Description of the Program

This is a two-year program that provides full training in Pediatric Emergency Medicine, encompassing the comprehensive acute health care of children of all ages and developmental levels, and including triage, stabilization, diagnosis, treatment, and follow-up care. Graduates of this program will have achieved the key competencies of the Pediatric Emergency Specialist in the areas of medical expert/clinical decision-maker, communicator, collaborator, manager, health advocate, scholar, and professional. Residents may enter the program following at least three years of Pediatric core training (Pediatric Stream) or at least three years of Emergency Medicine (Emergency Medicine Stream). The first year of the program may be concurrently undertaken with either of these specialties, with the approval of the Program Director of the base specialty and of the Pediatric Emergency Medicine Program.

Eligible Applicants

Eligible applicants include residents who have completed at least three years of core pediatric training or at least three core years of Emergency Medicine training at an accredited program in Canada or the United States. The program may also consider applications from foreign medical graduates with equivalent credentials, if externally funded.

Application Requirements

All applicants must submit an application package consisting of:

1. letter of application
2. CV
3. three letters of reference
4. documentation of prerequisite training including university transcripts
5. evidence of a passing grade on the Medical Council of Canada’s Evaluating Examination

References and previous program directors will be contacted prior to accepting an applicant. On-site interviews with the Residency Program Committee are required.

Core Training in Pediatric Emergency Medicine

All residents undertake core training in Pediatric Emergency Medicine at the Children’s Hospital Emergency Department. The department is located in the only tertiary-care pediatric facility in the province, and serves the needs of children and adolescents 0-17 years of age from Manitoba, North-western Ontario, Nunavut and Eastern Saskatchewan. The Emergency Department has 10 treatment beds, a 5-bed observation unit, 5 isolation rooms, a 2-bed resuscitation room, a psychiatric room, family room, casting room, and houses the regional Poison Control Centre. The annual census is near 50 000 (includes Fast Track). A Fast Track clinic with an annual census of approximately 10 000 operates daily between the hours of 1000 and 2400 and accepts less urgent (triage levels 4&5) ambulatory patients arriving at the Emergency Department for assessment.

Residents complete a minimum of 13 (4 week blocks) of Pediatric Emergency Medicine. A minimum of 5 blocks per year will ensure graded exposure and responsibility. The suggested program design (below) ensures that the rotations are spread evenly throughout the year to account for seasonal variation of illness and injury. During these rotations residents work approximately equivalent to full-time hours in a variety of shifts, similar to current clinical practice in our institution. They will be expected to have increasing responsibilities in patient management, teaching, and administration over the course of the residency. While on duty, residents are given first priority for all technical procedures (to do or teach/supervise) and are given the opportunity to lead all resuscitations. They maintain a log of cases and procedures to correct any areas of limited experience. The log is also used to monitor the breadth and depth of clinical exposure and the number of patients seen per shift.
Additional Core Training

The additional core requirements of the Pediatric Emergency Medicine training program are designed to maximize the development of technical and clinical skills relevant to the subspecialty of Pediatric Emergency Medicine. Much of this training will occur in the first year when possible, to establish a sound base for graded responsibility in the second year.

*Pediatric Stream residents* will complete 5 blocks of additional core training consisting of *Plastic Surgery, Pediatric Orthopedic Surgery, Adult Trauma,* and *Adult Emergency Medicine.*

*Pediatric Stream residents* will spend one month in *Plastic Surgery* and *Pediatric Orthopedic Surgery.* These rotations are hosted at the Health Sciences Centre (HSC) and Children’s Hospital sites. The Plastic Surgery rotation is a combined adult/pediatric service. During these rotations residents are encouraged to structure their experience to accomplish PEM-specific objectives, with the assistance of the Program Director and rotation liaisons. PEM residents typically function as junior residents on these rotations, and are usually paired with the senior resident for consultations and call duty. As such, PEM residents will be responsible for completing all consultations, including procedures (suturing, casting), under the supervision of the senior resident. Both clinical services are very busy, offering ample opportunity for practical skill development in suturing, splinting, and casting. In-house orthopedic technicians are available to assist and instruct in splinting and casting (24 hours).

