

1 **ACGME Program Requirements for Fellowship Education**
2 **in Pediatric Radiology**

3
4 Introduction

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6 A. Definition and Scope of the Subspecialty

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8 *A fellowship program in a subspecialty of diagnostic radiology is an educational*
9 *experience of at least one year designed to develop advanced knowledge and*
10 *skills in a specific clinical area. ~~All educational components of the program~~*
11 *~~should be related to program goals.~~ The program design and/or structure must*
12 *be approved by the Review Committee as part of the regular review process.*

13
14 ~~The training program in the subspecialty of pediatric radiology constitutes a~~
15 ~~supervised experience in the pediatric applications and interpretation of~~
16 ~~radiography, computed tomography, ultrasonography, angiography,~~
17 ~~interventional techniques, nuclear radiology, magnetic resonance, and any other~~
18 ~~imaging modality customarily included within the specialty of diagnostic~~
19 ~~radiology.~~

20 ~~The program should be structured to enhance substantially the subspecialty~~
21 ~~fellows knowledge of the applications of all forms of diagnostic imaging to the~~
22 ~~unique clinical/pathophysiologic problems of the newborn, infant, child, and~~
23 ~~adolescent. The fundamentals of radiobiology, radiologic physics, and radiation~~
24 ~~protection as they relate to the infant, child, and adolescent should be reviewed~~
25 ~~during the pediatric radiology training experience. The program must provide~~
26 ~~fellows direct and progressively responsible experience in pediatric imaging as~~
27 ~~they advance through training. This training must culminate in sufficiently~~
28 ~~independent responsibility for clinical decision making such that the program is~~
29 ~~assured that the graduating resident has achieved the ability to execute sound~~
30 ~~clinical judgment.~~

31
32 1. The program should provide education in multimodality imaging of
33 pediatric patients and include learning the unique knowledge, techniques,
34 communications and interpersonal skills to meet the needs of the infant,
35 child, adolescent and young adults in both acute and chronic conditions.
36 At the completion of the fellowship year, the fellow can be expected to
37 apply his or her knowledge to appropriately image both the common and
38 rare pediatric diseases in a safe environment which is directed to the
39 special needs of those served. Pediatric radiologists will function as
40 expert diagnosticians, consultants, and clinicians.

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42 2. The program should provide fellows with an organized, comprehensive
43 and supervised educational experience in pediatric imaging. This will
44 include radiography, computed tomography, ultrasonography, vascular
45 interventional techniques, nuclear radiology including positron emission
46 tomography, magnetic resonance imaging, and any other imaging
47 modality customarily included within the specialty.

48
49 B. Duration of Training

50 Prerequisite training for entry into a diagnostic radiology subspecialty program
51 should include the satisfactory completion of a diagnostic radiology residency

52 accredited by the Accreditation Council for Graduate Medical Education
53 (ACGME) or the Royal College of Physicians and Surgeons of Canada (RCPSC);
54 or other training judged suitable by the program director.
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56 **C. Objectives and Goals**
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58 The educational program in pediatric radiology shall meet training objectives so
59 that on completion of the program the fellow is able to:

- 60 1. Understand the developmental and acquired disease processes of the
61 newborn, infant, child, and adolescent that are basic to the practice of pediatric
62 and adolescent medicine.
- 63 2. Perform and interpret radiological and imaging studies of the pediatric patient.
- 64 3. Supervise and teach the elements of radiography and radiology as they
65 pertain to infants and children.
- 66 4. Understand how to design and perform research
- 67 5. Prepare material suitable for presentation and publication.
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69 **I. Institutions**
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71 **A. Sponsoring Institution**
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73 **One sponsoring institution must assume ultimate responsibility for the**
74 **program, as described in the Institutional Requirements, and this**
75 **responsibility extends to fellow assignments at all participating sites.**
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77 **The sponsoring institution and the program must ensure that the program**
78 **director has sufficient protected time and financial support for his or her**
79 **educational and administrative responsibilities to the program.**
80

81 **B. Participating Sites**
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- 83 1. **There must be a program letter of agreement (PLA) between the**
84 **program and each participating site providing a required**
85 **assignment. The PLA must be renewed at least every five years.**
86

