

**RESIDENCY REVIEW COMMITTEE FOR DIAGNOSTIC RADIOLOGY**  
515 N State, Ste 2000, Chicago, IL 60654 • (312) 755-5000 • [www.acgme.org](http://www.acgme.org)

**FOR CONTINUED ACCREDITATION – PEDIATRIC RADIOLOGY**

**GENERAL INSTRUCTIONS**

**REVIEW OF AN ACCREDITED PROGRAM OR RE-ACCREDITATION OF A PROGRAM:** If the Program Information Form (PIF) is being completed for a currently accredited program, follow the provided instructions to create the correct form. Go to the Accreditation Data System found on the ACGME home page ([www.acgme.org](http://www.acgme.org)) under Data Collection Systems. Using your previously assigned User ID and password, proceed to the PIF Preparation section on the left hand menu and update the Common PIF data. Most data are updated through annual updates, but some information is required at the time of site visit only. Once the data entry is complete, select Generate PIF to review and print the Common PIF (PDF). Pages will be numbered consecutively in the bottom center of each page.

Once the Common PIF is complete, proceed to the appropriate Residency Review Committee webpage to retrieve the Specialty Specific PIF for **CONTINUED ACCREDITATION**. Once the forms are complete, enter page numbers for the Continued PIF in the bottom center for each page that consecutively follows the Common PIF numbering, combine the Common PIF and the Continued Accreditation PIF and complete the Table of Contents (found with the Specialty Specific PIF instructions). After completing the PIF/documents, make four copies. They must be identical and final. Draft copies are not acceptable. The forms should be submitted bound by either sturdy rubber bands or binder clips. Do not place the forms in covers such as two or three ring binders, spiral bound notebooks, or any other form of binding. Mail one set of the completed forms to the site visitor at least 14 working days before the site visit. The remaining three sets should be provided to the site visitor on the day of the visit.

The program director is responsible for the accuracy of the information supplied in this form and must sign it. It must also be signed by the designated institutional official of the sponsoring institution.

Review the Program Requirements for Residency Education in Pediatric Radiology. The Program Requirements and the Institutional Requirements may be downloaded from the ACGME website ([www.acgme.org](http://www.acgme.org)):

For questions regarding:

- the completion of the form (content), contact the Accreditation Administrator.
- the Accreditation Data System, email [WebADS@acgme.org](mailto:WebADS@acgme.org).

For a glossary of terms, use the following link –  
[http://www.acgme.org/acWebsite/GME\\_info/gme\\_glossary.asp](http://www.acgme.org/acWebsite/GME_info/gme_glossary.asp)

**Have the following documents available for the site visitor:**

References to Common Program and Institutional Requirements are in parentheses

**The Designated Institutional Official should provide the following:**

1. Policy for supervision of fellows (addressing fellow responsibilities for patient care, progressive responsibilities for patient management, and faculty responsibility for supervision) (CPR VI.B)
2. Program policies and procedures for fellows' duty hours and work environment, including grievance and due process (CPR VI; IR II.D.4.e.; IR II.D.4.i.; IR III.B. 3.)
3. Moonlighting policy (CPR VI.E)
4. Documentation of monitoring of fellow duty hours to determine compliance with the requirements (CPR VI.C.1-3)
5. Documentation of internal review (date, participants' titles, type of data collected, and date of review by the GMEC) (IR IV.)
6. Current Program Letters of Agreement (PLAs) (CPR I.B.1)

**The Program Director should provide the following:**

1. Document delineating the eligibility criteria to enter the program (CPR III.A)
2. Document delineating the skills and competencies the fellow will be able to demonstrate at the conclusion of the program (CPR IV.A.1)
3. Evaluations:
  - a) Objective assessments for the six competencies (Patient Care, Medical Knowledge, Practice-based learning & improvement, Interpersonal & Communication Skills, Professionalism, Systems-based Practice) showing input from multiple evaluators (faculty, peers, patients, self, and other professional staff) (CPR V.A.1.b.(1) and (2))
  - b) Documentation of fellows' semiannual evaluations of performance with feedback (CPR V.A.1.b.(3))
  - c) Final (summative) evaluation of fellows, documenting performance during the final period of education and verifying that the fellow has demonstrated sufficient competence to enter practice without direct supervision (CPR V.A.2)
  - d) Documentation of program evaluation and written improvement plan (CPR V.C)
4. Files of current fellows and most recent program graduates
5. **Documentation of fellows' quarterly evaluations**

**Single Program Sponsors only, provide/attach the following additional documents to the application:**

1. Copy of the institutional statement that commits the necessary financial, educational, and human resources to support the GME program(s) and provide documentation that the statement has been approved by the governing body, the administration and the teaching staff. (IR I.B.2)
2. Copy of the fellow contract with the pertinent items required by the Institutional Requirements highlighted and numbered according to the Institutional Requirements (IR II.C-D).
3. Institutional policy for recruitment, appointment, eligibility, and selection of fellows (IR II.A)
4. Institutional policy for discipline and dismissal of fellows (IR III.B.7)

## RESIDENCY REVIEW COMMITTEE FOR RADIOLOGY

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10 Digit ACGME Program I.D. #: 4242321038  
 Program Name: Pediatric Radiology – Johns Hopkins University Program

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**COMMON SUBSPECIALTY PROGRAM INFORMATION FORM**

**PARTICIPATING SITES (PR.I.B.3.)**

Name of ACGME- accredited diagnostic radiology program with which the fellowship program is associated. (Not required for pediatric radiology). If the residency is not sponsored by the institution that sponsors the fellowship program, describe the affiliation between the fellowship and the residency.

Johns Hopkins University Program 4202311077

**PROGRAM PERSONNEL AND RESOURCES**

**Program Director (PR II.A.1.a.)**

What percentage of time does the program director spend in the subspecialty? ..... ( 100 )

**Other Program Personnel (PR II.C.1.)**

1. Is there a program coordinator available to the program? ..... ( X ) YES ( ) NO

If no, explain

2. Does the program coordinator have sufficient time and resources to support the administration and educational conduct of the program? ..... ( X ) YES ( ) NO

If no, explain

**Resources (PR II.D.)**

Briefly describe the facilities and space, including study space, conference space, and access to computers, available for the education of fellow.

