post-doctoral fellow's development of the*
1537 *skills, knowledge, and attitudes required to enter the*
1538 *unsupervised participation in care; and establishes a*
1539 *foundation for continued professional growth.*

1540
1541 **VI.A.2.a).(1)** Each patient must have an identifiable and
1542 appropriately-credentialed and privileged attending
1543 specialist as specified by the applicable Review
1544 Committee who is responsible and accountable for the
1545 patient's care. ^(Core)

1546
1547 **VI.A.2.a).(1).(a)** This information must be available to post-
1548 doctoral fellows, faculty members, other
1549 members of the health care team, and patients.
1550 ^(Core)

1551
1552 **VI.A.2.a).(1).(b)** Post-doctoral fellows and faculty members
1553 must ensure patients are informed of the
1554 specialist involved in their care, and of their
1555 respective roles in contributing to patient care.
1556 ^(Core)

1557
1558 **VI.A.2.b)** *Supervision may be exercised through a variety of methods.*
1559 *For many aspects of patient care, the supervising specialist*
1560 *may be a more advanced post-doctoral fellow or physician*
1561 *fellow. Other portions of care provided by the post-doctoral*
1562 *fellow can be adequately supervised by the immediate*

1563		<i>availability of the supervising faculty member, fellow, or</i>
1564		<i>senior post-doctoral fellow, either on site or by means of</i>
1565		<i>telephonic and/or electronic modalities. Some activities</i>
1566		<i>require the physical presence of the supervising faculty</i>
1567		<i>member. In some circumstances, supervision may include</i>
1568		<i>post-hoc review of post-doctoral fellow-delivered care with</i>
1569		<i>feedback.</i>
1570		
1571	VI.A.2.b).(1)	The program must demonstrate that the appropriate
1572		level of supervision in place for all post-doctoral
1573		fellows is based on each post-doctoral fellow's level of
1574		training and ability, as well as patient complexity and
1575		acuity. Supervision may be exercised through a variety
1576		of methods, as appropriate to the situation. ^(Core)
1577		
1578	VI.A.2.c)	Levels of Supervision
1579		
1580		To promote oversight of post-doctoral fellow supervision
1581		while providing for graded authority and responsibility, the
1582		program must use the following classification of supervision:
1583		^(Core)
1584		
1585	VI.A.2.c).(1)	Direct Supervision – the supervising specialist is
1586		physically present with the post-doctoral fellow during
1587		interactions around patient care. ^(Core)
1588		
1589	VI.A.2.c).(2)	Indirect Supervision:
1590		
1591	VI.A.2.c).(2).(a)	with Direct Supervision immediately available –
1592		the supervising specialist is physically within
1593		the hospital or other site of interactions around
1594		patient care, and is immediately available to
1595		provide Direct Supervision. ^(Core)
1596		
1597	VI.A.2.c).(2).(b)	with Direct Supervision available – the
1598		supervising specialist is not physically present
1599		within the hospital or other site of involvement
1600		with patient care, but is immediately available
1601		by means of telephonic and/or electronic
1602		modalities, and is available to provide Direct
1603		Supervision. ^(Core)
1604		
1605	VI.A.2.c).(3)	Oversight – the supervising specialist is available to
1606		provide review of post-doctoral fellow involvement in
1607		procedures/encounters, with feedback provided after
1608		care is delivered. ^(Core)
1609		
1610	VI.A.2.d)	The privilege of progressive authority and responsibility,
1611		conditional independence, and a supervisory role in
1612		contributions to patient care delegated to each post-doctoral