87 **The PLA should:**
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- 89 a) **identify the faculty who will assume both educational and**
90 **supervisory responsibilities for fellows;**
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- 92 b) **specify their responsibilities for teaching, supervision, and**
93 **formal evaluation of fellows, as specified later in this**
94 **document;**
- 95
- 96 c) **specify the duration and content of the educational**
97 **experience; and,**
- 98
- 99 d) **state the policies and procedures that will govern fellow**
100 **education during the assignment.**

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- 102 2. **The program director must submit any additions or deletions of**

103 participating sites routinely providing an educational experience,
104 required for all fellows, of one month full time equivalent (FTE) or
105 more through the Accreditation Council for Graduate Medical
106 Education (ACGME) Accreditation Data System (ADS).
107

- 108 3. *A pediatric radiology fellowship program ~~may~~ should be accredited in*
109 *institutions that either sponsor a residency education program in*
110 *diagnostic radiology accredited by the [Accreditation Council for Graduate](#)*
111 *[Medical Education \(ACGME\)](#) or are integrated by formal agreement into*
112 *such programs. Close cooperation between the fellowship and residency*
113 *program directors is required. An exception to the above is a pediatric*
114 *radiology fellowship which is structured in a free standing children's*
115 *hospital.*
- 116
- 117 a) A pediatric radiology program is considered free standing when it
118 is not necessarily administratively linked to an accredited core
119 residency program in diagnostic radiology.
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121 II. Program Personnel and Resources

122 A. Program Director

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- 125 1. **There must be a single program director with authority and**
126 **accountability for the operation of the program. The sponsoring**
127 **institution's GMEC must approve a change in program director.**
128 **After approval, the program director must submit this change to the**
129 **ACGME via the ADS.**
- 130
- 131 a) *The program director should spend all of his/her professional time*
132 *in pediatric radiology, and devote sufficient time to fulfill all*
133 *responsibilities inherent in meeting the educational goals of the*
134 *program.*
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- 136 2. **Qualifications of the program director must include:**
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- 138 a) **requisite specialty expertise and documented educational**
139 **and administrative experience acceptable to the Review**
140 **Committee;**
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- 142 b) **current certification in the specialty by the American Board of**
143 **Radiology, or specialty qualifications that are acceptable to**
144 **the Review Committee; and,**
- 145
- 146 c) **current medical licensure and appropriate medical staff**
147 **appointment.**
- 148
- 149 d) *current subspecialty certification in those subspecialties in which*
150 *certification is offered.*
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- 152 e) *post-residency experience in the subspecialty area, including*
153 *preferably fellowship training, or five years of practice experience*

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in the subspecialty for those subspecialties in which no certification is offered.

~~e) The program director must have sufficient academic and administrative experience to ensure effective implementation of these program requirements and should have had at least 5 years of participation as an active faculty member in an accredited pediatric radiology program. The program director must be certified by the American Board of Radiology in radiology or diagnostic radiology and must have received the Certificate of Added Qualifications in Pediatric Radiology granted by the American Board of Radiology or have appropriate educational qualifications as so judged by the RRC.~~

3. The program director must administer and maintain an educational environment conducive to educating the fellows in each of the ACGME competency areas. The program director must:

- a) prepare and submit all information required and requested by the ACGME;**
- b) be familiar with and oversee compliance with ACGME and Review Committee policies and procedures as outlined in the ACGME Manual of Policies and Procedures;**
- c) obtain review and approval of the sponsoring institution's GMC/DIO before submitting to the ACGME information or requests for the following:**
 - (1) all applications for ACGME accreditation of new programs;**
 - (2) changes in fellow complement;**
 - (3) major changes in program structure or length of training;**
 - (4) progress reports requested by the Review Committee;**
 - (5) responses to all proposed adverse actions;**
 - (6) requests for increases or any change to fellow duty hours;**
 - (7) voluntary withdrawals of ACGME-accredited programs;**
 - (8) requests for appeal of an adverse action;**
 - (9) appeal presentations to a Board of Appeal or the ACGME.**