The fellow is provided with a desk and computer, located in the pediatric radiology administrative office. The computer is on the hospital/university network, which allows internet access, access to journals through the university subscription portal, and access to the PACS. Microsoft Office 2007 with PowerPoint is installed for paper and conference preparation. A conference area has been set up in the reading room, with its own computer, projector and screen; many of the clinical conferences take place there, enabling attendance by the fellow even when on another clinical rotation. (For larger gatherings, the department conference room is used, which is in an adjacent building.) A division library (next to the fellow's desk) contains recent textbooks and atlases and is augmented yearly with new purchases. The main medical library has research librarians that aid complex database mining. A film-based teaching file is housed in the reading room. On-line education takes the form of the Society for Pediatric Radiology Curriculum (<https://www.cchs.net/pediatricradiology/>), RadPrimer (an interactive teaching file with graded quiz capabilities -- <https://app.radprimer.com/login>), and instructional modules necessary for compliance training ([www.hopkinsinteractive.org](http://www.hopkinsinteractive.org)).

**Medical Information Access (PR II.E)**

Describe resources available for point of service teaching and learning utilized during read out session. The description should include the availability of electronic resources.

In the reading room are 9 workstations, allowing efficient workflow and dictation of studies. Dictations are with voice-recognition, so the preliminary written report is available immediately. The attending radiologist reads out with the fellow several times each day, discussing the findings and the clinical entities, reviewing and editing the fellow's dictated reports. Each workstation has PACS access and also internet access for instant literature searches on clinical topics as they come up in daily practice. The university subscription portal allows access to nearly all the journals listed in PubMed. The division also has access to the electronic version of Caffey's Pediatric Diagnostic Imaging (11<sup>th</sup> edition), an encyclopedic resource.

**FELLOW APPOINTMENTS**

1. Explain the distinction between the diagnostic radiology residents and the fellows in terms of clinical activities and level of responsibility.

On a daily basis, there are 3 clinical services to be covered (plain radiographs/fluoro, ICU radiographs, and cross-sectional imaging); 3 weeks per month pediatric neuroradiology is added. An attending radiologist is assigned to each service to mentor the trainee on the service that day and work in parallel to keep the service caught up. 1-2 diagnostic radiology residents join the fellow to cover these services (with attending radiologists assuming responsibility for the uncovered services). Thus, the residents and the fellow have separate work areas and do not compete for cases. More responsibility is given to the fellow to coordinate the workflow, approve and protocol studies, and interact with the clinicians and technologists, while the residents are given more specific direction and prompting.

2. Will the fellow have responsibility for teaching residents? ..... ( ) YES ( X ) NO

If yes, describe.

\_\_\_\_\_

**PATIENT CARE**

1. Briefly describe how fellows provide consultation with referring physicians or services. (PR IV.A.2.a.(1))

The Pediatric Radiology service works very closely with its referring physicians. The fellow is rapidly introduced early in the year during as many conferences and rounds as possible so that the clinicians will recognize the name and the face. When questions arise about indications for a cross-sectional or fluoroscopic examination, the fellow phones the clinician to discuss it and determine the best imaging study for that clinical problem. During readout, the attending pediatric radiologists encourage the fellow to phone urgent results. Clinicians coming to the reading room are directed to speak with the fellow primarily; the attending radiologist will remain in the background. Later in the year, the fellow conducts ICU imaging rounds, first with the attending radiologist in the room, then alone.

2. Do fellows have a clearly defined role in educating diagnostic residents, and if appropriate, medical students and other professional personnel in the care and management of patients? (PR IV.A.2.a.(2)) ..... ( X ) YES ( ) NO

If no, explain

\_\_\_\_\_

3. Provide examples of how fellows follow standards of care for practicing in a safe environment, attempt to reduce errors, and improve patient outcomes. (PR IV.A.2.a.(3))

*Limit to 100 words*

The ACR Appropriateness Criteria were used in the formulation of the procedure specifications in the Division Handbook. They are also available in a binder in the division library. The fellow is instructed to perform procedures conforming to those specifications.

The concept of a “pre-procedure time-out” is used to promote patient safety even for non-operative procedures such as routine fluoroscopy: the patient's identity is matched with the requisition, and the indications are reviewed to make sure the correct study has been ordered. For any discrepancy or reservation, the clinician is contacted.

Every radiograph or cross-sectional study entry in the RIS has a unique accession number that is generated for the images that match it; the fellow must cross-check these numbers before the study is dictated to be sure all images are present.

The fellow is taught to be alert to the possibility of mis-identified images. Automatically checking bony maturation vs. stated age, presence and type of support devices, etc. can help prevent mis-attributed reports.

4. Describe and provide examples of how fellows are educated in and apply low dose radiation techniques in both adults and children and how they become skilled in preventing and treating complications of contrast administration. (PR IV.A.2.a.(4) and IV.A.2.b.(2))

*Limit to 200 words*

The fellow is expected to complete the Radiation Safety and Fluoroscopy modules in the SPR curriculum (<https://www.cchs.net/pediatricradiology>) in the first days of the fellowship. The Division Handbook describes how procedures should be performed to minimize the fluoro time, number of exposures, fluorotime (fluoroscopy), scanning phases, scanned area (CT). Proper fluoroscopy technique is taught by the attending radiologists and the fellow's skills are monitored until they are competent. CT requisitions are reviewed with the fellow to instill an understanding of appropriateness, and how CT requests can be converted to US or MRI. The fellow is BLS certified before beginning clinical work; airway management is part of the course. A page in the Fellow's Handbook provides directed reading about contrast reactions; all CT injections are monitored and reactions are handled with the attending radiologist.

**MEDICAL KNOWLEDGE (PR IV.A.2.B.(3))**

Briefly describe how fellows develop skills in preparing and presenting educational material for medical students, graduate medical staff, and allied health personnel.

*Limit to 200 words*

The fellow listens to cases being presented in noon case conference and participates with personal cases; the faculty critiques oral presentations and encourages development of proper format. For more formal presentations with slides, the fellow is provided with an up-to-date version of PowerPoint on the fellow's computer. The fellow attends lectures by the faculty which can be used as models; the faculty is always available to help the fellow evaluate cases for presentation, choose images and manipulate them onto slides. For more didactic help in learning instructional skills, there are self-instruction modules available online through [http://www.hopkinsmedicine.org/fac\\_development/teaching/](http://www.hopkinsmedicine.org/fac_development/teaching/): Advanced PowerPoint and Case Method Teaching.