*Pediatric Stream Residents* will also complete one month of *Adult Trauma* and one month of *Adult Emergency Medicine.* These rotations are also hosted at the Health Sciences Centre (HSC) site. The Adult Emergency Department is the provincial trauma centre, and provides all types of emergency services to patients 17 years of age and older. A large number of patients are seen annually who require tertiary care such as dialysis, transplant, complex medical and surgical care, interventional cardiology, neurosurgery, burns and plastic surgery. The HSC Emergency Department is a 32 bed unit including 3 trauma beds and 5 observation beds and has a census of over 50,000 visits per year. PEM residents will function as senior trainees under the supervision of the attending physician.

The *Adult Trauma* rotation is hosted by the Trauma and Acute Care Service (Gold Service) of the Department of Surgery. This service provides the major training in trauma and acute care management for the University Of Manitoba Faculty Of Medicine. The Gold Service manages all significant multiple trauma admissions and attends all trauma resuscitations in the Adult Emergency Department. This is a very busy service. Attending staff are available in the hospital on a twenty-four hour basis. This service has formal rounds, teaching sessions, audits, and ambulatory care experiences. The PEM Resident functions as a junior resident on the Gold Service, under the supervision of the senior resident and attending physician (the latter two being in-house 24 hours). In this capacity, the PEM resident has the opportunity both to lead trauma resuscitations and to perform specific procedures during trauma resuscitations (chest tubes, venous access, etc.), with direct supervision and instruction from attending physicians and surgery residents.

*Emergency Medicine Stream residents* will spend a total of 3 blocks of training consisting of *Neonatology, Child Protection,* and *Ambulatory/Community Pediatrics.*

The *Neonatology* rotation is hosted by the Children’s Hospital (18 bed NICU) and the Women’s Hospital (Labour and Delivery, Neonatal Resuscitation Room/Triage, 24 bed Intermediate Care Nursery). Residents attend high-risk deliveries and all neonatal resuscitations, offering ample opportunity for numerous technical procedures (intubation, management of meconium aspiration, intravenous, UVCs/UACs, lumbar punctures) and to lead neonatal resuscitations. The rotation allows opportunities for the management of patients in all clinical areas (resuscitation, triage, NICU, intermediate care), under the direct supervision of Neonatology attending physicians and fellows. During on-call coverage the resident functions initially at a junior resident level, with graded responsibility as knowledge and skills progress. PEM residents perform procedures and lead resuscitations under the direct supervision of senior staff. Two senior residents and/or Neonatologists are on-site for overnight call.

Modified Jan 26, 2011
The **Child Protection** rotation is hosted by the Child Protection Centre of Children’s Hospital. The centre offers province-wide consultation and services for child abuse and neglect, including sexual assault, for patients up to 16 years of age. It is staffed by pediatricians with extensive child abuse and neglect expertise, nurse clinicians, social workers, and child life specialists. Residents will complete consultations in the child protection clinic, emergency department, and inpatient facilities. There will be opportunities to attend court to experience expert testimony by their mentors. Visits with the Winnipeg Police Service Child Abuse Unit and regional community agencies will be arranged. An extensive teaching slide collection is used for additional instruction.

The **Ambulatory/Community Pediatrics** rotation is hosted by the Ambulatory Pediatrics Service of Children’s Hospital but may include blocks of subspecialty pediatrics (i.e. Cardiology, nephrology, adolescent medicine, etc), general/community pediatrics, or a block with community pediatricians in Thompson, Manitoba. Residents on this service are also responsible for daily rounds of the inpatients under the service on which they are rotating (but not for their inpatient care).

**Mandatory subspecialty rotations**

- The program is designed such that residents from both streams complete **Pediatric Anesthesia** in the first year. This exposure is placed early in the program in order to gain expertise in airway management, technical procedures and management of critically ill children. Early exposure will assist residents in leading resuscitations and performing with confidence in the Emergency Department in subsequent PEM rotations. In Pediatric Anesthesia residents will focus on the development of airway management skills, induction techniques, and use of medications for anesthesia, sedation, and pain relief. The rotation will be structured to maximize the number and variety of intubations (oral, nasal, rapid-sequence, etc.) and airway techniques (laryngeal mask airway, hand ventilation, etc.). Residents are expected to undertake call during the anaesthesia rotation. Call allows the trainee opportunity to manage more critically ill or unstable cases requiring anaesthesia emergently.