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- d) **obtain DIO review and co-signature on all program information forms, as well as any correspondence or document submitted to the ACGME that addresses:**
 - (1) **program citations, and/or**
 - (2) **request for changes in the program that would have significant impact, including financial, on the program or institution.**
- e) ~~The director must devote sufficient time to the program to fulfill all of the responsibilities inherent in meeting the educational goals of the program. establish the curriculum as well as procedures for evaluation of the fellow's competency.~~
- e) evaluate the fellow at least quarterly, and provide written feedback at a formal semiannual meeting with the fellow.
- f) select and supervise the fellows and work to comply with departmental, institutional, and ACGME guidelines concerning fellowship issues. ~~shall select pediatric radiology program faculty members.~~
- g) work with the faculty to organize, continuously evaluate and improve the fellowship educational program.
- h) ensure that goals and objectives of specific rotations are distributed to the trainees and faculty. Subspecialty conferences, interactive case based conferences, lectures, seminars, research conferences should be scheduled regularly.

B. Faculty

1. **There must be a sufficient number of faculty with documented qualifications to instruct and supervise all fellows.**
2. **The faculty must devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities and demonstrate a strong interest in the education of fellows.**
3. **The physician faculty must have current certification in the specialty by the American Board of Radiology, or possess qualifications acceptable to the Review Committee.**
 - a) The pediatric radiology faculty must have five years of post residency experience in pediatric imaging and should have or be eligible for the Certificate of Added Qualifications in Pediatric Radiology.

255 b) The pediatric radiology faculty must include, in addition to the
256 program director, a minimum of one full-time pediatric radiologist.
257 Subspecialty radiologists (e.g., Neuroradiology, Musculoskeletal,
258 Cardiothoracic, Vascular/Interventional) if experienced in imaging
259 pediatric patients, may also be members of the faculty.
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261 c) A ratio of at least one pediatric radiologist for every subspecialty
262 fellow is essential to provide adequate opportunity for teaching
263 and supervision. ~~It is desirable that p~~Pediatric radiologistsy faculty
264 members should supervise special imaging, such as ultrasound,
265 cardiac, interventional radiology, nuclear radiology, computed
266 tomography, and magnetic resonance.
267

268 d) The faculty should regularly participate in clinical discussions,
269 journal clubs, clinical multi-disciplinary conferences, and research
270 conferences.
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272 ~~There should be sufficient qualified professional personnel to constitute a~~
273 ~~teaching faculty. The faculty should comprise no fewer than two~~
274 ~~experienced radiologists, including the program director, who work full-~~
275 ~~time in pediatric radiology and its related subspecialty areas and are able~~
276 ~~to devote adequate time to the program. The minimum faculty~~
277 ~~requirement may be met by the program director and one other full-time~~
278 ~~equivalent, ie a total of two or more individual faculty members. A ratio of~~
279 ~~at least one pediatric radiologist for every subspecialty fellow is essential~~
280 ~~to provide adequate opportunity for teaching and supervision. It is~~
281 ~~desirable that pediatric radiologists supervise special imaging, such as~~
282 ~~angiography, interventional radiology, nuclear radiology, computed~~
283 ~~tomography, magnetic resonance.~~
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285 **4. The physician faculty must possess current medical licensure and**
286 **appropriate medical staff appointment.**
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288 **C. Other Program Personnel**
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290 **The institution and the program must jointly ensure the availability of all**
291 **necessary professional, technical, and clerical personnel for the effective**
292 **administration of the program.**
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294 1. *A program coordinator must devote sufficient time to support the*
295 *administration and educational conduct of the program.*
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297 **D. Resources**
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299 **The institution and the program must jointly ensure the availability of**
300 **adequate resources for fellow education, as defined in the specialty**
301 **program requirements.**
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303 1. *The program must have appropriate facilities and space for the education*
304 *of the fellows. There must be office space, conference space and access*
305 *to computers.*

306
307 ~~Fellows must have sufficient volume and variety of pediatric cases to ensure that~~
308 ~~they gain experience in the full range of pediatric imaging studies, radiologic~~
309 ~~examinations, procedures, and interpretations. There should be no fewer than~~
310 ~~7000-10,000 pediatric radiologic imaging examinations per year per fellow.~~