**INTERPERSONAL AND COMMUNICATION SKILLS (PR IV.A.2.D.(1))**

List the methods used to evaluate the fellows written and oral communication skills.

*Limit to 200 words*

The Fellow's Handbook contains a page concerning proper report format and its rationale; the fellow is expected to construct reports that follow that format. Every report that the fellow dictates is reviewed, edited and countersigned by an attending radiologist, nearly always with the fellow and the images, so that any discrepancies can be pointed out and corrected. The fellow is expected to review the requests for fluoro and cross-sectional imaging, find out background to the clinical problem, and present the patients to the attending radiologist, giving a plan for imaging. The attending radiologist listens as the fellow speaks to patients and families, talks on the telephone to clinicians, gives imaging rounds in the ICU's. Questions 34 through 40 on the quarterly evaluation form ask the faculty directly to rate these skills.



**PROFESSIONALISM**

- 1. Do fellows demonstrate compassion, integrity, and respect for others? (PR IV.A.2.e.(1))  
.....( X ) YES ( ) NO
- 2. Do fellows demonstrate responsiveness to patient needs that supersedes self-interest?  
(PR IV.A.2.e.(2) ) .....( X ) YES ( ) NO
- 3. Do fellows demonstrate respect for patient privacy and autonomy? (PR IV.A.2.e.(3))  
.....( X ) YES ( ) NO
- 4. Do fellows demonstrate accountability to patients, society and the profession? (PR IV.A.2.e.(4))  
.....( X ) YES ( ) NO
- 5. Do fellows demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation?  
(PR IV.A.2.e.(5)) .....( X ) YES ( ) NO
- 6. Briefly describe how the program assesses fellow competence in the areas referenced in questions 1-5.

Questions 14 through 21 of the quarterly faculty evaluation of the fellow and 2 questions on each of the nurse and technologist evaluation forms address the fellow’s professionalism. This is also one of the attributes that surfaces quickly in any informal discussion of the fellow that the program director has with allied staff, clinicians and residents with whom the fellow interacts.

- 7. Describe how the program ensures that fellows demonstrate compliance with institutional and departmental policies (e.g., HIPAA, the JC, patient safety, infection control, etc). (PR IV.A.2.e.(6))

*Limit to 200 words*

There are 10 online compliance modules on subjects ranging from “Sleep Deprivation” to “Using Systems Theory to Prevent Errors and Injuries in Health Care” that are required from the fellow prior to beginning the fellowship. Each must be completed and a certificate generated; failure to do so results in departmental notification by the Registrar. The modules are designed to satisfy requirements from all governing bodies and interested parties such as those mentioned.

**SYSTEMS-BASED PRACTICE**

- 1. Describe how fellows work in interprofessional teams to enhance patient safety and improve patient care quality. (PR IV.A.2.f.(1))

*Limit to 200 words*

Pediatricians, surgeons, nurse practitioners, speech-language pathologists, technologists, nurses, patient services coordinators and sonographers all have unique perspectives on patient care and service priorities. The fellow comes into contact with each of these groups in the course of the day: in ICU rounds, in clinical interdisciplinary conferences, by phone to clarify study indications or communicate urgent findings, in person to protocol cross-sectional or fluoro exams. In each of these negotiations, the fellow is coached by the attending radiologist to listen and understand the concerns the other disciplines bring to the discussion and to assume the proper role as a consultant and health care team member.

- 2. Provide specific examples of how fellows participate in identifying system errors and implementing potential systems solutions. (PR IV.A.2.f.(2))

*Limit to 200 words*

The fellow's participation in interprofessional teams yields great insight into hospital systems and their effects on patient care in radiology. Contact with the patient services coordinators provides some practical education in the vagaries of insurance approval for added-on studies, variability of transport availability, difficulties in scheduling outpatients, all of which cause delays in service, which the fellow learns to anticipate. Clinician contact brings the realization that the same words used by clinicians and radiologists may have very different meanings to the two groups; careful explanation and clarification in reports becomes important. Speech-language pathologists and occupational therapists focus on the patient and his abilities during modified barium swallows; the fellow learns to stay mindful of accumulating radiation dose and help the clinicians triage their questions.

**CURRICULUM**

**Conferences (PR IV.A.3.)**

1. Do conferences include:

- a) Intradepartmental conferences (PR IV.A.3.a).....( X ) YES ( ) NO  
If yes, how frequently does this occur? ....( 4 times per week )
- b) Departmental grand rounds (PR IV.A.3.b).....( X ) YES ( ) NO  
If yes, how frequently does this occur? ..... ( 4 times per year )
- c) At least one interdisciplinary conference per week (IV.A.3.c).....( X ) YES ( ) NO
- d) Peer review case conference and/or M&M conference (PR IV.A.3.d).....( X ) YES ( ) NO  
If yes, how frequently does this occur? ..... ( 1 time per month )

2. Briefly describe the policy for fellow attendance and participation at local and national meetings. Indicate whether the program provides reimbursement. (PR IV.A.4)

The fellow is expected to attend the Society for Pediatric Radiology meeting (national or international, depending on the year). Expenses are paid from the fellow's academic stipend (\$2500.00 for 2010-2011). The fellow is strongly encouraged to submit at least one abstract for this meeting. The fellow may also attend the Radiologic Society of North America, American Roentgen Ray Society, or a subspecialty meeting at the discretion of the division chair, who may decide to cover additional expenses, particularly if the fellow is presenting.

