

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

3
4 **Common Program Requirements are in BOLD**

5
6 Effective: July 1, 2007
7

8 **Introduction**

9
10 **Int.A. Residency is an essential dimension of the transformation of the medical**
11 **student to the independent practitioner along the continuum of medical**
12 **education. It is physically, emotionally, and intellectually demanding, and**
13 **requires longitudinally-concentrated effort on the part of the resident.**
14

15 **The specialty education of physicians to practice independently is**
16 **experiential, and necessarily occurs within the context of the health care**
17 **delivery system. Developing the skills, knowledge, and attitudes leading to**
18 **proficiency in all the domains of clinical competency requires the resident**
19 **physician to assume personal responsibility for the care of individual**
20 **patients. For the resident, the essential learning activity is interaction with**
21 **patients under the guidance and supervision of faculty members who give**
22 **value, context, and meaning to those interactions. As residents gain**
23 **experience and demonstrate growth in their ability to care for patients, they**
24 **assume roles that permit them to exercise those skills with greater**
25 **independence. This concept—graded and progressive responsibility—is**
26 **one of the core tenets of American graduate medical education.**
27 **Supervision in the setting of graduate medical education has the goals of**
28 **assuring the provision of safe and effective care to the individual patient;**
29 **assuring each resident’s development of the skills, knowledge, and**
30 **attitudes required to enter the unsupervised practice of medicine; and**
31 **establishing a foundation for continued professional growth.**
32

33 **Int.B. ~~Clinical m~~Medical geneticists are physicians who provides comprehensive**
34 **diagnostic, management, treatment, risk assessment, interpretation of genetic**
35 **and genomic testing, and genetic counseling services for patients who have or**
36 **are at risk for having genetic disorders or disorders with a genetic component.**
37

38 ~~Int.C. Accredited graduate medical education programs in medical genetics must~~
39 ~~provide formal instruction and clinical experience for residents to develop the~~
40 ~~knowledge, skills, and attitudes essential to the practice of clinical medical~~
41 ~~genetics.~~
42

43 **Int.D. The educational program A residency in clinical medical genetics must be**
44 **twenty-four months in length, may be accredited to provide two and/or four years**
45 **of graduate medical education.**
46

47 ~~Int.D.1. A four-year program must include two years of pre-genetics ACGME-~~
48 ~~accredited residency education, followed by two years of education in~~
49 ~~clinical medical genetics. A four-year program must be designed~~
50 ~~prospectively by the medical genetics program director together with the~~
51 ~~directors of the programs to which residents will be assigned during the~~

two years of pre-genetics education.

I. Institutions

I.A. Sponsoring Institution

One sponsoring institution must assume ultimate responsibility for the program, as described in the Institutional Requirements, and this responsibility extends to resident assignments at all participating sites.

The sponsoring institution and the program must ensure that the program director has sufficient protected time and financial support for his or her educational and administrative responsibilities to the program.

I.A.1. The program director must be provided with at least 0.2 full time equivalent (FTE) protected time and financial support for his or her educational and administrative responsibilities to the program.

I.A.2. ~~The institutions sponsoring institution medical genetics programs~~ should also sponsor ACGME-accredited programs in internal medicine, obstetrics and gynecology, and pediatrics.

I.B. Participating Sites

I.B.1. There must be a program letter of agreement (PLA) between the program and each participating site providing a required assignment. The PLA must be renewed at least every five years.

The PLA should:

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

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

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

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

I.B.2. The program director must submit any additions or deletions of participating sites routinely providing an educational experience, required for all residents, of one month full time equivalent (FTE) or more through the Accreditation Council for Graduate Medical Education (ACGME) Accreditation Data System (ADS).

II. Program Personnel and Resources

- 103 **II.A. Program Director**
104
- 105 **II.A.1. There must be a single program director with authority and**
106 **accountability for the operation of the program. The sponsoring**
107 **institution's GMEC must approve a change in program director.**
108 **After approval, the program director must submit this change to the**
109 **ACGME via the ADS.**
110
- 111 **II.A.1.a)** ~~Sponsoring institutions must develop and implement policies and~~
112 ~~procedures to ensure continuity when the program director~~
113 ~~departs, is on sabbatical, or is unable to meet his or her duties for~~
114 ~~any other reason. An interim program director must be appointed~~
115 ~~for a temporary absence of the program director of one or more~~
116 ~~months.~~
117
- 118 **II.A.1.a).(1)** The interim program director must have current American
119 Board of Medical Genetics (ABMG) certification in the
120 specialty and at least two years of experience following the
121 completion of graduate medical education.
122
- 123 **II.A.1.a).(2)** If the absence of the regularly-appointed program director
124 extends beyond nine months, a permanent replacement
125 must be appointed.
126
- 127 **II.A.2. The program director should continue in his or her position for a**
128 **length of time adequate to maintain continuity of leadership and**
129 **program stability.**
130
- 131 **II.A.3. Qualifications of the program director must include:**
132
- 133 **II.A.3.a) requisite specialty expertise and documented educational**
134 **and administrative experience acceptable to the Review**
135 **Committee;**
136
- 137 **II.A.3.b) current certification in the specialty ~~Clinical Genetics by the~~**
138 **American Board of Medical Genetics ~~(ABMG)~~, or specialty**
139 **qualifications that are acceptable to the Review Committee;**
140
- 141 **II.A.3.b).(1)** The Review Committee accepts only current ABMG
142 certification in clinical genetics.
143
- 144 **II.A.3.b).(2)** The program director must meet the requirements for
145 Maintenance of Certification in clinical genetics through the
146 ABMG.
147
- 148 **II.A.3.c) current medical licensure and appropriate medical staff**
149 **appointment; and,**
150
- 151 **II.A.3.c).(1)** The program director must have a full-time faculty
152 appointment.
153

- 154 II.A.3.d) at least four years of experience as an attending genetics faculty
155 member following completion of all graduate medical education.
156
- 157 **II.A.4. The program director must administer and maintain an educational**
158 **environment conducive to educating the residents in each of the**
159 **ACGME competency areas. The program director must:**
160
- 161 **II.A.4.a) oversee and ensure the quality of didactic and clinical**
162 **education in all institutions that participate in the program;**
163
- 164 **II.A.4.b) approve a local director at each participating site who is**
165 **accountable for resident education;**
166
- 167 **II.A.4.c) approve the selection of program faculty as appropriate;**
168
- 169 **II.A.4.d) evaluate program faculty and approve the continued**
170 **participation of program faculty based on evaluation;**
171
- 172 **II.A.4.e) monitor resident supervision at all participating sites;**
173
- 174 **II.A.4.f) prepare and submit all information required and requested by**
175 **the ACGME, including but not limited to the program**
176 **information forms and annual program resident updates to**
177 **the ADS, and ensure that the information submitted is**
178 **accurate and complete;**
179
- 180 **II.A.4.g) provide each resident with documented semiannual**
181 **evaluation of performance with feedback;**
182
- 183 **II.A.4.h) ensure compliance with grievance and due process**
184 **procedures as set forth in the Institutional Requirements and**
185 **implemented by the sponsoring institution;**
186
- 187 **II.A.4.i) provide verification of residency education for all residents,**
188 **including those who leave the program prior to completion;**
189
- 190 **II.A.4.j) implement policies and procedures consistent with the**
191 **institutional and program requirements for resident duty**
192 **hours and the working environment, including moonlighting,**
193 **and, to that end, must:**
194
- 195 **II.A.4.j).(1) distribute these policies and procedures to the**
196 **residents and faculty;**
197
- 198 **II.A.4.j).(2) monitor resident duty hours, according to sponsoring**
199 **institutional policies, with a frequency sufficient to**
200 **ensure compliance with ACGME requirements**
201
- 202 **II.A.4.j).(3) adjust schedules as necessary to mitigate excessive**
203 **service demands and/or fatigue; and,**
204