311 ~~Space and Equipment~~

312 ~~Modern facilities and equipment in adequate space must be available and~~
313 ~~functioning to accomplish the overall educational program in pediatric radiology.~~
314 ~~Diagnostic imaging modalities shall include radiography, computed tomography,~~
315 ~~ultrasonography, radionuclide scintigraphy, angiography, and magnetic~~
316 ~~resonance imaging. The department must have a minimum of one~~
317 ~~radiographic/fluoroscopic room, one ultrasound unit, one angiographic room, one~~
318 ~~CT scanner, one MR unit, and one nuclear radiology gamma camera. All~~
319 ~~equipment must be up-to-date. There must be justification for continued use of~~
320 ~~any equipment that is more than 10 years of age.~~

321 ~~In general hospitals that treat patients of all ages, pediatric radiology often is a~~
322 ~~section of the radiology department; similarly, special imaging services of such~~
323 ~~departments are separate sections. In such cases, there should be recognition~~
324 ~~within the special imaging sections of the particular needs of the pediatric~~
325 ~~radiology program. There should be low-dose roentgenographic/fluoroscopic~~
326 ~~facilities specifically for children and minimizing CT radiation dose in children~~
327 ~~should be emphasized. The availability of all special imaging services for~~
328 ~~pediatric radiology fellows is essential.~~

329 ~~Laboratory and pathology services must be adequate to permit fellows to~~
330 ~~enhance their educational experience during the diagnostic imaging and care of~~
331 ~~patients and obtain timely correlation with diagnostic imaging studies.~~

332 ~~Other Accredited Programs~~

- 333
334 2. ~~There should be an ACGME-accredited residency in pediatrics, as well as~~
335 ~~pediatric medical and surgical subspecialty programs, to provide an~~
336 ~~appropriate patient population and educational resources in the~~
337 ~~institution. In addition to full-time pediatricians, there should be one or~~
338 ~~more pediatric surgeons, one or more pediatric pathologists, as well as a~~
339 ~~broad range of pediatric medical and surgical subspecialists.~~

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341 ~~Inpatient and Outpatient Services~~

342 ~~The hospital must have sufficient inpatient and outpatient services in general and~~
343 ~~subspecialty pediatrics to ensure a board and in-depth exposure to pediatrics.~~

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345 **E. Medical Information Access**

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

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351 ~~Library and textbooks sufficient to cover the specialty of pediatrics and pediatric~~
352 ~~subspecialties, radiology, and related fields. The library must contain journals~~
353 ~~and current textbooks on all aspects of pediatric radiology. The institutional~~
354 ~~library must have a librarian and internet access to electronic database searches.~~
355 ~~Moreover, the methods of performing such electronic database searches must be~~
356 ~~taught to fellows. A pediatric radiology teaching file must be available for use by~~

357 pediatric radiology fellows. This teaching file should contain a minimum of 500
358 cases that are indexed, coded, actively maintained, and continually enhanced
359 with new cases. Availability of the American College of Radiology pediatric
360 learning file or its equivalent is desirable; this only partially meets the teaching file
361 requirements.
362

363 III. Fellow Appointments

364 A. Eligibility Criteria

365 **Each fellow must successfully complete an ACGME-accredited specialty**
366 **program and/or meet other eligibility criteria as specified by the Review**
367 **Committee. The program must document that each fellow has met the**
368 **eligibility criteria.**
369

- 370 1. *Prerequisite training for entry into ~~a subspecialty~~ the fellowship program*
371 *of ~~Diagnostic Radiology~~ should include the satisfactory completion of a*
372 *diagnostic radiology residency program accredited by the ACGME or the*
373 *Royal College of Physicians and Surgeons of Canada (RCPSC) or*
374 *completion of other radiology training experience judged to be suitable*
375 *acceptable to ~~by~~ the program director.*
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377 B. Number of Fellows