- 1613 fellow must be assigned by the program director and faculty
 1614 members. ^(Core)
 1615
 1616 VI.A.2.d).(1) The program director must evaluate each post-
 1617 doctoral fellow's abilities based on specific criteria,
 1618 guided by the Milestones. ^(Core)
 1619
 1620 VI.A.2.d).(2) Faculty members functioning as supervising
 1621 specialists must delegate portions of care involvement
 1622 to post-doctoral fellows based on contributions to care
 1623 needed and the skills of each post-doctoral fellow. ^(Core)
 1624
 1625 VI.A.2.d).(3) Senior post-doctoral fellows should serve in a
 1626 supervisory role to junior post-doctoral fellows in
 1627 recognition of their progress toward independence,
 1628 based on the contributions to care needed for each
 1629 patient and the skills of the individual post-doctoral
 1630 fellow or fellow. ^(Detail)
 1631
 1632 VI.A.2.e) Programs must set guidelines for circumstances and events
 1633 in which post-doctoral fellows must communicate with the
 1634 supervising faculty member(s). ^(Core)
 1635
 1636 VI.A.2.e).(1) Each post-doctoral fellow must know the limits of their
 1637 scope of authority, and the circumstances under
 1638 which the post-doctoral fellow is permitted to act with
 1639 conditional independence. ^(Outcome)
 1640

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

- 1641
 1642 VI.A.2.e).(1).(a) Initially, post-doctoral fellows must be
 1643 supervised either directly, or indirectly with
 1644 direct supervision immediately available. ^(Core)
 1645
 1646 VI.A.2.f) Faculty supervision assignments must be of sufficient
 1647 duration to assess the knowledge and skills of each post-
 1648 doctoral fellow and to delegate to the post-doctoral fellow the
 1649 appropriate level of involvement in patient care authority and
 1650 responsibility. ^(Core)
 1651
 1652 VI.B. Professionalism
 1653
 1654 VI.B.1. Programs, in partnership with their Sponsoring Institutions, must
 1655 educate post-doctoral fellows and faculty members concerning the
 1656 professional responsibilities of specialists, including their obligation
 1657 to be appropriately rested and fit to provide the care required by
 1658 their patients. ^(Core)
 1659
 1660 VI.B.2. The learning objectives of the program must:

- 1661
 1662 VI.B.2.a) be accomplished through an appropriate blend of supervised
 1663 patient care responsibilities, clinical teaching, and didactic
 1664 educational events; ^(Core)
 1665
 1666 VI.B.2.b) be accomplished without excessive reliance on post-doctoral
 1667 fellows to fulfill non-specialist obligations; and, ^(Core)
 1668

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.

- 1669
 1670 VI.B.2.c) ensure manageable patient care responsibilities. ^(Core)
 1671

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.

- 1672
 1673 VI.B.3. The program director, in partnership with the Sponsoring Institution,
 1674 must provide a culture of professionalism that supports patient
 1675 safety and personal responsibility. ^(Core)
 1676
 1677 VI.B.4. Post-doctoral fellows and faculty members must demonstrate an
 1678 understanding of their personal role in the:
 1679
 1680 VI.B.4.a) contributions to of patient- and family-centered care; ^(Outcome)
 1681
 1682 VI.B.4.b) safety and welfare of patients entrusted to their care,
 1683 including the ability to report unsafe conditions and adverse
 1684 events; ^(Outcome)
 1685

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.

- 1686
 1687 VI.B.4.c) assurance of their fitness for work, including: ^(Outcome)
 1688

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.