205	II.A.4.j).(4)	if applicable, monitor the demands of at-home call and
206		adjust schedules as necessary to mitigate excessive
207		service demands and/or fatigue.
208		
209	II.A.4.k)	monitor the need for and ensure the provision of back up
210		support systems when patient care responsibilities are
211		unusually difficult or prolonged;
212		
213	II.A.4.l)	comply with the sponsoring institution's written policies and
214		procedures, including those specified in the Institutional
215		Requirements, for selection, evaluation and promotion of
216		residents, disciplinary action, and supervision of residents.
217		
218	II.A.4.m)	be familiar with and comply with ACGME and Review
219		Committee policies and procedures as outlined in the ACGME
220		Manual of Policies and Procedures;
221		
222	II.A.4.n)	obtain review and approval of the sponsoring institution's
223		GMEC/DIO before submitting to the ACGME information or
224		requests for the following:
225		
226	II.A.4.n).(1)	all applications for ACGME accreditation of new
227		programs;
228		
229	II.A.4.n).(2)	changes in resident complement;
230		
231	II.A.4.n).(3)	major changes in program structure or length of
232		training;
233		
234	II.A.4.n).(4)	progress reports requested by the Review Committee;
235		
236	II.A.4.n).(5)	responses to all proposed adverse actions;
237		
238	II.A.4.n).(6)	requests for increases or any change to resident duty
239		hours;
240		
241	II.A.4.n).(7)	voluntary withdrawals of ACGME-accredited
242		programs;
243		
244	II.A.4.n).(8)	requests for appeal of an adverse action;
245		
246	II.A.4.n).(9)	appeal presentations to a Board of Appeal or the
247		ACGME; and,
248		
249	II.A.4.n).(10)	proposals to ACGME for approval of innovative
250		educational approaches.
251		
252	II.A.4.o)	obtain DIO review and co-signature on all program
253		information forms, as well as any correspondence or
254		document submitted to the ACGME that addresses:
255		

- 256 II.A.4.o).(1) program citations, and/or
257
- 258 II.A.4.o).(2) request for changes in the program that would have
259 significant impact, including financial, on the program
260 or institution.
261
- 262 II.B. Faculty
- 263
- 264 II.B.1. At each participating site, there must be a sufficient number of
265 faculty with documented qualifications to instruct and supervise all
266 residents at that location.
267
- 268 The faculty must:
- 269
- 270 II.B.1.a) devote sufficient time to the educational program to fulfill
271 their supervisory and teaching responsibilities; and to
272 demonstrate a strong interest in the education of residents;
273 and,
274
- 275 II.B.1.b) administer and maintain an educational environment
276 conducive to educating residents in each of the ACGME
277 competency areas.
278
- 279 II.B.2. The physician faculty must have current certification in the specialty
280 by the American Board of Medical Genetics, or possess qualifications
281 acceptable to the Review Committee.
282
- 283 II.B.2.a) ~~Those responsible for resident education in a given area must~~
284 ~~have ABMG certification in that area. Specifically:~~
- 285
- 286 II.B.2.b) ~~The person(s) Faculty members responsible for resident~~
287 ~~education in biochemical genetics must be certified have current~~
288 ~~ABMG certification in biochemical genetics.~~
- 289
- 290 II.B.2.c) ~~The person(s) Faculty members responsible for resident~~
291 ~~education in molecular genetics must be certified have current~~
292 ~~certification in molecular genetics by the ABMG or the American~~
293 ~~Board of Pathology.~~
- 294
- 295 II.B.2.d) ~~The person(s) Faculty members responsible for resident~~
296 ~~education in clinical cytogenetics must be certified have current~~
297 ~~ABMG certification in clinical cytogenetics.~~
- 298
- 299 II.B.2.e) ~~Faculty members responsible for resident education during~~
300 ~~laboratory rotations must meet local and state requirements for~~
301 ~~directing a clinical laboratory.~~
- 302
- 303 II.B.3. The physician faculty must possess current medical licensure and
304 appropriate medical staff appointment.
305
- 306 II.B.4. The nonphysician faculty must have appropriate qualifications in

- 307 their field and hold appropriate institutional appointments.
 308
- 309 **II.B.5. The faculty must establish and maintain an environment of inquiry
 310 and scholarship with an active research component.**
- 311
- 312 **II.B.5.a) The faculty must regularly participate in organized clinical
 313 discussions, rounds, journal clubs, and conferences.**
- 314
- 315 **II.B.5.b) Some members of the faculty should also demonstrate
 316 scholarship by one or more of the following:**
- 317
- 318 **II.B.5.b).(1) peer-reviewed funding;**
- 319
- 320 **II.B.5.b).(2) publication of original research or review articles in
 321 peer-reviewed journals, or chapters in textbooks;**
- 322
- 323 **II.B.5.b).(3) publication or presentation of case reports or clinical
 324 series at local, regional, or national professional and
 325 scientific society meetings; or,**
- 326
- 327 **II.B.5.b).(4) participation in national committees or educational
 328 organizations.**
- 329
- 330 **II.B.5.c) Faculty should encourage and support residents in scholarly
 331 activities.**
- 332
- 333 **II.B.5.d) Faculty members must maintain a continuing involvement in
 334 scholarly activities, participate in key national scientific human
 335 genetics meetings, and contribute to graduate medical education,
 336 both locally and nationally.**
- 337
- 338 **II.B.6. There must be at least three ~~members of the teaching staff~~ FTE faculty
 339 members, (including the program director,) who are members of the
 340 medical staffs ~~of~~ at participating sites. At least two of these individuals
 341 must have current ABMG certification ~~be certified~~ in clinical medical
 342 genetics.**
- 343
- 344 **II.C. Other Program Personnel**
- 345
- 346 **The institution and the program must jointly ensure the availability of all
 347 necessary professional, technical, and clerical personnel for the effective
 348 administration of the program.**
- 349
- 350 **II.C.1. ~~Residents must have regular opportunities to work with a~~ Genetic
 351 counselors, nurses, nutritionists, and other health care professionals who
 352 are involved in the provision of clinical medical genetics services must be
 353 available to work on a regular basis with residents.**
- 354
- 355 **II.C.2. There must be a dedicated program coordinator to assist the program
 356 director in effectively fulfilling the administrative requirements of the
 357 program.**

358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408

II.D. Resources

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

II.D.1. ~~Program sites~~ Laboratory facilities must include ~~should have~~ a clinical cytogenetics laboratory, a clinical biochemical genetics laboratory, and a clinical molecular genetics laboratory, ~~each of which provides an appropriate volume and variety of services related to medical genetics, together with an adequate number of qualified staff. If a laboratory is not located in a participating site, a written letter of agreement from the laboratory director detailing the laboratory's contributions to the education of medical genetics residents must be prepared and kept on file by the program director.~~

II.D.2. ~~Adequate space and equipment must be available to meet the educational goals of the program. In addition to~~ Clinical facilities must include space for patient care activities, ~~this requires~~ meeting rooms, classrooms, office space, research facilities, and facilities for record storage and retrieval.