378 **The program director may not appoint more fellows than approved by the**
379 **Review Committee, unless otherwise stated in the specialty-specific**
380 **requirements. The program's educational resources must be adequate to**
381 **support the number of fellows appointed to the program.**
382

- 383 1. *The presence of other learners (including, but not limited to residents*
384 *from other specialties subspecialty fellows, PhD students, and nurse*
385 *practitioners) in the program must not interfere with the appointed fellows'*
386 *education.*
387
- 388 2. *The fellows must not dilute or detract from the educational opportunities*
389 *available to residents in the core diagnostic radiology residency program.*
390 *Lines of responsibilities of the diagnostic radiology residents and the*
391 *subspecialty fellow must be clearly defined.*
392
- 393 3. *The training program should have close interaction with a diagnostic*
394 *radiology residency. It is strongly encouraged that fellows should have*
395 *shared experience with residents in general pediatrics and with fellows*
396 *in the pediatric-related subspecialties (i.e., surgery, pathology,*
397 *neonatology, general pediatrics, and adolescent medicine) and*
398 *cardiology; where appropriate, expert faculty in these disciplines should*
399 *supervise and teach the fellows. The subspecialty program in pediatric*
400 *radiology must not have an adverse impact, such as by dilution of the*
401 *available clinical material, on the education of the diagnostic radiology*
402 *residents in the same institution.*
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404 IV. Educational Program

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A. The curriculum must contain the following educational components:

- 1. Skills and competencies the fellow will be able to demonstrate at the conclusion of the program. The program must distribute these skills and competencies to fellows and faculty annually, in either written or electronic form. These skills and competencies should be reviewed by the fellow at the start of each rotation;**
- 2. ACGME Competencies**

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

a) Patient Care

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows:

Curriculum

The training should consist of didactic and clinical experiences that encompass the scope of pediatric radiology from the neonate to the adolescent. Every organ system should be studied in the contexts of growth and development, congenital malformations, diseases peculiar to infants and children, and diseases beginning in childhood but causing substantial residual impairment in adulthood. The didactic component should promote scholarship, self-instruction, self-evaluation, teaching, and research activity. It should foster the development of analytic skills and judgment. The clinical component should facilitate skillful technical performance of low radiation dose procedures on all organ systems that are examined in the practice of pediatric radiology. The pediatric imaging experience should include both inpatient and outpatient studies. The fellows must have graded responsibility and supervision in the performance of procedures and the perfection of technical and interpretive skills. It is essential that the pediatric radiology fellow be instructed in common pediatric imaging technical procedures and their indications, limitations, judicious utilization, and risks, including radiation dose considerations. The pediatric radiology fellow must also be instructed in the risks and benefits of pediatric sedation; this includes an understanding of the physician's role in the monitoring and management of pediatric patients during and after sedation for diagnostic and therapeutic procedures. Where the program is conducted in a general hospital, the pediatric radiology fellow must have training in imaging examinations of pediatric patients. The scope of a 1-year training program in pediatric radiology shall include all diagnostic imaging applicable to the pediatric patient. The 1-year training program should include no more than 4 weeks' vacation. The curriculum must include the central nervous, musculoskeletal, cardiopulmonary, gastrointestinal, and genitourinary systems. In each organ system, the effective and appropriate use of imaging modalities, including ultrasound, computed tomography, magnetic resonance, nuclear radiology, and vascular/interventional radiology, should be taught. The fellow is responsible for following the imaging workup of the patient

459 and must be substantially involved in the performance and interpretation of
460 examinations that utilize various modalities. Correlation of radiologic findings with
461 the clinical management and outcome aspects of the pediatric patient is
462 essential.

463 464 Clinical Component

465 The institution's pediatric population must include patients with a diversity of
466 pediatric illnesses from which broad experience can be gained. The number of
467 pediatric radiology fellows in a program at any given time should reflect the
468 patient census to ensure each trainee of an adequate experience.

469 The pediatric radiology training program should provide a minimum number of
470 procedures available per year per resident as follows:

471 300 fluoroscopic procedures

472 300 ultrasound examinations

473 200 body imaging (CT/MR) examinations

474 The procedures available for the pediatric radiology fellow should not have an
475 adverse impact on the education of the residents of the core diagnostic radiology
476 residency program in the same institution.