3. Formal didactic sessions (PR IV.A.5)

Enter the schedule of conferences and lectures for the most recent 12-month period. The specific title of lectures/sessions is requested. (PR IV.A.4-6)

Reporting Period (Recent 12-month period):	From: 01/01/2010	To: 01/01/2011
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Topic	Title
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8:15-8:30 a.m. ED conference – daily	Review interesting & current cases
8-8:30 a.m. PICU conference – daily	Review interesting & current cases
9:30-10:15 a.m. PICU conference – daily	Review interesting & current cases
12-1 p.m. Case conference – M-W-F	Review interesting & current cases
1-1:30 p.m. NICN conf w/ TH & AT–Th&F/M&F	Review interesting & current cases
4:30 p.m. PENT conf w/ AT – 1 <sup>st</sup> Mon	Review interesting & current cases
7-8 a.m. Vasc. Anom. conf w/ AT – 4 <sup>th</sup> Mon	Review interesting & current cases
8-9 a.m. Peds Neuro Rev w/ TH & AT – 1 <sup>st</sup> Fri	Review interesting & current cases
PONC w/ TH & AT–Tues 7:30-8:15 a.m.	Review interesting & current cases
Tumor Board w/ MS – Tues 12-1 p.m.	Review interesting & current cases
NMCIC conference w/ UW – 2 <sup>nd</sup> & 4 <sup>th</sup> Tues	Review interesting & current cases
GPS conference w/ JB – 2 <sup>nd</sup> Weds	Review interesting & current cases

<p>Thursday Conferences –</p> <p>1/1/10 – JB – Case conference</p> <p>2/4/10 – JB – Journal Club</p> <p>2/11/10 – TH – CME lecture</p> <p>2/18/10 – RFG – Case conference</p> <p>2/25/10 – UW – CME lecture</p> <p>3/4/10 – MS – Case conference</p> <p>3/18/10 – RFG – Journal Club</p> <p>3/25/10 – AT – CME lecture</p> <p>4/8/10 – AO (Fellow) – Journal Club</p> <p>4/15/10 – JB – CME lecture</p> <p>4/22/10 – RFG – Case conference</p> <p>4/29/10 – MS – Case conference</p> <p>5/6/10 – UW – Journal Club</p> <p>5/13/10 – JB - Case conference</p> <p>5/20/10 – TH – Case conference</p> <p>5/27/10 – UW – CME lecture</p> <p>6/3/10 – MS – Journal Club</p> <p>6/17/10 – AO (Fellow) – Case conference</p> <p>7/1/10 – JB – Journal Club</p> <p>7/7/10 – AT – Case conference (Wed)</p> <p>7/15/10 – TH – CME lecture</p> <p>7/22/10 – MS – CME lecture</p> <p>7/29/10 – TH CME lecture</p> <p>8/5/10 – TH – Journal Club</p> <p>8/12/10 – MS – Case conference</p> <p>8/19/10 – UW – Case conference</p> <p>8/26/10 – UW – CME lecture</p> <p>9/2/10 – UW – Journal Club</p> <p>9/9/10 – TH – Case conference</p> <p>9/16/10 – JB – Case conference</p> <p>9/23/10 – AT – CME lecture</p> <p>9/30/10 – JB – CME lecture</p> <p>10/7/10 – RFG – Journal Club</p> <p>10/14/10 – JB – Case conference</p> <p>10/21/10 – UW – Case conference</p> <p>10/28/10 – TB (Fellow) – Case conference</p> <p>11/4/10 – MS – Journal Club</p> <p>11/18/10 – MS – CME lecture</p> <p>12/9/10 – TH – Case conference</p> <p>12/16/10 – TH – Case conference</p> <p>1/6/2011 – Case conference</p>	<p>Review interesting &amp; current cases</p> <p>“Impact of radiology reports on clinical treatment”</p> <p>[Scheduled – snow]</p> <p>Review interesting &amp; current cases</p> <p>“Gynecological masses in girls”</p> <p>Review interesting &amp; current cases</p> <p>“Interesting articles in Radiographics”</p> <p>“Pediatric Head Trauma”</p> <p>“Pediatric chest CT”/“Chest radiographs in NICU”</p> <p>“Skeletal &amp; Brain Dysplasia”</p> <p>Review interesting &amp; current cases</p> <p>Review interesting &amp; current cases</p> <p>[Scheduled]</p> <p>Review interesting &amp; current cases</p> <p>Review interesting &amp; current cases</p> <p>“Peds Male Urethra”</p> <p>“Interesting articles in Radiology, Apr-May 2010”</p> <p>“Case: Right lower abdominal mass”</p> <p>“Interesting articles in Radiology”</p> <p>Review interesting &amp; current cases</p> <p>“Why Johns Hopkins?”</p> <p>“The Image Gently Campaign: Safety in Peds”</p> <p>“MRI of the Pediatric Abdomen”</p> <p>[Scheduled]</p> <p>Review interesting &amp; current cases</p> <p>Review interesting &amp; current cases</p> <p>“Imaging in the management of UTI”</p> <p>“MDC Practice at Hopkins”</p> <p>Review interesting &amp; current cases</p> <p>Review interesting &amp; current cases</p> <p>“Focal Spinal Cord Lesions”</p> <p>“Practical Approach to Peds Cardio Radiology”</p> <p>“Interesting articles in Radiographics”</p> <p>Review interesting &amp; current cases</p> <p>Review interesting &amp; current cases</p> <p>“Interesting cases in General Radiology”</p> <p>“Articles in Pediatric Radiology, Nov 2010”</p> <p>“Skeletal Manifestations of Child Abuse”</p> <p>Review interesting &amp; current cases</p> <p>Review interesting &amp; current cases</p> <p>Review interesting &amp; current cases</p>
NUR conference w/ UW – 2 <sup>nd</sup> & 4 <sup>th</sup> Fri	Review interesting & current cases

### Rotation Schedule (PR IV)

Using the format provided in the sample below, provide a rotation schedule for the 12-month program. Insert additional rows as needed.

#### SAMPLE

Week/Month	Rotation Title	Site
4 weeks	Emergency radiology	3
12 weeks	CT/MRI	1

4 weeks	Orthopedic elective	2
4 weeks	MSK ultrasound	3
4 weeks	Peds MSK	1
8 weeks	MSK interventions	1
4 weeks	PET/CT	4
4 weeks	Research	2
8 weeks	General MSK	1

Week/Month	Rotation Title	Site
10 weeks	General	1
2 weeks	Nuclear Medicine	1
2 weeks	General	1
2 weeks	Interventional Radiology (IR or CVDL)	1
6 weeks	General/IR or CVDL	1
2 weeks	MSK	1
8 weeks	General/IR or CVDL	1
2 weeks	Nuclear Medicine	1
7 weeks	General/Neuroradiology	1
4 weeks	Vacation	1
7 weeks	General/Neuroradiology	1

**FELLOWS' SCHOLARLY ACTIVITIES**

1. Describe how fellows are instructed in the fundamentals of experimental design, performance, interpretation of results. (PR IV.B.1.)