II.D.3. Education facilities must include ~~Office and laboratory space, meeting rooms, classrooms, and laboratory space, and research facilities must be provided for the residents' for both patient care work and participation in scholarly activities.~~

II.D.4. ~~Participating sites must provide~~ There should be a sufficient number and variety (e.g., patients of all ages and both genders, including women who are pregnant, and non-pregnant, all ages) of inpatients and outpatients to permit residents to gain experience with the natural history of a wide range of genetic disorders and other disorders with a genetic component.

II.D.4.a) ~~This will mean, typically, that programs will care for~~ should include at least ~~400-150~~ 150 different patients or families per year averaged over two years for each resident.

II.D.4.b) ~~These p~~ Patients and families must be seen in both outpatient and inpatient settings.

II.D.5. ~~Residents should have access to computer-based genetic diagnostic systems; and The audiovisual resources available for educational purposes should be adequate to meet the goals and objectives of the program.~~

II.E. Medical Information Access

Residents must have ready access to specialty-specific and other appropriate reference material in print or electronic format. Electronic medical literature databases with search capabilities should be available.

- 409
410 **III. Resident Appointments**
411
412 **III.A. Eligibility Criteria**
413
414 **The program director must comply with the criteria for resident eligibility**
415 **as specified in the Institutional Requirements.**
416
417 III.A.1. Prior to appointment in the program, residents ~~Physicians who must have~~
418 successfully completed ~~a at least one year two or more years of a~~
419 residency program accredited by the Accreditation Council for Graduate
420 Medical Education (ACGME), ~~a program located in Canada and~~
421 accredited by the Royal College of Physicians and Surgeons of Canada
422 (RCPSC), or a program located in the United Kingdom and accredited by
423 either the Royal College of Physicians or the Royal College of Surgeons,
424 including are eligible for appointment to a two-year medical genetics
425 residency; ~~12 months of direct patient care experience.~~
426
427 III.A.1.a) Residents must demonstrate competency in the following
428 fundamental clinical skills by the completion of this experience:
429
430 III.A.1.a).(1) obtaining a comprehensive medical history;
431
432 III.A.1.a).(2) performing a comprehensive physical examination;
433
434 III.A.1.a).(3) assessing a patient's medical conditions;
435
436 III.A.1.a).(4) making appropriate use of diagnostic studies and tests;
437
438 III.A.1.a).(5) integrating information to develop a differential diagnosis;
439 and,
440
441 III.A.1.a).(6) developing, implementing, and evaluating a treatment
442 plan.
443
444 III.A.2. ~~A medical genetics program director may appoint a resident to a two-year~~
445 ~~program following two or more years of ACGME-accredited residency~~
446 ~~education accredited by the ACGME~~
447
448 **III.B. Number of Residents**
449
450 **The program director may not appoint more residents than approved by the**
451 **Review Committee, unless otherwise stated in the specialty-specific**
452 **requirements. The program's educational resources must be adequate to**
453 **support the number of residents appointed to the program.**
454
455 **III.C. Resident Transfers**
456
457 **III.C.1. Before accepting a resident who is transferring from another**
458 **program, the program director must obtain written or electronic**
459 **verification of previous educational experiences and a summative**

460 competency-based performance evaluation of the transferring
461 resident.
462
463 **III.C.2.** A program director must provide timely verification of residency
464 education and summative performance evaluations for residents
465 who leave the program prior to completion.
466
467 **III.D. Appointment of Fellows and Other Learners**
468
469 The presence of other learners (including, but not limited to, residents from
470 other specialties, subspecialty fellows, PhD students, and nurse
471 practitioners) in the program must not interfere with the appointed
472 residents' education. The program director must report the presence of
473 other learners to the DIO and GMEC in accordance with sponsoring
474 institution guidelines.
475
476 ~~III.D.1. The presence of other learners in medical genetics and in other
477 specialties within participating sites is essential to the maintenance of a
478 stimulating educational environment.~~
479
480 **IV. Educational Program**
481
482 **IV.A. The curriculum must contain the following educational components:**
483
484 **IV.A.1. Overall educational goals for the program, which the program must
485 distribute to residents and faculty annually;**
486
487 **IV.A.2. Competency-based goals and objectives for each assignment at
488 each educational level, which the program must distribute to
489 residents and faculty annually, in either written or electronic form.
490 These should be reviewed by the resident at the start of each
491 rotation;**
492
493 **IV.A.3. Regularly scheduled didactic sessions;**
494
495 **IV.A.3.a) The didactic curriculum must include:**
496
497 **IV.A.3.a).(1) ~~ensure that clinical teaching conferences are organized by
498 the faculty for the residents, and that attendance by the
499 residents and the faculty is documented. These
500 conferences must be distinct from the basic science
501 lectures and didactic sessions. Clinical teaching
502 conferences may, which should include formal didactic
503 sessions on clinical laboratory topics, medical genetics
504 rounds, journal clubs, and follow-up conferences for
505 genetic clinics, and~~**
506
507 **IV.A.3.a).(1).(a) ~~Attendance by the residents and faculty must be
508 documented.~~**
509
510 **IV.A.3.a).(2) will participate formally, through lectures or other didactic**

511		sessions, in the equivalent of a one-year graduate level
512		course in basic human medical genetics <u>on the following</u>
513		<u>topics:</u>
514		
515	IV.A.3.a).(2).(a)	<u>basic mechanisms of inheritance, including sex</u>
516		<u>chromosomes, autosomes, and mitochondrial DNA;</u>
517		
518	IV.A.3.a).(2).(b)	<u>basic molecular biology techniques pertinent to</u>
519		<u>clinical testing and understanding genetic research;</u>
520		
521	IV.A.3.a).(2).(c)	<u>Bayesian analysis and other methods of genetic</u>
522		<u>risk assessment;</u>
523		
524	IV.A.3.a).(2).(d)	<u>behavior of genes in a population, including Hardy-</u>
525		<u>Weinberg equilibria of alleles;</u>
526		
527	IV.A.3.a).(2).(e)	<u>bioinformatic approaches to interpreting molecular</u>
528		<u>test results, including methods to assign causation</u>
529		<u>to novel findings;</u>
530		
531	IV.A.3.a).(2).(f)	<u>the cell cycle and molecular genetics of cancer;</u>
532		
533	IV.A.3.a).(2).(g)	<u>DNA, RNA, and protein chemistry, including DNA</u>
534		<u>repair;</u>
535		
536	IV.A.3.a).(2).(h)	<u>gene expression and mechanisms of regulation of</u>
537		<u>genes and genomes, including epigenetic</u>
538		<u>regulation;</u>
539		
540	IV.A.3.a).(2).(i)	<u>genetic linkage, mapping and association studies;</u>
541		
542	IV.A.3.a).(2).(j)	<u>human embryology and development;</u>
543		
544	IV.A.3.a).(2).(k)	<u>inheritance of complex traits and genetic variation;</u>
545		
546	IV.A.3.a).(2).(l)	<u>mechanisms of chromosomal rearrangement;</u>
547		
548	IV.A.3.a).(2).(m)	<u>molecular organization of the genome, including</u>
549		<u>molecular evolution mechanisms;</u>
550		
551	IV.A.3.a).(2).(n)	<u>principles of biochemical genetics and metabolism;</u>
552		<u>and,</u>
553		
554	IV.A.3.a).(2).(o)	<u>principles of replication, recombination and</u>
555		<u>segregation of alleles during meiosis.</u>
556		
557	IV.A.3.b)	Research seminars should be <u>provided as a</u> part of the training
558		<u>educational</u> experience, but will not be considered an acceptable
559		alternative to this basic science didactic component.
560		
561	IV.A.4.	Delineation of resident responsibilities for patient care, progressive