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478 The pediatric radiology fellow must have experience in each of the following
479 specialized areas: pediatric neuroradiology; vascular/interventional radiology;
480 and nuclear radiology. There must be direct clinical experience as the primary or
481 secondary operator, which should be supplemented by lectures and conferences.
482 Supervised instruction should be provided by physicians with special expertise in
483 those disciplines. It is acceptable to supplement the pediatric experience with
484 adult patients in some specialties, such as vascular and interventional radiology,
485 to enhance teaching. The program must require fellows to maintain a logbook to
486 document their training in nuclear radiology, neuroradiology, and
487 vascular/interventional radiology. The log should be reviewed periodically with
488 the program director. The logbook should include the patient name, medical
489 record number, and procedure(s) performed. The minimum numbers of
490 procedures per resident performed in these specialized areas of pediatric
491 radiology are as follows:

492 50 pediatric nuclear radiology studies

493 200 neuroimaging studies

494 25 vascular/interventional studies

495 The fellows should serve as pediatric radiologic consultants, under the
496 supervision and mentoring of faculty pediatric radiologists. The teaching
497 experience should include pediatric and radiologic-oriented conferences with
498 medical students, residents, medical staff, and health care professionals.

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500 (1) *must have the opportunity to provide consultation with*
501 *referring physicians or services;*

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503 (2) *should have a clearly defined role in educating diagnostic*
504 *residents, and if appropriate, medical students and other*
505 *professional personnel in the care and management of*
506 *patients;*

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- (3) *must follow standards of care for practicing in a safe environment, attempt to reduce errors, and improve patient outcomes;*
 - (4) *must apply low dose radiation techniques in both adults and children;*
 - (5) *must have the opportunity to perform and interpret all exams and/or invasive studies under close, graded responsibility and supervision.*
 - (6) must assume direct and progressive responsibility in pediatric imaging as they advance through training. This training must culminate in sufficiently independent responsibility for clinical decision making such that the program is assured that the graduating resident has achieved the ability to execute sound clinical judgment.

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b) Medical Knowledge

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Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows:

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~~Didactic Component~~

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~~Study of clinical and basic sciences as they relate to radiology and pediatrics shall be a part of the didactic program. Subspecialty conferences, seminars, and academic review activities in pediatric radiology must be regularly scheduled. It is essential that the fellow participate in the planning and presenting of conferences. In addition to conferences, study is integrated with the performance and interpretation of roentgenographic and other imaging examinations.~~

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~~Fellows must attend a minimum of 3 departmental or interdepartmental conferences per week dedicated to pediatric radiology, which may include rounds with pediatric services. A journal club or research club must meet monthly. The fellow must also be involved in teaching conferences for medical students, radiology residents, other residents rotating on the pediatric radiology service, and other health professional training programs.~~

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- (1) *must demonstrate a level of expertise in the knowledge of those areas appropriate for a radiologist specialist.*
 - (2) *must be educated in low dose radiation techniques in both adults and children, and learn how to prevent and/or treat complications of contrast administration.*
 - (3) *should develop skills in preparing and presenting educational material for medical students, graduate medical staff, and allied health personnel.*

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(a) Specifically, fellows must be involved in teaching conferences for medical students, radiology residents, other residents rotating on the pediatric radiology service, and other health professional training programs.

(4) must utilize appropriate imaging as it is applied to congenital, developmental or acquired diseases of the newborn, infant, child, and adolescent that are basic to the practice of pediatrics.

(5) must interpret imaging studies of the pediatric patient with awareness of normals, normal variants, and typical imaging findings of pediatric diseases and congenital malformations.

c) Practice-based Learning and Improvement

Fellows are expected to develop skills and habits to be able to meet the following goals:

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

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

d) Interpersonal and Communication Skills

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

(1) *Fellows must communicate effectively with patients, colleagues, referring physicians, and other members of the health care team concerning imaging and procedure appropriateness, informed consent, safety issues, and the results of imaging tests or procedures. Competence in oral communication must be judged through direct observation. Competence in written communication must be judged on the basis of the quality and timeliness of dictated reports.*

(2) Fellows should learn techniques that improve understanding of age-appropriate behaviors for the pediatric patient, and sensitivity to the needs of parents and patients.

