Paediatric Anesthesia Fellowship
The Hospital for Sick Children

Fellowship overview:
The Paediatric Anesthesia Fellowship at the Hospital for Sick Children is a twelve-month education and training program in all aspects of paediatric anesthesia. The clinical and didactic education curriculum includes paediatric pain management and perioperative anesthetic care for neonates, infants, children and adolescents both in the operating room and in satellite locations.

Fellows are expected to participate in departmental educational activities and clinical and/or basic science research. Relevant to their level of training and experience, fellows also assume graduated independence and responsibility for supervision of residents assigned to the service.

Training objective:
To prepare a trainee who aspires to a career in full-time paediatric anesthesia practice in a specialist paediatric hospital or a tertiary referral centre.

The level of proficiency that is expected at the end of the fellowship is described below in the context of the CanMEDS (Canadian Medical Education Directives for Specialists) framework.

1. **Medical Expert**
    a. Definition:
        i. As Medical Experts, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional attitudes in their provision of patient-centred care. Medical Expert is the central physician Role in the CanMEDS framework
    b. Learning objectives:
        i. Demonstrate proficiency in perioperative management of patients, including appropriate preoperative assessment, investigations, technical and procedural skills, clinical judgement and decision-making and postoperative disposition.
        ii. Achieve comprehensive knowledge in the following:
            1. Developmental anatomy and physiology pertinent to anesthesia and perioperative care.
            2. Pediatric and developmental anesthetic pharmacology.
            3. Interpretation of pediatric laboratory results.
            4. Preanesthetic assessment and preparation of the pediatric patient.
            5. Methods and goals of mechanical ventilatory support.
            6. Perioperative fluid therapy and management of massive fluid and/or blood loss.
            7. Intraoperative temperature regulation and maintenance.
            8. Pharmacological and mechanical support of circulation.

9. Recognition and treatment of perioperative vital organ dysfunction.
10. Understand implications of co-existing diseases in neonates, infants and children, including:
    a. Premature infants
    b. Complex congenital heart disease, cardiomyopathies
    c. Pulmonary Hypertension
    d. Respiratory disease
    e. Neuromuscular diseases
    f. Gastrointestinal/hepatobiliary disease
    g. Endocrine/metabolic Diseases
    h. Hematologic diseases/malignancies
    i. Common syndromes
11. Understand implications of surgical interventions in neonates, infants and children, including:
    a. Neonatal emergencies
    b. Complex congenital heart disease
    c. Solid organ transplantation
    d. Neurosurgery
    e. Craniofacial reconstruction
    f. Thoracic surgery
    g. Scoliosis repair
12. Postoperative pain management assessment and therapy.
13. Assessment and management of pediatric post-anesthesia care unit problems.
14. Considerations for anesthesia management during diagnostic or therapeutic procedures outside the operating room.
15. Transport of critically ill pediatric patients.
16. Advanced life support for pediatric patients.
17. Introductory familiarity with management methods in the pediatric patient with chronic pain.
18. Psychological response of the pediatric patient and adult caring for the perioperative pediatric patient.

iii. Achieve comprehensive skill in the following:
1. Assessment and management of the normal and difficult pediatric airway with and without tracheal intubation.
2. Airway management for one-lung ventilation.
3. Vascular access for fluid and pharmacological therapy.
4. Vascular access for invasive hemodynamic monitoring.
5. Intra-operative placement of caudal, lumbar, thoracic epidural blocks with and without catheter placement.
6. Peripheral nerve blockade with or without catheter placement.

2. **Communicator**
    a. Definition:
    As Communicators, physicians effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

    b. Learning objectives:
        i. Communication with patients of various ages, with an understanding of needs and perception of patients of different age groups.
        ii. Communication with families in the perioperative period.
        iii. Display skills as a consultant to concisely discuss patients with colleagues, organizing and expressing thoughts clearly.
        iv. Meticulous charting and transfer of information – both written documentation and verbal presentation skills.
        v. Effective presentation skills in teaching colleagues, residents, students, and other health care professionals.

3. **Collaborator**
    a. Definition:
    As Collaborators, physicians effectively work within a healthcare team to achieve optimal patient care.
    b. Learning objectives:
        i. Working effectively with multidisciplinary teams in the operating room, the trauma room, and in crisis situations.
        ii. Utilization of resources in perioperative preparation of the pediatric patient, such as parental presence at induction and preoperative consultation.
        iii. Research collaboration with co-investigators from different subspecialty areas.

4. **Manager**
    a. Definition:
    As Managers, physicians are integral participants in healthcare organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the healthcare system.
    b. Learning objectives:
        i. Develop ways to maintain or increase efficiency in management of a busy OR list, which may involve uncooperative and anxious patients and families.
        ii. Review individual practice and assure individual standards.