562 responsibility for patient management, and supervision of residents
563 over the continuum of the program; and,

564
565 IV.A.4.a) ~~Residents must have the opportunity to develop the abilities to~~
566 ~~diagnose genetic disorders, counsel patients, and manage and~~
567 ~~treat the broad range of clinical problems in patients of all ages~~
568 ~~that are encompassed by medical genetics.~~

569
570 **IV.A.5. ACGME Competencies**

571
572 **The program must integrate the following ACGME competencies**
573 **into the curriculum:**

574
575 **IV.A.5.a) Patient Care**

576
577 **Residents must be able to provide patient care that is**
578 **compassionate, appropriate, and effective for the treatment of**
579 **health problems and the promotion of health. Residents:**

580
581 IV.A.5.a).(1) must demonstrate competence in~~will gather essential and~~
582 ~~accurate information about the patient by using the~~
583 ~~following clinical skills:~~

584
585 IV.A.5.a).(1).(a) completing comprehensive genetics physical
586 examination;~~and,~~

587
588 IV.A.5.a).(1).(b) diagnostic studies, to include~~including the~~
589 ~~interpretation of interpreting laboratory data~~
590 ~~generated from biochemical genetic, cytogenetic,~~
591 ~~and molecular genetic analyses;~~and,

592
593 IV.A.5.a).(1).(c) medical interviewing, to include~~including the taking~~
594 ~~and interpretation of interpreting a complete family~~
595 ~~history, (including construction of a pedigree);~~;

596
597 IV.A.5.a).(2) must demonstrate competence in making~~will make~~
598 ~~informed decisions about diagnostic and therapeutic~~
599 ~~interventions based on patient and family information and~~
600 ~~preferences, up-to-date scientific evidence, and clinical~~
601 ~~judgment by:~~

602
603 IV.A.5.a).(2).(a) appropriate use of~~appropriately using~~ consultants
604 ~~and referrals;~~

605
606 IV.A.5.a).(2).(b) demonstrating awareness~~understanding of the~~
607 ~~limits of one's in their own knowledge and~~
608 ~~expertise;~~

609
610 IV.A.5.a).(2).(c) demonstrating effective and appropriate clinical
611 problem-solving skills;~~and,~~

612

613	IV.A.5.a).(2).(d)	will use <u>using</u> information technology to support patient care decisions and patient education;
614		
615		
616	IV.A.5.a).(3)	<u>must demonstrate competence in developing and implementing</u> will develop and carry out patient management plans, <u>including</u> :
617		
618		
619		
620	IV.A.5.a).(3).(a)	<u>prescribing medications</u> will prescribe and performing medical interventions essential for the care of patients with heritable disorders; <u>and</u> ,
621		
622		
623		
624	IV.A.5.a).(3).(b)	<u>assisting</u> will assist patients in accomplishing their personal health goals.
625		
626		
627	IV.A.5.b)	Medical Knowledge
628		
629		Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. Residents:
630		
631		
632		
633		
634	IV.A.5.b).(1)	<u>must demonstrate expertise in their knowledge</u> will know, critically evaluate, and use of current medical information and scientific evidence for patient care, including:
635		
636		
637		
638	IV.A.5.b).(1).(a)	results from genetics laboratory tests;
639		
640	IV.A.5.b).(1).(b)	quantitative risk assessment; and,
641		
642	IV.A.5.b).(1).(c)	available bioinformatics.
643		
644	IV.A.5.b).(2)	<u>must demonstrate expertise in their knowledge of</u> possess the basic economic and business <u>knowledge principles</u> needed necessary to function effectively in one's <u>the</u> practice setting;
645		
646		
647		
648		
649	IV.A.5.b).(3)	<u>must demonstrate expertise in their knowledge of</u> including but not limited to :
650		
651		
652	IV.A.5.b).(3).(a)	biochemical genetics; and ,
653		
654	IV.A.5.b).(3).(b)	cytogenetics;
655		
656	IV.A.5.b).(3).(c)	mendelian and non-mendelian genetics;
657		
658	IV.A.5.b).(3).(d)	molecular genetics. (An introductory medical genetics course for medical students does not satisfy this requirement.); <u>and</u> ,
659		
660		
661		
662	IV.A.5.b).(3).(e)	population and quantitative genetics;
663		

664		
665	IV.A.5.c)	Practice-based Learning and Improvement
666		
667		Residents must demonstrate the ability to investigate and
668		evaluate their care of patients, to appraise and assimilate
669		scientific evidence, and to continuously improve patient care
670		based on constant self-evaluation and life-long learning.
671		Residents are expected to develop skills and habits to be able
672		to meet the following goals:
673		
674	IV.A.5.c).(1)	identify strengths, deficiencies, and limits in one’s
675		knowledge and expertise;
676		
677	IV.A.5.c).(2)	set learning and improvement goals;
678		
679	IV.A.5.c).(3)	identify and perform appropriate learning activities;
680		
681	IV.A.5.c).(4)	systematically analyze practice using quality
682		improvement methods, and implement changes with
683		the goal of practice improvement;
684		
685	IV.A.5.c).(5)	incorporate formative evaluation feedback into daily
686		practice;
687		
688	IV.A.5.c).(6)	locate, appraise, and assimilate evidence from
689		scientific studies related to their patients’ health
690		problems;
691		
692	IV.A.5.c).(7)	use information technology to optimize learning;
693		
694	IV.A.5.c).(8)	participate in the education of patients, families,
695		students, residents and other health professionals;
696		and,
697		
698	IV.A.5.c).(9)	obtain and use information about their own patients and
699		the larger population from which their patients are drawn.
700		
701	IV.A.5.c).(10)	use information technology to manage information, access
702		on-line medical information, and support their own
703		education;
704		
705	IV.A.5.d)	Interpersonal and Communication Skills
706		
707		Residents must demonstrate interpersonal and
708		communication skills that result in the effective exchange of
709		information and collaboration with patients, their families,
710		and health professionals. Residents are expected to:
711		
712	IV.A.5.d).(1)	communicate effectively with patients, families, and
713		the public, as appropriate, across a broad range of
714		socioeconomic and cultural backgrounds;