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- (3) The program curriculum should include learning techniques that improve understanding of cultural, economic and intellectual/educational differences.
- (4) Fellows should help plan and present conferences. Fellows must attend a minimum of three departmental or interdepartmental conferences per week dedicated to pediatric radiology, which may include rounds with pediatric services.

e) Professionalism

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

Fellows ~~are expected to~~ must demonstrate:

- (1) *compassion, integrity, and respect for others;*
- (2) *responsiveness to patient needs;*
- (3) *respect for patient privacy and autonomy;*
- (4) *accountability to patients, society and the profession;*
- (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;*
- (6) *compliance with institutional and departmental policies (HIPAA, the Joint Commission, patient safety, infection control, etc).*

f) Systems-based Practice

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Fellows are expected to:

- (1) *work in interprofessional teams to enhance patient safety and improve patient care quality.*
- (2) *participate in identifying system errors and implementing potential systems solutions.*

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3. [The pediatric radiology program should provide rotations in chest, body imaging, GI/GU imaging, emergency call, ultrasound, musculoskeletal, nuclear medicine, fluoroscopy, vascular/interventional, neuroradiology, cardiology and fetal imaging. Rotations may have different lengths and designated rotations should be designed by the program director with the faculty.](#)
 4. [At the discretion of the program director, each fellow may elect to take up to three months of training in a subspecialty area of pediatric radiology.](#)
 5. *Fellows must participate on a regular basis in scheduled conferences. Conferences must provide for progressive fellow participation. Scheduled presentations by fellows should be encouraged. These conferences should include:*
 - a) *intradepartmental conferences*
 - b) *departmental grand rounds*
 - c) *at least one interdisciplinary conference per week*
 - d) *peer review case conference and/or M&M conference*
 6. *Fellows should attend and participate in local conferences and at least one national meeting or post graduate course in the subspecialty while in training. Participation in local or national subspecialty societies should be encouraged. Reasonable expenses should be reimbursed.*
 7. *Fellows must attend didactic conferences directed to the level of the fellow that provides formal review of the topics in the specialty curriculum. These conferences should occur at least twice a month.*

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B. Fellows' Scholarly Activities

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1. *The program must provide instruction in the fundamentals of experimental design, performance, and interpretation of results.*
 2. *All fellows must engage in a scholarly project. This project may take the form of laboratory research, clinical research, analysis of disease processes, imaging techniques or practice management issues. The results of such projects must be submitted for publication or presented at local, regional, national or international meetings.*
 - ~~3. Trainees should develop competence in critical assessment of imaging research, patient outcomes data, and the scientific literature.~~
 - ~~4. The fellow should participate in clinical, basic biomedical, or health services research projects and submit at least one scientific paper or exhibit to a regional or national meeting. The fellow should participate in the quality improvement program of the department.~~

- 711 V. Evaluation
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713 A. Fellow Evaluation
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715 1. Formative Evaluation
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717 a) The faculty must evaluate fellow performance in a timely
718 manner.
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720 b) The program must:
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722 (1) provide objective assessments of competence in
723 patient care, medical knowledge, practice-based
724 learning and improvement, interpersonal and
725 communication skills, professionalism, and systems-
726 based practice;
727
728 (2) use multiple evaluators (e.g., faculty, peers, patients,
729 self, and other professional staff); and,
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731 (3) provide each fellow with documented semiannual
732 evaluation of performance with feedback.
733
734 (a) ensure that there is at least a quarterly review
735 which should include:
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737 (i) review of faculty's evaluations of the fellow,
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739 (ii) review of the procedure log,
740
741 (iii) documentation of compliance with
742 institutional and departmental policies
743 (HIPAA, the Joint Commission, patient
744 safety, infection control, etc),
745
746 (iv) review of procedural competencies or other
747 simulation learning.
748
749 c) The evaluations of fellow performance must be accessible for
750 review by the fellow, in accordance with institutional policy.
751
752 2. Summative Evaluation
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754 The program director must provide a summative evaluation for each
755 fellow upon completion of the program. This evaluation must
756 become part of the fellow's permanent record maintained by the
757 institution, and must be accessible for review by the fellow in
758 accordance with institutional policy. This evaluation must:
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760 a) document the fellow's performance during their education,
761 and