5. **Health Advocate**
    a. Definition:
    As Health Advocates, physicians responsibly use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.

b. Learning objectives:
    i. Learn to be proactive in the preparation and anticipation of potential complications of the paediatric patient in the perioperative period.
    ii. Advocate for resources for improved care, such as new medical technologies as applied to the paediatric patient.
    iii. Involvement in hospital or departmental committee meetings aimed at improving patient safety.

6. Scholar

a. Definition:
   As Scholars, physicians demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.
b. Learning objectives:
    i. Develop life-long learning skills.
    ii. Participate and contribute in morning seminars, departmental rounds and telehealth meetings.
    iii. Gain presentation skills and utilization of evidence-based medicine by researching a topic and presenting to their peers.
    iv. Participate in departmental research, audit or quality assurance projects.

7. Professional

a. Definition:
   As Professionals, physicians are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.
b. Learning objectives:
    i. Demonstrate appropriate professional behaviours, e.g., fulfilling on-call duties, being punctual, reliable, responsible, and prepared for their cases.
    ii. Fulfil role as junior staff by active participation of the care of the paediatric patient with appropriate preoperative preparation, intraoperative management and postoperative follow-up.
    iii. Recognize personal limitations and seek appropriate consultation as necessary.
    iv. Show consideration in the ethical aspects of patient care (e.g., consent/assent in minors, Jehovah's Witness population).
    v. Deliver the highest quality of care with compassion, honesty and integrity.

Curriculum

Clinical program:

Fellows work under staff supervision in the provision of anesthetic care in paediatric patients undergoing operations in all surgical subspecialties including cardiac, thoracic, abdominal, craniofacial, neurosurgical, ENT, orthopedic, urological, and transplant surgery. Experience will also be gained in the anesthetic management of

patients in satellite locations undergoing diagnostic and non-operative procedures including diagnostic and interventional radiology, cardiac catheterization and endoscopy.

Fellows actively participate in the acute pain management of paediatric patients through the performance of neuraxial and peripheral nerve blockade in the operating room and regular rotations with the Acute Pain Service. Exposure to chronic paediatric pain management is gained by elective attendance of the Chronic Pain Clinic.

Caseload:
Fellows can expect to meet the following clinical case experience over the course of 12 months:

- Total number of cases – approx. 300
- Total number of cases < 1month of age – approx. 30
- Total number of cases < 1 year of age – approx. 60
- Cardiac cases – approx. 40
- Neurosurgical cases – approx. 20
- Craniofacial cases – approx. 10
- Liver transplantation – 1 to 5

Didactic teaching:
A lecture series, problem-based learning discussions and weekly departmental rounds provide discussion of core topics in general paediatric anesthesia, paediatric cardiac anesthesia and pain management. These meetings allow fellows to develop skills in lecture preparation and presentation.

Research:
Fellows are expected to participate in clinical and/or basic science research projects that are ongoing within the department. They are also encouraged and supported to contribute to the design, data collection and analysis of a research project. Fellows are expected to attend a lecture series in research methods and statistical analysis, which provides an introduction to the foundations of research.

Fellow roles and responsibilities

Clinical
The standard workweek is Monday to Friday, with weekends off except when on call. Fellows are expected to be available from 0730 -1700 hours each day. Preparation for complex cases in the operating room may require earlier attendance so that the case will commence at the booked time. Fellows are expected to attend a team "huddle" in the OR at 0735 for 0800 starts. This is an opportunity for the surgeons, nurses and anesthesiologists in the room to plan for the day. Fellows may not commence an anesthetic without first consulting with their staff supervisor.

Inpatients must be seen pre-operatively and problems discussed with staff the day before surgery. It is expected that inpatients booked for surgery on Mondays will be seen on Sunday evening by the fellow on call. Same day admission cases should have their history reviewed the night before using the Electronic Patient Chart and will be seen and assessed in the waiting area prior to surgery.

Pain

Fellows rotate through the Acute Pain Service for a week at a time. Depending on the number of fellows in a given year, fellows may do up to 6 weeks of Acute Pain Service in a 12-month period. When on the service, handover is received from the fellow on call the previous day and the pain fellow subsequently joins the nurse practitioner and staff anesthesiologist to review all inpatients with patient-controlled analgesia and epidural or peripheral nerve block infusions. Fellows are the initial point of contact for any acute pain enquiries and referrals.

Education

The formal didactic program for the fellows includes their participation in the general and cardiac teaching sessions from 7:00 a.m. to 7:30 a.m. on Tuesdays and Thursdays respectively. Research seminars are held from 5:00 p.m. to 6:00 p.m. on Wednesday evenings. Departmental Rounds are held on Friday mornings from 7:30 a.m. till 8:30 a.m.