715		
716	IV.A.5.d).(2)	communicate effectively with physicians, other health professionals, and health related agencies;
717		
718		
719	IV.A.5.d).(2).(a)	communicate effectively with the general public
720		
721	IV.A.5.d).(3)	work effectively as a member or leader of a health care team or other professional group;
722		
723		
724	IV.A.5.d).(4)	act in a consultative role to other physicians and health professionals;
725		
726		
727	IV.A.5.d).(5)	maintain comprehensive, timely, and legible medical records, if applicable;
728		
729		
730	IV.A.5.d).(6)	communicate effectively and demonstrate caring and respectful behavior when interacting with patients and their families;
731		
732		
733		
734	IV.A.5.d).(7)	communicate effectively with patients and their families to create and sustain a professional and therapeutic relationship <u>with patients and their families</u>; and,
735		
736		
737		
738	IV.A.5.d).(8)	will counsel and educate patients and their families in order to <u>encourage them to</u>:
739		
740		
741	IV.A.5.d).(8).(a)	take measures needed to enhance or maintain health and function, and to prevent disease and injury;
742		
743		
744		
745	IV.A.5.d).(8).(b)	encourage the family to participate actively in their care, and in order to provide information that will contribute to their care; and,
746		
747		
748		
749	IV.A.5.d).(8).(c)	empower patients to make informed decisions, interpret risk assessment, and to use predictive testing for themselves and family members.
750		
751		
752		
753	IV.A.5.e)	Professionalism
754		
755		Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:
756		
757		
758		
759	IV.A.5.e).(1)	compassion, integrity, and respect for others;
760		
761	IV.A.5.e).(2)	responsiveness to patient needs that supersedes self-interest;
762		
763		
764	IV.A.5.e).(3)	respect for patient privacy and autonomy;
765		

766	IV.A.5.e).(4)	accountability to patients, society and the profession;
767		
768	IV.A.5.e).(5)	sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation;
769		
770		
771		
772		
773	IV.A.5.e).(6)	a-commitment to excellence and ongoing professional development; and,
774		
775		
776	IV.A.5.e).(7)	a-commitment to ethical principles pertaining to the provision or withholding of clinical care, confidentiality of patient information, informed consent, conflict of interest, and business practices.
777		
778		
779		
780		
781	IV.A.5.f)	Systems-based Practice
782		
783		Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.
784		
785		
786		
787		Residents are expected to:
788		
789	IV.A.5.f).(1)	work effectively in various health care delivery settings and systems relevant to their clinical specialty;
790		
791		
792		
793	IV.A.5.f).(2)	coordinate patient care within the health care system relevant to their clinical specialty;
794		
795		
796	IV.A.5.f).(3)	incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate;
797		
798		
799		
800	IV.A.5.f).(4)	advocate for quality patient care and optimal patient care systems;
801		
802		
803	IV.A.5.f).(5)	work in interprofessional teams to enhance patient safety and improve patient care quality;
804		
805		
806	IV.A.5.f).(6)	participate in identifying system errors and implementing potential systems solutions;
807		
808		
809	IV.A.5.f).(7)	assist patients in dealing with <u>navigating</u> the complexities of a health care system; and,
810		
811		
812	IV.A.5.f).(8)	promote <u>optimal patient</u> health and function, and prevent disease and injury in populations.
813		
814		
815	IV.A.6.	<u>Curriculum Organization and Resident Experiences</u>
816		

- 817 IV.A.6.a) ~~In both two-year and four-year programs, the~~ The 24 months of
818 ~~genetics education curriculum~~ must include:
819
- 820 IV.A.6.a).(1) at least 18 months of broad-based, clinically-oriented
821 medical genetics experiences activities; and,
822
- 823 IV.A.6.a).(1).(a) This must include experiences with pediatric, adult,
824 prenatal, and cancer patients.
825
- 826 IV.A.6.a).(1).(b) For metabolic patients, residents must have
827 experience in both inpatient and outpatient settings.
828
- 829 IV.A.6.a).(2) ~~will spend a minimum of two continuous weeks in each~~
830 ~~type of~~ of the required ~~laboratory settings (clinical~~
831 ~~biochemical, molecular genetic, and cytogenetic).~~ so that
832 ~~they will be able to develop their abilities to understand~~
833 ~~and critically interpret laboratory data. Residents must~~
834 ~~develop an understanding of the appropriate use of~~
835 ~~laboratories during diagnosis, counseling, management~~
836 ~~and treatment of patients with genetic disorders.;~~
837
- 838 IV.A.6.a).(2).(a) Experiences in the clinical biochemical genetics
839 laboratory must include:
840
- 841 IV.A.6.a).(2).(a).(i) interpreting the results of acylcarnitine
842 analysis;
843
- 844 IV.A.6.a).(2).(a).(ii) interpreting the results of analyses of
845 enzymes by any methodology;
846
- 847 IV.A.6.a).(2).(a).(iii) interpreting the results of tests for plasma
848 amino acid and urine organic acid; and,
849
- 850 IV.A.6.a).(2).(a).(iv) observing diagnostic techniques utilized by
851 the laboratory.
852
- 853 IV.A.6.a).(2).(b) Experiences in the clinical cytogenetics laboratory
854 should include:
855
- 856 IV.A.6.a).(2).(b).(i) interpreting karyotyping (G-banding) and
857 analysis of interphase and metaphase cells
858 using fluorescence in situ hybridization
859 (FISH);
860
- 861 IV.A.6.a).(2).(b).(ii) interpreting the results of testing for copy
862 number gains and losses, including
863 techniques to detect deletions, duplications,
864 and other copy number variations or
865 changes in gene expression; and,
866
- 867 IV.A.6.a).(2).(b).(iii) observing diagnostic techniques utilized by