The fellow chooses a research project early in the year and a target journal and/or meeting is decided upon. The requirements for papers in that journal and abstracts at the meeting are reviewed by the fellow and the faculty co-author. The fellow receives intensive mentoring by the faculty co-author with regular feedback on the IRB approval, research design and implementation, choice of bibliography, and final write-up. PubMed searches are available through the medical library's free subscription portal and research librarian services to instruct and aid in complex searches and mining databases are also free. The fellow also gets pointers about composition and execution of studies through the monthly journal club, where articles are reviewed and critiqued by faculty (and, later in the year, by the fellow).

2. List fellow scholarly projects for the current fellows and most recent graduates. Indicate whether the projects were submitted for publication or presented at departmental, institutional, local, regional, national or international meetings. (PR IV.B.2.)

Current fellow: "Handlebar hernia"- CT findings and associated visceral injuries' – Poster accepted for International Pediatric Radiology May 2011  
Thangamadhan Bosemani, Thierry Huisman, Jane Benson, Aylin Tekes

'Focal spinal cord lesions in children: Differential Diagnosis with MRI' – Poster accepted for International Pediatric Radiology May 2011 Thangamadhan Bosemani, Thierry A.G.M Huisman, Andrea Poretti, Avner Meoded, Aylin Tekes

Diffuse infantile hepatic hemangiomas – Imaging strategy and remarkable regression with propranolol and steroids – Pending submission to Pediatric Radiology  
Thangamadhan Bosemani, Katherine B. Puttgen, Thierry A.G.M Huisman, Aylin Tekes.

<p>Focal spinal cord lesions in children: a practical approach to differential diagnosis with MRI – Review article - Pending submission to <u>Applied Radiology</u> Thangamadhan Bosemani, Aylin Tekes</p> <p>Leukoencephalopathy with Vanishing White Matter – Abstract submitted – pending decision from American Society of Neuroradiology meeting 2011 Avner Meoded, Andrea Poretti, Thangamadhan Bosemani, Shoko Yoshida, Thierry A.G.M Huisman</p>	
<p>2009-2010 fellow: 'MR Enterography Findings and Clinical Correlations in Pediatric Inflammatory Bowel Disease' Arzu Ozturk, MD, Aylin Tekes, MD, Maria Oliva-Hemker, MD, Elizabeth Kaykin, PhD, MHS, SM, Thierry A.G.M. Huisman, MD. Final review before submission to <u>Pediatric Radiology</u></p> <p>"MR Enterography Findings in Pediatric Inflammatory Bowel Disease' pictorial essay submitted to American Journal of Roentgenology, awaiting decision ( Chalian, Ozturk, Huisman).</p>	

**EVALUATION**

**Fellow Formative Evaluation (PR V.A.1.b.(3).(a))**

1. Do fellow evaluations include at least a quarterly review?.....( X ) YES ( ) NO
2. Does the quarterly review include the following?
  - a) review of the faculty’s evaluations of the fellow .....( X ) YES ( ) NO
  - b) review of the fellow’s procedure log .....( X ) YES ( ) NO
  - c) documentation of compliance with institutional and department policies (e.g. HIPAA, the JC, patient safety, infection control, etc.) .....( X ) YES ( ) NO

Explain any “no” responses.

**Faculty Evaluation (PR V.B.3.)**

1. Do faculty evaluations include a written confidential evaluation by the fellows? .( X ) YES ( ) NO
2. Do faculty receive annual feedback from these evaluations? .....( X ) YES ( ) NO

Explain any “no” responses.

**RESIDENCY REVIEW COMMITTEE FOR DIAGNOSTIC RADIOLOGY**  
 515 N State, Ste 2000, Chicago, IL 60654 • (312) 755-5000 • www.acgme.org

**FOR CONTINUED ACCREDITATION – PEDIATRIC RADIOLOGY**

**PROGRAM PERSONNEL AND RESOURCES**

1. Does the program director select and supervise the fellows and work to comply with departmental, institutional, and ACGME guidelines concerning fellowship issues? (PR II.A.3.f.) ( X ) YES ( ) NO
2. Does the program director work with the faculty to organize, continuously evaluate and improve the fellowship educational program? (PR II.A.3.g.) .....( X ) YES ( ) NO
3. Does the program director ensure that goals and objectives of specific rotations are distributed to fellows and faculty? (PR II.A.3.h.) .....( X ) YES ( ) NO
4. Is fellow experience in special imaging, such as ultrasound, cardiac, interventional radiology, nuclear radiology, computed tomography, and magnetic resonance supervised by pediatric radiology faculty? (PR II.B.3.b.) .....( X ) YES ( ) NO
5. Do faculty regularly participate in: (PR II.B.3.c.)
  - a) clinical discussions.....( X ) YES ( ) NO  
If yes, indicate frequency ..... ( daily )
  - b) journal clubs.....( X ) YES ( ) NO  
If yes, indicate frequency ..... ( monthly )
  - c) clinical multidisciplinary conferences.....( X ) YES ( ) NO  
If yes, indicate frequency ..... ( daily )
  - d) research conferences .....( X ) YES ( ) NO  
If yes, indicate frequency ..... ( yearly )

Explain any “no” responses.

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6. List the number of units available to fellows in each site. Include units in other departments, e.g., cardiology, GI and GU. (PR II.D.2.)

Diagnostic Radiology Equipment	Site #1	Site #2	Site #3
DR and CR radiographic units	10		
Portable radiographic units	28		
Fluoroscopic units	6		
C arm fluoroscopic units	20		
Interventional suite	8		
CT scanners in hospital complex (date of last purchased unit)	9 (4/27/09)		
CT scanners off site	None		
<b>Ultrasound Equipment</b>			
Number of units with color Doppler	(together)		
Portable units	16		

<b>Diagnostic Radiology Equipment</b>	<b>Site #1</b>	<b>Site #2</b>	<b>Site #3</b>
<b>MRI Scanners</b>			
Units on-site in hospital complex	7		
Units intra-operative	None		
Units available off-site	None		
Date of last purchase	01/2008		
<b>Nuclear Radiology Equipment</b>			
Single head gamma	1		
Dual head gamma (SPECT/CT)	6		
PET/CT	2		
Uptake probe	2		

7. Does the sponsoring institution also sponsor an ACGME-accredited pediatric residency? (PR II.D.2.)  
.....( X ) YES ( ) NO
8. List the ACGME-accredited pediatric medical and surgical fellowship programs in the institution and the number of fellows in each. (PR II.D.2.)