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- b) **verify that the fellow has demonstrated sufficient competence to enter practice without direct supervision.**

B. Faculty Evaluation

1. **At least annually, the program must evaluate faculty performance as it relates to the educational program.**
2. **These evaluations should include a review of the faculty’s clinical teaching abilities, commitment to the educational program, clinical knowledge, professionalism, and scholarly activities.**
3. *These evaluations must include a written confidential evaluation by the fellows. Faculty must receive annual feedback from these evaluations.*

C. Program Evaluation and Improvement

1. **The program must document formal, systematic evaluation of the curriculum at least annually. The program must monitor and track each of the following areas:**
 - a) **fellow performance, and**
 - b) **faculty development**
2. **If deficiencies are found, the program should prepare a written plan of action to document initiatives to improve performance in the areas listed in section V.C.1. The action plan should be reviewed and approved by the teaching faculty and documented in meeting minutes.**
3. The Review Committee will consider as one measure of a program’s quality the performance of its graduates on the examination of the American Board of Radiology for the Certificate of Added Qualifications in Pediatric Radiology. All program graduates should take the examination.

VI. Fellow Duty Hours in the Learning and Working Environment

A. Principles

1. **The program must be committed to and be responsible for promoting patient safety and fellow well-being and to providing a supportive educational environment.**
2. **Duty hour assignments must recognize that faculty and fellows collectively have responsibility for the safety and welfare of patients.**
3. ~~The responsibility or independence given to residents should depend on their knowledge, skills, and experience. Additional personnel must be~~

812 ~~available within an appropriate time interval to perform or to supervise~~
813 ~~procedures.~~

814
815 4. The responsibility or independence given to fellows should depend on
816 their knowledge, skills, and experience.
817

818 **B. Supervision of Fellows**

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820 **The program must ensure that qualified faculty provide appropriate**
821 **supervision of fellows in patient care activities.**
822

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

825
826 **Duty hours are defined as all clinical and academic activities related to the**
827 **program; i.e., patient care (both inpatient and outpatient), administrative**
828 **duties relative to patient care, the provision for transfer of patient care,**
829 **time spent in-house during call activities, and scheduled activities, such as**
830 **conferences. Duty hours do *not* include reading and preparation time spent**
831 **away from the duty site.**
832

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

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836 2. **Fellows must be provided with one day in seven free from all**
837 **educational and clinical responsibilities, averaged over a four-week**
838 **period, inclusive of call.**

839
840 3. **Adequate time for rest and personal activities must be provided.**
841 **This should consist of a 10-hour time period provided between all**
842 **daily duty periods and after in-house call.**
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844 **D. On-call Activities**

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846 1. **In-house call must occur no more frequently than every-third-night,**
847 **averaged over a four-week period.**

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

854
855 a) *During this time, fellows may complete call activities and*
856 *participate in read-out sessions with faculty of the previous night's*
857 *cases.*
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859 3. **No new patients may be accepted after 24 hours of continuous duty.**

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861 a) *A new patient is defined as reading a new study or participating in*
862 *an interventional procedure on a patient for whom the fellow has*

863 *not previously provided care.*

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4. At-home call (or pager call)

- a) **The frequency of at-home call is not subject to the every-third-night, or 24+6 limitation. However at-home call must not be so frequent as to preclude rest and reasonable personal time for each fellow.**
- b) **Fellows taking at-home call must be provided with one day in seven completely free from all educational and clinical responsibilities, averaged over a four-week period.**
- c) **When fellows are called into the hospital from home, the hours fellows spend in-house are counted toward the 80-hour limit.**

E. Moonlighting

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

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

F. Duty Hours Exceptions

The Review Committee for Diagnostic Radiology will not consider requests for duty hour exception.

VII. Experimentation and Innovation

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

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