- 868 the laboratory.
- 869
- 870 IV.A.6.a).(2).(c) Experiences in the clinical molecular genetics
- 871 laboratory should include:
- 872
- 873 IV.A.6.a).(2).(c).(i) interpreting the results of genotyping,
- 874 including techniques to assess for known
- 875 variants;
- 876
- 877 IV.A.6.a).(2).(c).(ii) interpreting the results of sequencing
- 878 techniques used to discover known and
- 879 novel variants; and,
- 880
- 881 IV.A.6.a).(2).(c).(iii) observing diagnostic techniques utilized by
- 882 the laboratory.
- 883
- 884 IV.A.6.a).(2).(d) Residents must not be assigned clinical
- 885 responsibilities at the same time they are
- 886 participating in the required laboratory experiences.
- 887
- 888 IV.A.6.b) ~~Toward this end, resident education~~ Residents must include
- 889 ~~participation~~ participate in the working conferences of laboratories,
- 890 as well as ~~in ongoing~~ discussion of laboratory data during other
- 891 clinical conferences; ~~and,~~
- 892
- 893 IV.A.6.c) ~~will develop mature clinical judgment through properly supervised~~
- 894 ~~patient care commensurate with their ability. This can be achieved~~
- 895 ~~only if the resident is~~ Residents must be directly involved in
- 896 providing the decision-making process and in the continuity of
- 897 patient care, including decision making regarding that care.
- 898
- 899 IV.A.6.d) ~~Residents must be given the~~ have responsibility for direct patient
- 900 care in all settings, including planning, management, and
- 901 treatment, both diagnostic and therapeutic, subject to review and
- 902 approval by the ~~attending~~ physician faculty.
- 903
- 904 IV.A.6.e) Residents must enter into the ACGME Case Log System all cases
- 905 in which they directly participated.
- 906
- 907 **IV.B. Residents' Scholarly Activities**
- 908
- 909 **IV.B.1. The curriculum must advance residents' knowledge of the basic**
- 910 **principles of research, including how research is conducted,**
- 911 **evaluated, explained to patients, and applied to patient care.**
- 912
- 913 **IV.B.2. Residents should participate in scholarly activity.**
- 914
- 915 IV.B.2.a) ~~Programs must provide opportunities for residents to become~~
- 916 ~~involved in research and teaching.~~ Each resident must
- 917 demonstrate scholarship through submission of at least one
- 918 scientific presentation, abstract, or publication.

919		
920	IV.B.3.	The sponsoring institution and program should allocate adequate educational resources to facilitate resident involvement in scholarly activities.
921		
922		
923		
924	V. Evaluation	
925		
926	V.A. Resident Evaluation	
927		
928	V.A.1. Formative Evaluation	
929		
930	V.A.1.a)	The faculty must evaluate resident performance in a timely manner during each rotation or similar educational assignment, and document this evaluation at completion of the assignment.
931		
932		
933		
934		
935	V.A.1.b)	The program must:
936		
937	V.A.1.b).(1)	provide objective assessments of competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice;
938		
939		
940		
941		
942		
943	V.A.1.b).(1).(a)	<u>Residents must take the in-service exam each year.</u>
944		
945		
946	V.A.1.b).(1).(a).(i)	<u>Use of the results must be limited to identifying areas that need improvement for individual residents as well as program curriculum areas that need improvement.</u>
947		
948		
949		
950		
951	V.A.1.b).(2)	use multiple evaluators (e.g., faculty, peers, patients, self, and other professional staff);
952		
953		
954	V.A.1.b).(3)	document progressive resident performance improvement appropriate to educational level; and,
955		
956		
957	V.A.1.b).(4)	provide each resident with documented semiannual evaluation of performance with feedback.
958		
959		
960	V.A.1.c)	The evaluations of resident performance must be accessible for review by the resident, in accordance with institutional policy.
961		
962		
963		
964	V.A.2. Summative Evaluation	
965		
966		The program director must provide a summative evaluation for each resident upon completion of the program. This evaluation must become part of the resident's permanent record maintained by the institution, and must be accessible for review by the resident in
967		
968		
969		

- 970 accordance with institutional policy. This evaluation must:
- 971
- 972 V.A.2.a) document the resident's performance during the final period
- 973 of education, and
- 974
- 975 V.A.2.b) verify that the resident has demonstrated sufficient
- 976 competence to enter practice without direct supervision.
- 977
- 978 V.B. Faculty Evaluation
- 979
- 980 V.B.1. At least annually, the program must evaluate faculty performance as
- 981 it relates to the educational program.
- 982
- 983 V.B.2. These evaluations should include a review of the faculty's clinical
- 984 teaching abilities, commitment to the educational program, clinical
- 985 knowledge, professionalism, and scholarly activities.
- 986
- 987 V.B.3. This evaluation must include at least annual written confidential
- 988 evaluations by the residents.
- 989
- 990 V.C. Program Evaluation and Improvement
- 991
- 992 V.C.1. The program must document formal, systematic evaluation of the
- 993 curriculum at least annually. The program must monitor and track
- 994 each of the following areas:
- 995
- 996 V.C.1.a) resident performance;
- 997
- 998 V.C.1.b) faculty development;
- 999
- 1000 V.C.1.c) graduate performance, including performance of program
- 1001 graduates on the certification examination; and,
- 1002
- 1003 V.C.1.c).(1) At least 75% of those completing the program in the
- 1004 preceding five years must have taken the ABMG clinical
- 1005 genetics certifying examination.
- 1006
- 1007 V.C.1.c).(1).(a) If fewer than 10 residents graduated from the
- 1008 program in the preceding five years, then at least
- 1009 75% of the program's 10 most recent graduates
- 1010 must have taken the ABMG clinical genetics
- 1011 certifying examination.
- 1012
- 1013 V.C.1.c).(2) At least 75% of a program's graduates from the preceding
- 1014 five years taking the ABMG clinical genetics certifying
- 1015 examination for the first time must pass.
- 1016
- 1017 V.C.1.c).(2).(a) If fewer than 10 residents graduated from the
- 1018 program in the preceding five years, then at least
- 1019 75% of the program's 10 most recent graduates
- 1020 taking the ABMG clinical genetics certifying

examination for the first time must pass.

- 1021
1022
1023 **V.C.1.d)** **program quality. Specifically:**
1024
1025 **V.C.1.d).(1)** **Residents and faculty must have the opportunity to**
1026 **evaluate the program confidentially and in writing at**
1027 **least annually, and**
1028
1029 **V.C.1.d).(2)** **The program must use the results of residents'**
1030 **assessments of the program together with other**
1031 **program evaluation results to improve the program.**
1032
1033 **V.C.2.** **If deficiencies are found, the program should prepare a written plan**
1034 **of action to document initiatives to improve performance in the**
1035 **areas listed in section V.C.1. The action plan should be reviewed**
1036 **and approved by the teaching faculty and documented in meeting**
1037 **minutes.**
1038
1039 **VI. Resident Duty Hours in the Learning and Working Environment**
1040
1041 **VI.A. Professionalism, Personal Responsibility, and Patient Safety**
1042
1043 **VI.A.1.** **Programs and sponsoring institutions must educate residents and**
1044 **faculty members concerning the professional responsibilities of**
1045 **physicians to appear for duty appropriately rested and fit to provide**
1046 **the services required by their patients.**
1047
1048 **VI.A.2.** **The program must be committed to and responsible for promoting**
1049 **patient safety and resident well-being in a supportive educational**
1050 **environment.**
1051
1052 **VI.A.3.** **The program director must ensure that residents are integrated and**
1053 **actively participate in interdisciplinary clinical quality improvement**
1054 **and patient safety programs.**
1055
1056 **VI.A.4.** **The learning objectives of the program must:**
1057
1058 **VI.A.4.a)** **be accomplished through an appropriate blend of supervised**
1059 **patient care responsibilities, clinical teaching, and didactic**
1060 **educational events; and,**
1061
1062 **VI.A.4.b)** **not be compromised by excessive reliance on residents to**
1063 **fulfill non-physician service obligations.**
1064
1065 **VI.A.5.** **The program director and institution must ensure a culture of**
1066 **professionalism that supports patient safety and personal**
1067 **responsibility. Residents and faculty members must demonstrate an**
1068 **understanding and acceptance of their personal role in the**
1069 **following:**
1070
1071 **VI.A.5.a)** **assurance of the safety and welfare of patients entrusted to**