<b>ACGME-Accredited Programs</b>	<b>Residents/Fellows</b>
Cardiology	4
Endocrinology	4
Infectious Disease	3
Adolescent Medicine	4
Critical Care Medicine	12
Emergency Medicine	1
Hematology/Oncology	20
Nephrology	3
Neonatal/Perinatal Medicine	9
Pulmonology	4
Gastroenterology	7
Pediatric Surgery	2
Pediatric Urology	1
Pediatric Anesthesiology	4

9. How many pediatric surgeons are available at the sponsoring institution? (PR II.D.2.) ..... ( 5 )
10. How many pediatric pathologists are available at the sponsoring institution? (PR II.D.2.) ..... ( 3 )

**FELLOW APPOINTMENTS**

1. What is the total number of radiology residents that rotate through pediatric radiology per year: (30 )
- a) Average length of rotation: .....( 4 weeks )
2. If the pediatric radiology program is sponsored by a diagnostic radiology residency program, explain the distinction between the residents and the pediatric radiology fellows in terms of clinical activities and level of responsibility. (PR III.B.3.)

On a daily basis, there are 3 clinical services to be covered (plain radiographs/fluoro, ICU radiographs, and cross-sectional imaging); 3 weeks per month pediatric neuroradiology is added. An attending radiologist is assigned to each service to mentor the trainee on the service that day and work in parallel to keep the service caught up. 1-2 diagnostic radiology residents join the fellow to



cover these services (with attending radiologists assuming responsibility for the uncovered services). Thus, the residents and the fellow have separate work areas and do not compete for cases. More responsibility is given to the fellow to coordinate the workflow, approve and protocol studies, and interact with the clinicians and technologists, while the residents are given more specific direction and prompting.

3. Do pediatric radiology fellows have shared experiences with pediatric residents and fellows in pediatric-related subspecialties? (PR III.B.3. – note that programs will not be cited for failure to provide this experience) .....( X ) YES ( ) NO.

## PATIENT CARE

### 1. Patient Data

Reporting Period (Recent 12-month period):	From: 01/01/2010	To: 12/31/2010
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Patient Examination Data	Site #1		Site #2		Site #3	
	Out-patient	In-patient	Out-patient	In-patient	Out-patient	In-patient
Patient Encounters TOTAL	163,425	29,455				
Pediatric (Inc. neonatal)	28,195	5,162				
Diagnostic Examinations TOTAL	260,401	163,936				
Adult	215,331	125,424				
Pediatric (Inc. neonatal)	55,070	38,512				
	<b>Outpatient Only</b>		<b>Outpatient Only</b>		<b>Outpatient Only</b>	
Number of Emergency Room Radiology Examinations (included above)	78,054					
Adult	61,791					
Pediatric (include neonatal)	16,263					
Pediatric Admissions	8,439					
Pediatric Outpatient Visits	109,017					

2. Briefly describe how fellows are provided with direct and progressive responsibility on pediatric imaging as they advance through the program? (PR IV.A.2.a.(5))

Before taking up the fellowship, the trainee must complete a diagnostic radiology residency which includes training in pediatric radiology. However, the level of training and the knowledge base that the new fellow has on arrival differs greatly from program to program. Much of the first month is spent assessing this level of competence. The Fellow's Handbook outlines basic duties and expectations, as well as the goals and objectives for the rotations. Each faculty member oversees the fellow in the clinical areas of emergency and ICU radiography, fluoroscopy, and cross-sectional imaging, coaching and teaching. The fellow is given the Division Handbook which illustrates the procedural methods and standards agreed upon by the faculty. The fellow is also expected to begin the SPR Online Curriculum modules and choose a general pediatric radiology textbook to read. How quickly and how well the fellow absorbs this information and puts it into practice form the faculty's opinion of the fellow's aptitude. The fellow begins by observing fluoro and sitting by the faculty as they read studies. The fellow then graduates quickly to doing preliminary reports on radiographs, but usually must perform fluoro under direct observation by the faculty until fluoroscopy times and image composition are acceptable. The faculty each set their own standard for minimum practice, but usually the fellow is doing fluoro alone by the end of the first month. The images may continue to be reviewed before the patient leaves the room for another 3-4 months. On call, the fellow will answer all calls but, at first, will discuss all decisions with the back-up attending. If the fellow must come in to the hospital for a procedure, the faculty will come too for the first month or two; for the next few months they will review the images from home before the patient leaves

the room. Finally, the fellow will perform the study and will call the attending only if there is a problem; the faculty will review the images the next day. In the case of an interventional procedure (Intussusception reduction or hip aspiration) the attending will usually come in for backup unless they personally have overseen the fellow doing this procedure before.

3. Does the program 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? (PR IV.A.2.a.(5)) .....( X ) YES ( ) NO

If no, explain

## MEDICAL KNOWLEDGE

1. Briefly describe fellow involvement in teaching conferences for medical students, radiology residents, other resident rotating on the pediatric radiology service, and other health professional programs. (PR IV.A.2.b.(3).(a))

Medical students can take a 6-week Diagnostic Radiology elective that is given multiple times during the year. Faculty are requested to take part, and fill out the bulk of the lecture schedule. Where there are empty spots, fellows and upper-level radiology residents are asked to give conferences of basic teaching cases of their choice, for about 1 hour. The pediatric radiology fellow is asked to do this for a few of the electives during the year. The fellowship director gives out teaching evaluation forms to the medical students at least once during the year. The fellow does not give formal case conference for the residents. The fellow, the rotating radiology residents and the pediatric residents on radiology elective participate in the MWF clinical case conference in the division, bringing interesting cases from the daily workload and being quizzed on cases by the faculty.