Each fellow is expected to develop skills as an educator by teaching residents, medical students or other health professionals; organizing and moderating problem-based learning discussions or journal clubs, and creating and delivering lectures.

Research

Active participation in departmental research or quality assurance projects is expected and encouraged. The fellowship appointment includes one non-clinical day per week reserved for departmental related research following one month of clinical duties only. Additional research time may be available, based on demonstrated need. Conversely, non-clinical days can be retracted if not sufficiently utilized. Fellows are expected to spend non-clinical days in the hospital (7:30 a.m. – 5:00 p.m.) unless other arrangements have been made.

It is the expectation of the department that fellows will produce work to be presented at the University of Toronto Annual Shield's Research Day held in early May. Attendance at Shields day is compulsory for all but the on-call fellow.

On-line research ethics training is required for all fellows to obtain Research Ethics Board (REB) approval. This involves successful completion of the Tri-Council tutorial (www.pre.ethics.gc.ca/english/tutorial/) and submission of the certificate of completion to the REB office. Certification is required for all study investigators.

Call

Weekday and weekend call is of 24 hours duration from 7:30 a.m. till 7:30 a.m. the next day. The on-call fellow will have no clinical responsibilities the day following call. Depending on the number of fellows appointed at any one time and the number of fellows away on leave, on-call frequency varies from between 1 in 6 to 1 in 10. Fellows remain on-site in the hospital during call. On-call responsibilities include anesthetic care for emergency OR cases, managing pain service calls, and attendance at trauma calls and cardiac arrests. A staff anesthesiologist is available on call to supervise all anesthetics. Acute Pain Service rounds on Saturday and Sunday mornings are conducted by the fellow on Acute Pain Service for that week and handed over to the call fellow after rounds.

Codes

Paediatric:

Patient arrests will be attended by the code team, which consists of the anesthesia resident and fellow, the paediatric associate, a respiratory therapist, nurses and the CCRT (Critical Care Response Team). The designated team leader for patient codes is the paediatric associate. The anesthesia fellow's main responsibility is airway management, but assistance in other aspects code management may be required. Fellows are expected to remain with the patient till handover to a higher level of care (typically ICU), or till no longer required, and must communicate with code team leader prior to departing and document attendance, assessment and any intervention.

Adult:

Adult arrests (parents, hospital staff members, visitors) will be attended by the same team, however where appropriate, the anesthesia resident/fellow may be designated as the team leader to run adult codes. If required, adults will be transferred by ambulance to an adult hospital.

Trauma:

The trauma team leader is the general surgical or emergency department fellow on-call. Again, the anesthesia fellow's main responsibility is airway management, but assistance in all other aspects of trauma management may be required.

Administration

Chief Fellow:

One fellow will be chosen to act as Chief Fellow. The Chief Fellow will act as the liaison between the fellows and the fellowship program director. The Chief Fellow will organize the fellows' call schedule, assignment of non-clinical days, clinical blocks and leave.

Code blue representative:

One fellow will be volunteered for representation and feedback at the Hospital for Sick Children's Code Blue Committee monthly reviews.

Leave

The fellowship year includes 20 working days of vacation and 3 meeting days. No more than 2 fellows may be on leave at any given time. If necessary, additional time to present papers at scientific meetings may be made available.

Income

Gross annual income for the fellowship year is currently $95,190.86 CAD. Basic health care insurance for fellows and their families are provided via UHIP (University Health Insurance Plan) and OHIP (Ontario Health Insurance Plan). Additional health and medical benefits may be purchased if required.

Moonlighting

Moonlighting (applicable mostly to Trainees who have completed their residency training in Canada) is defined by the Royal College of Physicians and Surgeons of Canada (RCPSC) as the independent practice of medicine during residency training in situations that are not part of required training in the residency program.

Clinical fellows who hold a postgraduate educational certificate from the CPSO are not eligible for moonlighting.

The CPSO's terms and conditions for issuance of a postgraduate educational certificate include the statement that the clinical fellow "may practice medicine only as required by the clinical or research fellowship program in which he/she is enrolled." Clinical fellows must obtain an independent practice or restricted certificate of registration from the CPSO in order to take on additional shifts outside of the clinical fellowship.

In addition, the Canadian Medical Protective Association (CMPA) coverage for clinical fellows (CMPA Type of Work code 13) does *not* allow "moonlighting" (http://www.cmpa-acpm.ca/cmpapd04/docs/membership/fees/2013cal-e.pdf). Clinical fellows who hold an independent practice or restricted certificate of registration from the CPSO and wish to "moonlight" must select the appropriate CMPA practicing physician code.