- 1689
1690 VI.B.4.c).(1) management of their time before, during, and after
1691 clinical assignments; and, (Outcome)
1692
1693 VI.B.4.c).(2) recognition of impairment, including from illness,
1694 fatigue, and substance use, in themselves, their peers,
1695 and other members of the health care team. (Outcome)
1696
1697 VI.B.4.d) commitment to lifelong learning; (Outcome)
1698
1699 VI.B.4.e) monitoring of their contributions to patient care performance
1700 improvement indicators; and, (Outcome)
1701
1702 VI.B.4.f) accurate reporting of clinical and educational work hours,
1703 patient outcomes, and clinical experience data. (Outcome)
1704
1705 VI.B.5. All post-doctoral fellows and faculty members must demonstrate
1706 responsiveness to patient needs that supersedes self-interest. This
1707 includes the recognition that under certain circumstances, the best
1708 interests of the patient may be served by transitioning their role in
1709 that patient’s care to another qualified and rested provider. (Outcome)
1710
1711 VI.B.6. Programs, in partnership with their Sponsoring Institutions, must
1712 provide a professional, equitable, respectful, and civil environment
1713 that is free from discrimination, sexual and other forms of
1714 harassment, mistreatment, abuse, or coercion of students, post-
1715 doctoral fellows, faculty, and staff. (Core)
1716
1717 VI.B.7. Programs, in partnership with their Sponsoring Institutions, should
1718 have a process for education of post-doctoral fellows and faculty
1719 regarding unprofessional behavior and a confidential process for
1720 reporting, investigating, and addressing such concerns. (Core)
1721
1722 VI.C. Well-Being
1723
1724 *Psychological, emotional, and physical well-being are critical in the*
1725 *development of the competent, caring, and resilient specialist and require*
1726 *proactive attention to life inside and outside of medicine. Well-being*
1727 *requires that specialists retain the joy in medicine while managing their*
1728 *own real-life stresses. Self-care and responsibility to support other*
1729 *members of the health care team are important components of*
1730 *professionalism; they are also skills that must be modeled, learned, and*
1731 *nurtured in the context of other aspects of post-doctoral education*
1732 *training.*

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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.

As these efforts evolve, information will be shared with programs seeking to develop and/or strengthen their own well-being initiatives. In addition, there are many activities that programs can utilize now to assess and support specialist well-being. These include culture of safety surveys, ensuring the availability of counseling services, and attention to the safety of the entire health care team.

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- 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.

1763
1764 VI.C.1.d) policies and programs that encourage optimal post-doctoral
1765 fellow and faculty member well-being; and, (Core)
1766

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.

1767
1768 VI.C.1.d).(1) Post-doctoral fellows must be given the opportunity to
1769 attend medical, mental health, and dental care
1770 appointments, including those scheduled during their
1771 working hours. (Core)
1772

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.

1773
1774 VI.C.1.e) attention to post-doctoral fellow and faculty member burnout,
1775 depression, and substance abuse. The program, in
1776 partnership with its Sponsoring Institution, must educate
1777 faculty members and post-doctoral fellows in identification of
1778 the symptoms of burnout, depression, and substance abuse,
1779 including means to assist those who experience these
1780 conditions. Post-doctoral fellows and faculty members must
1781 also be educated to recognize those symptoms in themselves
1782 and how to seek appropriate care. The program, in
1783 partnership with its Sponsoring Institution, must: (Core)
1784

Background and Intent: Programs and Sponsoring Institutions are encouraged to review materials in order to create systems for identification of burnout, depression, and substance abuse. Materials and more information are available on the Physician Well-being section of the ACGME website (<http://www.acgme.org/What-We-Do/Initiatives/Physician-Well-Being>).

1785
1786 VI.C.1.e).(1) encourage post-doctoral fellows and faculty members
1787 to alert the program director or other designated
1788 personnel or programs when they are concerned that
1789 another post-doctoral fellow, resident, fellow, or
1790 faculty member may be displaying signs of burnout,
1791 depression, substance abuse, suicidal ideation, or
1792 potential for violence; (Core)
1793

Background and Intent: Individuals experiencing burnout, depression, substance abuse, 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.

- 1794
1795 VI.C.1.e).(2) provide access to appropriate tools for self-screening;
1796 and, ^(Core)
1797
1798 VI.C.1.e).(3) provide access to confidential, affordable mental
1799 health assessment, counseling, and treatment,
1800 including access to urgent and emergent care 24
1801 hours a day, seven days a week. ^(Core)
1802

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.