2. Briefly describe fellow experience utilizing appropriate imaging as it is applied to congenital, developmental or acquired diseases of the newborn, infant, child, and adolescent. (PR IV.A.2.b.(4))

The concept of appropriateness in imaging is instilled into the fellow from the first day: pathology must be evaluated fully, but safely. The clinical condition of the child and the availability of resources must be weighed against the clinicians' need to know. The fellow is coached in the consultative role that these discussions require; the fellow rapidly realizes the necessity of being conversant in the entire discipline of pediatric radiology in order to offer the most astute and well-reasoned opinions. The faculty constantly tries to convert clinician requests for CT and fluoro studies to MRI or US imaging to minimize the child's radiation burden, instructing the fellow by example. When there is no substitute for these exams, the ALARA concept is stressed: to keep the irradiated area and the duration of the radiation as small as possible. However, there are instances where the risk-to-benefit ratio is non-intuitive: for instance, the risk of radiation may be smaller than the risk of the general anesthesia required for MRI; the fellow is party to these discussions also.

3. Briefly describe fellow experience in interpreting imaging studies of the pediatric patient with awareness of normals, normal variants, and typical imaging findings of pediatric diseases and congenital malformations. (PR IV.A.2.b.b.(5))

The fellow is expected to dictate a preliminary report on every study in the work list of the clinical assignment of the day (with the attending radiologist taking up unread studies so as to keep the service caught up and leave time for read-out). In this way the fellow's accumulating knowledge is constantly tested; read-out with the attending provides the quick reinforcement or correction that expands the knowledge base. The concepts that there is a range of normalcy that is age-and-gender-dependent, and that it is the pediatric radiologist's job to guard the patient against the

consequences of over-diagnosis, are stressed. They are demonstrated by the faculty who consult with each other to take advantage of differing depth of experience. The atlases of normal development and normal variants are available in the reading room and utilized often by both faculty and fellow. The fellow learns that true pathology is what remains after normal anatomic variants and normal physiologic variants (made by differences in positioning or inspiration, for instance) have been sifted out.

## INTERPERSONAL AND COMMUNICATION SKILLS

1. Briefly describe how fellows learn techniques that improve understanding of age-appropriate behaviors for the pediatric patient, and sensitivity to the needs of parents and patients. (PR IV.A.2.d.(2))

The division employs a trained Child Life specialist part-time, who is a resource for consultation on this topic, as well as some summary literature that has been included in the Fellow's Handbook. Hospitalized children exhibit a range of behavior, some of which is predictable by age, but modified by their degree of illness. Proximity and involvement of the parents or customary caregiver also exerts a large influence. The fellow gets pointers from the faculty about how a patient and parents might react and how much comprehension of explanations to expect, but also from the nurses and technologists who often have a much closer familiarity with the patient.

2. Does the curriculum include learning techniques that improve understanding of cultural, economic, and intellectual/educational differences? (PR IV.A.2.d.(3)) ..... ( X ) YES ( ) NO

If no, explain

3. Briefly describe fellow participation in planning and presentation of conferences. (PR IV.A.2.d.(4))

The fellow is involved in two types of conferences: daily clinical conferences and more formal, semi-didactic or didactic conferences. In the former, the content is driven by the patients on the service that day. There is little direct preparation, but the fellow quickly sees that knowledge base determines how helpful and authoritative the consultant can be. This spurs the fellow's reading to broaden and deepen that knowledge. The second type of conference is more carefully prepared, usually under the guidance of the faculty radiologist responsible for it. These conferences may be weekly or monthly, depending on the service. The fellow is required to help prepare one in each category during the year; the faculty member fills out an evaluation form for the program director. The case selection is known in advance. The studies for review may be specified by the clinical staff or chosen by the radiologist, but the fellow reviews them, organizes them and selects the key images. The fellow and the attending assemble any didactic material needed. The fellow makes the bulk of the presentation. The evaluation form is examined at the next quarterly review that follows.

4. Do fellows attend a minimum of three departmental or interdepartmental conference per week dedicated to pediatric radiology? (PR IV.A.2.d.(4)) ..... ( X ) YES ( ) NO

## CURRICULUM

1. If there are outside rotations, describe the fellows' duties and level of responsibility during each of the outside assignments. (PR IV.A.6)

The fellow participates in three rotations outside the division, though still within the Department of Radiology. These are Nuclear Medicine/PET, Interventional Radiology and Musculoskeletal Radiology. Each of these services has its own fellowship program; the pediatric radiology fellow follows the same daily schedule as one of the service fellows. The level of responsibility is usually that of an early trainee. The pediatric radiology program director and the supervising faculty member of the outside rotation try to schedule the pediatric radiology fellow at a time when other learners on the service might be fewer in number, so that the pediatric radiology fellow will have a greater chance to see and dictate cases. The pediatric radiology fellow does not take service-specific night or weekend call while on those services; rather, the fellow continues the weekly pediatric radiology night call from home with attending back-up and the monthly weekend work with an attending. Care is taken to insure that duty hours do not exceed prescribed limits. While on each of the three outside services, the fellow keeps a log of the cases seen and dictated; due to the vagaries of the RIS, preliminary dictations are not always recorded and the cases may not be attributed to the fellow in the final RIS print-out delivered at the end of the year by Radiology IT.

2. Explain how training is provided in each of these areas (assignment in each of these areas should include participation in and responsibility for dictation of reports): (PR Introduction A.2.)

a) radiography

While on the ICU and Fluoro/Inpatient/ED services, the fellow will see 10-40 radiographic cases in a day. When on weekend call, the number is much higher, as many as 60 cases, depending on how quickly the fellow reads. Each case gets a preliminary report, where the fellow makes a "best-guess" about whether the image is normal or what the pathology is. Read-out with the attending happens quickly enough for the fellow to remember the decision algorithms that led to the preliminary reading: all the better to correct them if needed and learn better reasoning.

b) computed tomography

Body CT is part of the cross-sectional rotation. Every CT requisition is reviewed by the attending or fellow, usually with the nurse for pediatric CT that day. The medical history is reviewed and the indications checked; with any question or discrepancy, the fellow contacts the clinician. The need for oral and IV contrast and the protocol for giving it are decided upon by the fellow and attending early in the year, later by the fellow alone. Every contrast injection is monitored, again by the fellow alone as the year goes on. The fellow dictates a preliminary report which is edited and corrected at read-out later that day with the attending. Background reading is found in general pediatric radiology and pediatric CT textbooks in the division library. Modules about specific pathologies are found in the on-line curriculum.