1072		their care;
1073		
1074	VI.A.5.b)	provision of patient- and family-centered care;
1075		
1076	VI.A.5.c)	assurance of their fitness for duty;
1077		
1078	VI.A.5.d)	management of their time before, during, and after clinical assignments;
1079		
1080		
1081	VI.A.5.e)	recognition of impairment, including illness and fatigue, in themselves and in their peers;
1082		
1083		
1084	VI.A.5.f)	attention to lifelong learning;
1085		
1086	VI.A.5.g)	the monitoring of their patient care performance improvement indicators; and,
1087		
1088		
1089	VI.A.5.h)	honest and accurate reporting of duty hours, patient outcomes, and clinical experience data.
1090		
1091		
1092	VI.A.6.	All residents and faculty members must demonstrate responsiveness to patient needs that supersedes self-interest. Physicians must recognize that under certain circumstances, the best interests of the patient may be served by transitioning that patient's care to another qualified and rested provider.
1093		
1094		
1095		
1096		
1097		
1098	VI.B.	Transitions of Care
1099		
1100	VI.B.1.	Programs must design clinical assignments to minimize the number of transitions in patient care.
1101		
1102		
1103	VI.B.2.	Sponsoring institutions and programs must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety.
1104		
1105		
1106		
1107	VI.B.3.	Programs must ensure that residents are competent in communicating with team members in the hand-over process.
1108		
1109		
1110	VI.B.4.	The sponsoring institution must ensure the availability of schedules that inform all members of the health care team of attending physicians and residents currently responsible for each patient's care.
1111		
1112		
1113		
1114		
1115	VI.C.	Alertness Management/Fatigue Mitigation
1116		
1117	VI.C.1.	The program must:
1118		
1119	VI.C.1.a)	educate all faculty members and residents to recognize the signs of fatigue and sleep deprivation;
1120		
1121		
1122	VI.C.1.b)	educate all faculty members and residents in alertness

1123 management and fatigue mitigation processes; and,
1124
1125 **VI.C.1.c)** adopt fatigue mitigation processes to manage the potential
1126 negative effects of fatigue on patient care and learning, such
1127 as naps or back-up call schedules.
1128
1129 **VI.C.2.** Each program must have a process to ensure continuity of patient
1130 care in the event that a resident may be unable to perform his/her
1131 patient care duties.
1132
1133 **VI.C.3.** The sponsoring institution must provide adequate sleep facilities
1134 and/or safe transportation options for residents who may be too
1135 fatigued to safely return home.
1136
1137 **VI.D. Supervision of Residents**
1138
1139 **VI.D.1.** In the clinical learning environment, each patient must have an
1140 identifiable, appropriately-credentialed and privileged attending
1141 physician (or licensed independent practitioner as approved by each
1142 Review Committee) who is ultimately responsible for that patient's
1143 care.
1144
1145 Licensed independent practitioners who may have primary responsibility
1146 for patient care must be physicians.
1147
1148 **VI.D.1.a)** This information should be available to residents, faculty
1149 members, and patients.
1150
1151 **VI.D.1.b)** Residents and faculty members should inform patients of
1152 their respective roles in each patient's care.
1153
1154 **VI.D.2.** The program must demonstrate that the appropriate level of
1155 supervision is in place for all residents who care for patients.
1156
1157 Supervision may be exercised through a variety of methods. Some
1158 activities require the physical presence of the supervising faculty
1159 member. For many aspects of patient care, the supervising
1160 physician may be a more advanced resident or fellow. Other
1161 portions of care provided by the resident can be adequately
1162 supervised by the immediate availability of the supervising faculty
1163 member or resident physician, either in the institution, or by means
1164 of telephonic and/or electronic modalities. In some circumstances,
1165 supervision may include post-hoc review of resident-delivered care
1166 with feedback as to the appropriateness of that care.
1167
1168 **VI.D.3.** Levels of Supervision
1169
1170 To ensure oversight of resident supervision and graded authority
1171 and responsibility, the program must use the following classification
1172 of supervision:
1173

1174	VI.D.3.a)	Direct Supervision – the supervising physician is physically present with the resident and patient.
1175		
1176		
1177	VI.D.3.b)	Indirect Supervision:
1178		
1179	VI.D.3.b).(1)	with direct supervision immediately available – the supervising physician is physically within the hospital or other site of patient care, and is immediately available to provide Direct Supervision.
1180		
1181		
1182		
1183		
1184	VI.D.3.b).(2)	with direct supervision available – the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities, and is available to provide Direct Supervision.
1185		
1186		
1187		
1188		
1189		
1190		
1191	VI.D.3.c)	Oversight – the supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.
1192		
1193		
1194		
1195	VI.D.4.	The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each resident must be assigned by the program director and faculty members.
1196		
1197		
1198		
1199		
1200	VI.D.4.a)	The program director must evaluate each resident’s abilities based on specific criteria. When available, evaluation should be guided by specific national standards-based criteria.
1201		
1202		
1203		
1204	VI.D.4.b)	Faculty members functioning as supervising physicians should delegate portions of care to residents, based on the needs of the patient and the skills of the residents.
1205		
1206		
1207		
1208	VI.D.4.c)	Senior residents or fellows should serve in a supervisory role of junior residents in recognition of their progress toward independence, based on the needs of each patient and the skills of the individual resident or fellow.
1209		
1210		
1211		
1212		
1213	VI.D.5.	Programs must set guidelines for circumstances and events in which residents must communicate with appropriate supervising faculty members, such as the transfer of a patient to an intensive care unit, or end-of-life decisions.
1214		
1215		
1216		
1217		
1218	VI.D.5.a)	Each resident must know the limits of his/her scope of authority, and the circumstances under which he/she is permitted to act with conditional independence.
1219		
1220		
1221		
1222	VI.D.5.a).(1)	In particular, PGY-1 residents should be supervised either directly or indirectly with direct supervision immediately available.
1223		
1224		

1225		
1226	VI.D.6.	Faculty supervision assignments should be of sufficient duration to assess the knowledge and skills of each resident and delegate to him/her the appropriate level of patient care authority and responsibility.
1227		
1228		
1229		
1230		
1231	VI.E.	Clinical Responsibilities
1232		
1233		The clinical responsibilities for each resident must be based on PGY-level, patient safety, resident education, severity and complexity of patient illness/condition and available support services.
1234		
1235		
1236		
1237	VI.E.1.	The workload for a resident at any level must be no more than four patients with a confirmed diagnosis of an inborn error of intermediary metabolism in an ICU setting, or six patients with a confirmed diagnosis of an inborn error of intermediary metabolism in a non-ICU setting.
1238		
1239		
1240		
1241		
1242	VI.F.	Teamwork
1243		
1244		Residents must care for patients in an environment that maximizes effective communication. This must include the opportunity to work as a member of effective interprofessional teams that are appropriate to the delivery of care in the specialty.
1245		
1246		
1247		
1248		
1249	VI.G.	Resident Duty Hours
1250		
1251	VI.G.1.	Maximum Hours of Work per Week
1252		
1253		Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities and all moonlighting.
1254		
1255		
1256		
1257	VI.G.1.a)	Duty Hour Exceptions
1258		
1259		A Review Committee may grant exceptions for up to 10% or a maximum of 88 hours to individual programs based on a sound educational rationale.
1260		
1261		
1262		
1263	VI.G.1.a).(1)	In preparing a request for an exception the program director must follow the duty hour exception policy from the ACGME Manual on Policies and Procedures.
1264		
1265		
1266		
1267	VI.G.1.a).(2)	Prior to submitting the request to the Review Committee, the program director must obtain approval of the institution's GMEC and DIO.
1268		
1269		
1270		
1271	VI.G.2.	Moonlighting
1272		
1273	VI.G.2.a)	Moonlighting must not interfere with the ability of the resident to achieve the goals and objectives of the educational program.
1274		
1275		