- The **Toxicology** rotation will expose the resident to clinical toxicology through responding to the Manitoba Poison Control Centre emergency advice line and patient consultations (Adult and Pediatric Emergency Department, Winnipeg area inpatient facilities, and by telephone to rural and remote facilities) and through directed readings, discussions and presentations. In addition, all residents respond to the Poison Control Centre emergency advice line throughout the residency, under the supervision of the attending Pediatric Emergency attending physician(s) on duty. If residents have completed a block of toxicology in their primary program, they do not need to complete an additional block.

- The **EMS System/Disaster Planning** Combined with the Adult FRCP-EM program residents will complete a module in EMS systems and disaster planning, undertake site visits (such as EMS command centre, hazardous materials unit), and they will ride with Winnipeg First Responder and Paramedic ground units as clinical observers. They also may participate in provincial Lifeflight transports on a voluntary basis. Residents will attend either a City-wide or Province-wide EMS Committee meeting.

- Two **Research/Scholarly** rotations are required, which may be taken either as two blocks combined or two 4 week blocks. Residents will be paired with a research mentor in their area of interest. All residents are expected to complete a research project by the end of the program and submit an abstract for presentation at a peer-reviewed conference and/or a manuscript to a peer-reviewed journal. The research project may be a literature review/critical appraisal, development of a clinical practice guideline, an in-depth quality assurance audit, participation in an ongoing research study (e.g. multicentre RCT), or other original research. The Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) database, the HSC and Children’s Hospital trauma databases, and Manitoba Health Services Commission administrative database are accessible to trainees to conduct approved original research. In order to enhance the trainee’s exposure to trauma, during each research block the resident is required to participate in 4 penetrating trauma calls.
Administration experiences and mentoring will occur in a horizontal fashion throughout the program, under the direction of the Program Director and Section Head. Residents are expected to participate in PEM-related committees. These include a rotating schedule of City-wide or Province-wide EMS Committees, Children’s Hospital Emergency Department Patient Care Team, WRHA Emergency Program Committee, Children’s Hospital Child Health Standards Committee, the WRHA Child Health Standards Committee, and the provincial Children’s Inquest Review Committee. Areas of discussion and directed reading will include: manpower/recruiting, quality assurance, patient complaints, staff management (scheduling, conflict resolution, professional development), and university and hospital roles and responsibilities.

Child Protection is a mandatory rotation for Pediatric Stream Residents who did not complete 4 weeks of child protection training (or equivalent) during their three-year core pediatric training. As this would represent an additional mandatory month, one elective month would be deleted from the program design. This rotation is part of the Emergency Medicine Stream reciprocal training and is described above.

Electives

Residents may select 2 one-block electives. Opportunities include but are not limited to: PICU, Pediatric Radiology, Adolescent Medicine, Pediatric Sports Medicine, Child Protection, Child & Adolescent Obstetrics & Gynecology, Child Psychiatry, Pediatric Dermatology, Pediatric ENT, Pediatric Dentistry, and Pediatric Ophthalmology. Electives will be chosen in consultation with the Program Director, and will be tailored to the individual trainee and his/her career goals. Electives and mandatory rotations may be taken at other institutions in Canada and abroad with approval of the program director and provided the site/rotation satisfies all required criteria.

Teaching Curriculum

The curriculum includes formal instruction in the basic and clinical sciences of Pediatric Emergency Medicine (mandatory weekly PEM Academic Halfday) and assigned readings to be completed over the course of the residency to ensure that all residents achieve the general and rotation-specific goals and objectives of the program. Courses: All residents must be certified in ACLS, ATLS, PALS and NRP by the completion of the program. Incoming residents are expected to have completed ACLS and NRP (recertification will be supported by the program when necessary). Completion of ATLS, PALS, and the WRHA Procedural Sedation courses is required. Residents are encouraged to also undertake certification as PALS instructors and may teach in this capacity during their training. A Practice Management Seminar is now mandatory at the university. A university ‘Principles of Epidemiology’ course is required to support the research component of the program Teaching Skills: Continuing education in teaching skills will be offered to all residents, including the ‘Resident Teaching Development Program’ course offered through the University of Manitoba (required). Also available are a Certificate in Higher Education (CHET program), and a “New Faculty” series of seminars (optional).