- 1803
1804 VI.C.2. There are circumstances in which post-doctoral fellows may be
1805 unable to attend work, including but not limited to fatigue, illness,
1806 family emergencies, and parental leave. Each program must allow
1807 an appropriate length of absence for post-doctoral fellows unable to
1808 perform their patient care responsibilities. ^(Core)
1809
1810 VI.C.2.a) The program must have policies and procedures in place to
1811 ensure coverage of their contributions to patient care. ^(Core)
1812
1813 VI.C.2.b) These policies must be implemented without fear of negative
1814 consequences for the post-doctoral fellow who is or was
1815 unable to provide the clinical work. ^(Core)
1816

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.

- 1817
1818 VI.D. Fatigue Mitigation
1819
1820 VI.D.1. Programs must:

- 1821
 1822 **VI.D.1.a)** educate all faculty members and post-doctoral fellows to
 1823 recognize the signs of fatigue and sleep deprivation; ^(Core)
 1824
 1825 **VI.D.1.b)** educate all faculty members and post-doctoral fellows in
 1826 alertness management and fatigue mitigation processes; and,
 1827 ^(Core)
 1828
 1829 **VI.D.1.c)** encourage post-doctoral fellows to use fatigue mitigation
 1830 processes to manage the potential negative effects of fatigue
 1831 on contributions to patient care and learning. ^(Detail)
 1832

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.

- 1833
 1834 **VI.D.2.** Each program must ensure continuity of involvement with patient
 1835 care, consistent with the program’s policies and procedures
 1836 referenced in VI.C.2–VI.C.2.b), in the event that a post-doctoral
 1837 fellow may be unable to perform their role in patient care due to
 1838 excessive fatigue. ^(Core)
 1839
 1840 **VI.D.3.** The program, in partnership with its Sponsoring Institution, must
 1841 ensure adequate sleep facilities and safe transportation options for
 1842 post-doctoral fellows who may be too fatigued to safely return
 1843 home. ^(Core)
 1844
 1845 **VI.E. Clinical Responsibilities, Teamwork, and Transitions of Care**
 1846
 1847 **VI.E.1. Clinical Responsibilities**
 1848
 1849 The clinical care contributions for each post-doctoral fellow must be
 1850 based on PGY level, patient safety, post-doctoral fellow ability,
 1851 severity and complexity of patient illness/condition, and available
 1852 support services. ^(Core)
 1853

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.

- 1854
1855 **VI.E.2. Teamwork**
1856
1857 **Post-doctoral fellows must contribute to care for patients in an**
1858 **environment that maximizes communication. This must include the**
1859 **opportunity to work as a member of effective interprofessional**
1860 **teams that are appropriate to the delivery of care in the specialty**
1861 **and larger health system. ^(Core)**
1862
1863 **VI.E.3. Transitions of Care**
1864
1865 **VI.E.3.a) Programs must design clinical assignments to optimize**
1866 **transitions in patient care involvement, including their safety,**
1867 **frequency, and structure. ^(Core)**
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1869 **VI.E.3.b) Programs, in partnership with their Sponsoring Institutions,**
1870 **must ensure and monitor effective, structured hand-over**
1871 **processes to facilitate both continuity of care and patient**
1872 **safety. ^(Core)**
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1874 **VI.E.3.c) Programs must ensure that post-doctoral fellows are**
1875 **competent in communicating with team members in the hand-**
1876 **over process. ^(Outcome)**
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1878 **VI.E.3.d) Programs and clinical sites must maintain and communicate**
1879 **schedules of attending physicians and post-doctoral fellows**
1880 **currently responsible for care. ^(Core)**
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1882 **VI.E.3.e) Each program must ensure continuity of patient care**
1883 **contributions, consistent with the program’s policies and**
1884 **procedures referenced in VI.C.2–VI.C.2.b), in the event that a**
1885 **post-doctoral fellow may be unable to perform their patient**
1886 **care responsibilities due to excessive fatigue or illness, or**
1887 **family emergency. ^(Core)**
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1889 **VI.F. Clinical Experience and Education**
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1891 ***Programs, in partnership with their Sponsoring Institutions, must design***
1892 ***an effective program structure that is configured to provide post-doctoral***
1893 ***fellows with educational and clinical experience opportunities, as well as***
1894 ***reasonable opportunities for rest and personal activities.***
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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.