Head, neck and spine CT is part of the neuroradiology rotation. Most head and spine studies are non-contrast, and neck CT's are often monitored as part of a chest CT exam. The fellow still dictates all the preliminary reports and goes over them with the attending. Background reading is available in the division library, through textbooks and anatomic atlases, as well as through modules in the online curriculum.

c) ultrasonography

The fellow sees a wide range of ultrasound studies during the cross-sectional rotation. Because of the immediate uploading of the images to the PACS and the close proximity of the ultrasound room to the reading room, the fellow can review what the sonographer has done, then go into the room and perform some imaging personally. The sonographer provides guidance for hands-on techniques; the attending radiologist is always available also. Background reading is provided by the latest edition (2010) of Pediatric Ultrasonography by Siegel; several online curriculum modules address pathology commonly examined by ultrasound (e.g. testicular torsion, renal obstruction).

d) vascular interventional techniques

The interventional radiology rotation is arranged to take advantage of the availability of the designated pediatric interventionalist: the fellow gets 2 weeks of general rotation through the service, then returns on successive Wednesdays (the "pediatric day") for 10 more weeks for a total of 20 days. The fellow observes all cases and assists whenever there is an opportunity. Abscess drainages, cholangiograms, TIPS procedures, nephrostomies, and embolizations all occur frequently enough that the fellow gets experience commensurate with the level of interest. Proficiency in any particular skill is not anticipated: that is the purview of the interventional service. The aim for the pediatric radiology fellow is to gain familiarity with sterile procedure and understand the range of operations the service can do. This also helps alert the fellow to post-operative findings and conditions that might be encountered on radiography, CT or ultrasound.

e) nuclear radiology, including positron emission tomography

The fellow rotates on this service in two 2-week blocks separated by a few months. The fellow is assigned to inpatient and outpatient areas with the other NM fellows. PET is part of the inpatient service because of its location inside the hospital. There are daily interesting case conferences for residents, fellows and attendings. Read-out with the attending is usually at the end of the day. The fellow learns how the isotopes are made, calibrated and dosed. The service knows about the pediatric interests of the fellow and makes an effort to direct pediatric cases in the fellow's direction. There is a conference particularly for pediatric urology cases that happens once per month, given jointly by pediatric radiology and nuclear medicine; the fellow attends while on the NM service and participates at least once in the year.

f) magnetic resonance imaging

The fellow gets experience with MR Enterography, vascular malformations, hip dysplasia and urography while on the cross-sectional rotation. Fetal MR and brachial plexus injuries are encountered on the neuroradiology rotation, along with more conventional brain and spine MR. The fellow rotates to the Musculoskeletal Radiology service for a 2-week block; the case load there is large and consists almost entirely of MR. On all three rotations, the fellow dictates a preliminary reading and goes over the studies with the attending.

**FELLOW EVALUATION**

Does the quarterly review of the fellow include review of procedural competencies or other simulation learning? (PR V.A.1.b.(a).(iv)) ..... ( X ) YES ( ) NO

If no, explain

\_\_\_\_\_

**FELLOW DUTY HOURS IN THE LEARNING AND WORKING ENVIRONMENT**

Briefly describe how fellows are given increasing responsibility or independence based on their knowledge, skills, and experience. (PR VI.A.3)

As the fellow demonstrates increasing knowledge (through increasingly accurate reports, more successful interpretation of cases at noon conference, more confident interactions with patients and parents in the fluoro suite) more independence is given. The individual attendings are the judges of this and each has an internal standard of expectation. Thus, the amount of independence varies, but the trend is toward increasing fellow autonomy by mid-year. An unusual case might prompt more attending involvement while more routine cases get only cursory oversight. Much also depends on the personality of the fellow and the trust that the attendings have in the fellow's ability to recognize the limits of his or her experience. When the fellow not only demonstrates this awareness, but also the eagerness and ability to search out new information from trustworthy sources to fill the gaps in knowledge, then the fellow will finally be ready for independent practice.

## PEDIATRIC PROCEDURES

If the program is scheduled for site visit on or before June 30, 2011 provide the information requested below regarding the number of procedures performed at each site that participates in the program for the most recent 12 month period. If the program is scheduled for site visit on or after July 1, 2011, attach a Completing Residents Report for each fellow who finished your program during the last year. The reports must be generated from the Year End Menu of the ACGME's Case Log System. Do not complete the table below.

Procedure	CPT Code	Site #1	Site #2	Site #3
<b>Magnetic Resonance Imaging</b>				
L-spine with/without contrast	72148	341		
L-spine with contrast	72149	1		
L-spine with/without contrast	72158	193		
Brain with contrast	70552	7		
Brain with/without contrast	70553	981		
Lower extremity w/joint without contrast	73721	206		
Lower extremity w/joint with/without contrast	73723	82		
MRA upper extremity	73225	19		
MRA Lower extremity	73725	39		
Cardiac MR	75557	53		
Fetal MR	72195	66		
<b>TOTAL</b>		1988		
<b>Computed tomography</b>				
Chest with contrast	71250	417		
Chest without contrast	71260	586		
Abdominal without contrast	74150	257		
abdominal with contrast	74160	714		
pelvis with contrast	72192	41		
pelvis without contrast	72193	17		
ct head without contrast	70450	2734		
<b>TOTAL</b>		4766		
<b>Nuclear medicine</b>				
Nuc cysto	78740	3		
PET/CT	78815, 78816	122		
Bone scan planar/spect	78306, 78230	76		
<b>TOTAL</b>		201		
<b>Fluoro</b>				
UGI	74240	357*	*the local CPT for UGI is 74247	
Therapeutic enema	74283	10		
G-tube placement	74340	24		
<b>Ultrasound</b>				
Renal	76770	1494		
Abdomen	76700	747		

Head	76506	1579		
Hips	76886	207		
Fetal	76815	3		
<b>TOTAL</b>		4421		
<b>Radiography</b>				
Chest 1 view	71010	18344		
Chest 2 view	71020	4211		
Skeletal survey	77075	215		
<b>TOTAL</b>		22770		