Pediatric Interventional Radiology Fellowship - Goals and Objectives

DEFINITION OF PEDIATRIC INTERVENTIONAL RADIOLOGY

Pediatric interventional radiology is the medical subspecialty where invasive techniques using imaging guidance are undertaken for both diagnosis and therapy in infants and children.

TRAINING YEAR SPECIFIC OBJECTIVES

1) Medical Expert:
   1.1) Demonstrate knowledge of human anatomy and basic sciences as applied to pediatric interventional radiology.
   1.2) Demonstrate an understanding of the basic radiographic equipment in an angiographic suite: digital imaging, advanced fluoroangiographic techniques, fluoroscopy, ultrasound and CT. Understanding of competent usage of a vascular contrast injector and vascular pressure monitoring.
   1.3) Demonstrate knowledge in clinical medicine, medical imaging, diagnostic and interpretative skills as pertaining to interventional radiology.
   1.4) Demonstrate an understanding of maintaining patient well-being during interventional procedures and the specific requirements for infants and children
      1.4.1) Analgesia, fluid balance and body temperature maintenance.
      1.4.2) Monitoring devices including pulse oximetry and ECG.
      1.4.3) Usage of face mask oxygen and airway suction.
   1.5) Competence in common procedures with certain exceptions such as high-end endovascular interventions.
      1.5.1) Familiarity with interventional hardware such as catheters, wires, tubes, devices – names and sizes, etc.
      1.5.2) Routine practice of pre-procedure scrubbing techniques, aseptic techniques, self-protection against needle injury and unnecessary exposure to body fluids.
      1.5.3) Competency at insertion, removal and maintenance for all vascular access and enterostomy access devices.
      1.5.4) Competency in the usage of ultrasound, CT and fluoroscopy for image-guided drainage and biopsy.
   1.6. Undertake adequate consultations with patients, families and other health care professionals.
   1.7. Demonstrate an ability to manage patients.
1.7.1) Demonstrate an understanding of preprocedural requirements for children undergoing interventional procedures (such as bloodwork, fasting and the need for collaboration with other services prior to procedures).

1.7.2) Demonstrate knowledge of sedating patients for interventional procedures in accordance with hospital guidelines.

1.7.3) Demonstrate knowledge of how to deal with allergic reactions.

1.8. Demonstrate understanding of the need for adequate imaging assessment prior to certain interventional procedures e.g. mapping ultrasounds, the need for recent imaging and not basing procedures on older historic imaging.

1.9. Attendance at rounds (e.g. urology, teaching rounds, city-wide rounds, journal club, etc.) is mandatory. Presentations during these rounds are mandatory.

1.10. Demonstrate adequate preparation and presentation of cases at rounds.

2. Communicator:

2.1. Show effective communication with patients and families and other health care professionals.

2.2. Responsible for obtaining informed consent which includes discussion with patient and family, expected outcomes of procedures, risks or procedures and generally answering patient and family questions.

2.3. Communicate findings of procedures and their outcome in a timely fashion with responsible physicians and services.

2.4. Demonstrate adequacy of all written reports and records.

3. Collaborator:

3.1. Interact collaboratively with physicians, colleagues and other health care professionals.

3.2. Demonstrate an ability to discuss cases which may require interventional radiology.

3.3. Demonstrate an ability to function as a team member and in particular show evidence of good communication with other members of the department including radiologists, nurses and technologists.

4. Manager:

4.1. Demonstrate an understanding of effective resource utilization in medical imaging.

4.2. Demonstrates an understanding of safety issues and economic considerations in medical imaging.

5. Health Advocate:

5.1. Demonstrate an understanding of the benefits and risks of medical imaging investigations as pertaining to pediatric interventional radiology.
5.2. Demonstrate an understanding of situations in which imaging or intervention would be detrimental to the health/safety of the patient.

5.3. Demonstrate knowledge on all aspects of radiation safety. Demonstrate knowledge of radiation protection and necessary precautions for patients and staff and how to minimize exposure of patients to ionizing radiation.

6. Scholar:
   6.1. Demonstrate development for personal continuing education. This includes attendance at rounds and presentation at rounds, reading material, course and conference attendances and attendance at PALS course.
   6.2. Demonstrate an ability to critically appraise the literature. This will be evident at case presentations and paper reviews at Journal Club.
   6.3. Demonstrate an ability to conduct a radiology research project. All fellows undertake at least one research project which must be completed and a draft submitted for publication before the end of their 12-month fellowship.
   6.4. Attendance and presentations at relevant research rounds with Dr. Andrea Doria (Diagnostic Imaging Research Director) is mandatory.

7. Professional:
   7.1. Demonstrate ethical practice, sensitivity to gender/culture diversity, enthusiasm, motivation, good behaviour (honesty, integrity and compassion), good work habits (punctual, organization in work, adequate speed of work and responsibility).
   7.2. Show awareness of strengths and weaknesses.
   7.3. Show acceptance of constructive criticism.