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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.

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- 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)**

1915 VI.F.2.b).(1)
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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.

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1923 VI.F.2.c)
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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.

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1928 VI.F.2.d)
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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."

1933
1934 VI.F.3.
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Maximum Clinical Work and Education Period Length

1936 **VI.F.3.a)** **Clinical and educational work periods for post-doctoral**
1937 **fellows must not exceed 24 hours of continuous scheduled**
1938 **clinical assignments. (Core)**

1939
1940 **VI.F.3.a).(1)** **Up to four hours of additional time may be used for**
1941 **activities related to patient safety, such as providing**
1942 **effective transitions of care, and/or post-doctoral**
1943 **fellow education. (Core)**

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1945 **VI.F.3.a).(1).(a)** **Additional patient care responsibilities must not**
1946 **be assigned to a post-doctoral fellow during**
1947 **this time. (Core)**
1948

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.

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1950 **VI.F.4.** **Clinical and Educational Work Hour Exceptions**

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1952 **VI.F.4.a)** **In rare circumstances, after handing off all other**
1953 **responsibilities, a post-doctoral fellow, on their own initiative,**
1954 **may elect to remain or return to the clinical site in the**
1955 **following circumstances:**

1956
1957 **VI.F.4.a).(1)** **to continue to help provide care to a single severely ill**
1958 **or unstable patient; (Detail)**

1959
1960 **VI.F.4.a).(2)** **humanistic attention to the needs of a patient or**
1961 **family; or, (Detail)**

1962
1963 **VI.F.4.a).(3)** **to attend unique educational events. (Detail)**

1964
1965 **VI.F.4.b)** **These additional hours of care or education will be counted**
1966 **toward the 80-hour weekly limit. (Detail)**
1967

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.

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1969	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.
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1975		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.
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1978	VI.F.4.c).(1)	In preparing a request for an exception, the program director must follow the clinical and educational work hour exception policy from the <i>ACGME Manual of Policies and Procedures</i>. (Core)
1979		
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1983	VI.F.4.c).(2)	Prior to submitting the request to the Review Committee, the program director must obtain approval from the Sponsoring Institution's GMEC and DIO. (Core)
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Background and Intent: The provision for exceptions for up to 88 hours per week has been modified to specify that exceptions may be granted for specific rotations if the program can justify the increase based on criteria specified by the Review Committee. As in the past, Review Committees may opt not to permit exceptions. The underlying philosophy for this requirement is that while it is expected that all post-doctoral fellows should be able to train within an 80-hour work week, it is recognized that some programs may include rotations with alternate structures based on the nature of the specialty. DIO/GMEC approval is required before the request will be considered by the Review Committee.

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1988	VI.F.5.	Moonlighting
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1990	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)
1991		
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1996	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)
1997		
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2001	VI.F.5.c)	PGY-1 post-doctoral fellows are not permitted to moonlight. (Core)
2002		
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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>).

2004		
2005	VI.F.6.	In-House Night Float
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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.

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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.

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***Core Requirements:** Statements that define structure, resource, or process elements essential to every graduate medical educational program.

†Detail Requirements: Statements that describe a specific structure, resource, or process, for achieving compliance with a Core Requirement. Programs and sponsoring institutions in substantial compliance

2043 with the Outcome Requirements may utilize alternative or innovative approaches to meet Core
2044 Requirements.

2045
2046 ‡**Outcome Requirements:** Statements that specify expected measurable or observable attributes
2047 (knowledge, abilities, skills, or attitudes) of residents or fellows at key stages of their graduate medical
2048 education.

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2050 **Osteopathic Recognition**

2051 For programs seeking Osteopathic Recognition for the entire program, or for a track within the program,
2052 the Osteopathic Recognition Requirements are also applicable.

2053 (http://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/Osteopathic_Recognition_Requirements.pdf)
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