1276		
1277	VI.G.2.b)	Time spent by residents in Internal and External Moonlighting
1278		(as defined in the ACGME Glossary of Terms) must be
1279		counted towards the 80-hour Maximum Weekly Hour Limit.
1280		
1281	VI.G.2.c)	PGY-1 residents are not permitted to moonlight.
1282		
1283	VI.G.3.	Mandatory Time Free of Duty
1284		
1285		Residents must be scheduled for a minimum of one day free of duty
1286		every week (when averaged over four weeks). At-home call cannot
1287		be assigned on these free days.
1288		
1289	VI.G.4.	Maximum Duty Period Length
1290		
1291	VI.G.4.a)	Duty periods of PGY-1 residents must not exceed 16 hours in
1292		duration.
1293		
1294	VI.G.4.b)	Duty periods of PGY-2 residents and above may be
1295		scheduled to a maximum of 24 hours of continuous duty in
1296		the hospital. Programs must encourage residents to use
1297		alertness management strategies in the context of patient
1298		care responsibilities. Strategic napping, especially after 16
1299		hours of continuous duty and between the hours of 10:00
1300		p.m. and 8:00 a.m., is strongly suggested.
1301		
1302	VI.G.4.b).(1)	It is essential for patient safety and resident education
1303		that effective transitions in care occur. Residents may
1304		be allowed to remain on-site in order to accomplish
1305		these tasks; however, this period of time must be no
1306		longer than an additional four hours.
1307		
1308	VI.G.4.b).(2)	Residents must not be assigned additional clinical
1309		responsibilities after 24 hours of continuous in-house
1310		duty.
1311		
1312	VI.G.4.b).(3)	In unusual circumstances, residents, on their own
1313		initiative, may remain beyond their scheduled period
1314		of duty to continue to provide care to a single patient.
1315		Justifications for such extensions of duty are limited
1316		to reasons of required continuity for a severely ill or
1317		unstable patient, academic importance of the events
1318		transpiring, or humanistic attention to the needs of a
1319		patient or family.
1320		
1321	VI.G.4.b).(3).(a)	Under those circumstances, the resident must:
1322		
1323	VI.G.4.b).(3).(a).(i)	appropriately hand over the care of all
1324		other patients to the team responsible
1325		for their continuing care; and,
1326		

1327	VI.G.4.b).(3).(a).(ii)	document the reasons for remaining to care for the patient in question and submit that documentation in every circumstance to the program director.
1328		
1329		
1330		
1331		
1332	VI.G.4.b).(3).(b)	The program director must review each submission of additional service, and track both individual resident and program-wide episodes of additional duty.
1333		
1334		
1335		
1336		
1337	VI.G.5.	Minimum Time Off between Scheduled Duty Periods
1338		
1339	VI.G.5.a)	PGY-1 residents should have 10 hours, and must have eight hours, free of duty between scheduled duty periods.
1340		
1341		
1342	VI.G.5.b)	Intermediate-level residents should have 10 hours free of duty, and must have eight hours between scheduled duty periods. They must have at least 14 hours free of duty after 24 hours of in-house duty.
1343		
1344		
1345		
1346		
1347		Residents in the first year of the program (MG-1) are considered to be at the intermediate level of education.
1348		
1349		
1350	VI.G.5.c)	Residents in the final years of education must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods.
1351		
1352		
1353		
1354		Residents in the second (final) year of the program (MG-2) are considered to be in the final years of education.
1355		
1356		
1357	VI.G.5.c).(1)	This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day-off-in-seven standards. While it is desirable that residents in their final years of education have eight hours free of duty between scheduled duty periods, there may be circumstances when these residents must stay on duty to care for their patients or return to the hospital with fewer than eight hours free of duty.
1358		
1359		
1360		
1361		
1362		
1363		
1364		
1365		
1366	VI.G.5.c).(1).(a)	Circumstances of return-to-hospital activities with fewer than eight hours away from the hospital by residents in their final years of education must be monitored by the program director.
1367		
1368		
1369		
1370		
1371		
1372	VI.G.5.c).(1).(b)	The Review Committee defines such circumstances as required continuity of care for a severely ill or unstable patient, or a complex patient with whom the resident has been involved; events of exceptional educational value; or humanistic attention to the needs of a patient or family.
1373		
1374		
1375		
1376		
1377		

1378
1379 **VI.G.6. Maximum Frequency of In-House Night Float**
1380
1381 **Residents must not be scheduled for more than six consecutive**
1382 **nights of night float.**
1383
1384 Residents must not be assigned night float duty.
1385
1386 **VI.G.7. Maximum In-House On-Call Frequency**
1387
1388 **PGY-2 residents and above must be scheduled for in-house call no**
1389 **more frequently than every-third-night (when averaged over a four-**
1390 **week period).**
1391
1392 **VI.G.8. At-Home Call**
1393
1394 **VI.G.8.a) Time spent in the hospital by residents on at-home call must**
1395 **count towards the 80-hour maximum weekly hour limit. The**
1396 **frequency of at-home call is not subject to the every-third-**
1397 **night limitation, but must satisfy the requirement for one-day-**
1398 **in-seven free of duty, when averaged over four weeks.**
1399
1400 **VI.G.8.a).(1) At-home call must not be so frequent or taxing as to**
1401 **preclude rest or reasonable personal time for each**
1402 **resident.**
1403
1404 **VI.G.8.b) Residents are permitted to return to the hospital while on at-**
1405 **home call to care for new or established patients. Each**
1406 **episode of this type of care, while it must be included in the**
1407 **80-hour weekly maximum, will not initiate a new “off-duty**
1408 **period”.**
1409
1410 **VII. Innovative Projects**
1411
1412 **Requests for innovative projects that may deviate from the institutional, common**
1413 **and/or specialty specific program requirements must be approved in advance by**
1414 **the Review Committee. In preparing requests, the program director must follow**
1415 **Procedures for Approving Proposals for Innovative Projects located in the**
1416 **ACGME Manual on Policies and Procedures. Once a Review Committee approves**
1417 **a project, the sponsoring institution and program are jointly responsible for the**
1418 **quality of education offered to residents for the duration of such a project.**
1419
1420 *******