Clinical fellows who hold a postgraduate educational certificate from the CPSO may complete additional shifts only if this additional clinical experience is within the educational objectives on file with the CPSO. If adding extra shifts to the fellowship makes revision of the fellowship's educational objectives necessary, then the revised objectives should be forwarded to the PGME Office for the approval of the Vice Dean PGME prior to their submission to the CPSO. Clinical fellows doing additional shifts must have a clearly identified supervisor for each additional shift who will provide an appropriate level of supervision.

Evaluation

Fellows:
The performances of fellows are regularly evaluated on-line by staff anesthesiologists. Written evaluations are requested more frequently if substandard performance is observed. The program director subsequently reviews all evaluations and completes a summary evaluation at four-month intervals. The program director of the department reviews unsatisfactory performance immediately. Persistent unsatisfactory performance shall prompt review and action by the Departmental Chief.

Staff:
Fellows are requested to complete regular on-line evaluations of staff anesthesiologists with whom they have worked. The Program Director and Department Chief review the evaluations and meet annually with staff to discuss the training program and plan indicated modifications.

Fellowship evaluation:
Feedback from fellows about the fellowship program is invited at any time and will be sought by the program director at four-month intervals. Towards the completion of the fellowship year, fellows are requested to complete a formal summative fellowship evaluation.

Pre-Entry Assessment Period (PEAP**) - adapted from the College of Physicians and Surgeons of Ontario (CPSO):**

The PEAP is an assessment process that evaluates international medical graduates to determine whether they can function at their reported level of training. It is normally 4 weeks in duration but may be extended by the Program Director up to a maximum of 12 weeks if necessary.

Candidates in a Fellowship PEAP will be evaluated based on their general knowledge and competency in the specialty in which they are certified, and appropriate for practice in the discipline in which they are entering fellowship training. Assessment also ensures candidate is: mentally competent to practice medicine; able to practice with decency, integrity and honesty and in accordance with the law; have sufficient knowledge, skill and judgment to engage in postgraduate medical training as authorized by the educational license; can communicate effectively, and display an appropriate professional attitude.

APPLICATION REQUIREMENTS

Typically 8 to 10 fellowship positions are offered annually. Please note that this fellowship is best suited for applicants approaching consultant grade. Candidates with significant experience as independent practitioners will not qualify for this program.

Please note that Canadian fellowships are not ACGME accredited. Also, this training period does not count towards a credit for Canadian Royal College exam eligibility.

The deadline for applications for fellowships commencing July 2026 and January 2026 is **April 30, 2025**. The selection of applicants will be completed in June 2025; shortly thereafter applicants will be notified of the selection committee's decision.

Please note the link to the Paediatric Anesthesia Fellowship application on our website will direct you to the University of Toronto online Postmd ApplicationS System (PASS).

You will be required to submit a completed application form, as well as upload a current curriculum vitae, a letter of intent, copies of your medical degree and specialty certification. In addition, three letters of reference must be submitted by your referees.

Your ***curriculum vitae*** must be prepared in accordance with the University of Toronto format and must include:

- Cover page with name, date of birth, country of birth, citizenship, and date CV is prepared
- Biographical information:
    - Degrees: degree/year/institution/specialty
    - Training
    - Employment
    - Honors
    - Professional affiliations and activities
- Academic History
    - Research endeavors
        - Please include any research presentation(s)
    - Research awards
- Publications
- Others

The ***letter of intent*** should include the reasons why you wish to pursue this fellowship, personal goals for the fellowship year, and the role this training will play in achieving your career aspirations. In addition, the letter of intent should outline a research topic that is of interest to you.

Copies of your ***medical degree and specialty certification*** must include English translation by an approved translator, if applicable. If you are currently a trainee, please arrange for your program director to provide a letter of good standing with start date in program, expected end date and date you will receive your certificate. Fellows who are completing their Anesthesia residency in Canada will be required to inform the Fellowship Program Director of the outcome of their FRCPC Certification Exam, as soon as the exam results are received.

Current ***letters of reference*** are to be received from the referees via email to anesthesia.fellowship@sickkids.ca. Letters should be addressed to Dr. Ilavajady Srinivasan, must be signed, on departmental letterhead, and should comment on the following points:

- Clinical Skills
- Communication Skills
- Academic History
- Management/Administrative Skills
- Professionalism
- Research activities

For graduates of medical schools where the language of instruction is not English, completion of the ***TOEFL or IELTS*** is required. Minimum score requirements for TOEFL are: Paper Based Test 587, Computer Based Test 240, and Internet Based Test 96. Minimum score requirement for IELTS is 7.0. Proof of these test scores must be included when submitting the completed application. If the language of instruction was English at the medical school attended, these tests are not required.

If further information about the fellowship is required, please contact anesthesia.fellowship@sickkids.ca

Thank you again for your interest in the program and we look forward to receiving your application.