

**McMaster University Department of Anesthesia**

**Quality Improvement and Patient Safety Fellowship Program**

**Goals and Objectives**

**Goal of Fellowship**

The Quality Improvement (QI) and Patient Safety Fellowship (PS) through the Department of Anesthesia at McMaster University provides a unique opportunity to learn and apply QI/PS concepts to post-graduate trainees in an interactive, project-based manner. The goal of this PS/QI fellowship training program is to train and mentor future anesthetists to lead quality and patient safety initiatives and excel clinically. A secondary goal is to encourage fellowship graduates to incorporate a culture of quality improvement into their future practices, resulting in systematic changes that place QI/PS at the forefront of the medical field. Our diverse program ensures fellows receive a broad clinical and educational experience, with trainees participating in pain management and anesthesia for neurosurgery, vascular, orthopedic, trauma, plastics, and general surgery cases. The QI/PS Fellowship prepares fellows for independent practice by providing an opportunity to develop skills in clinical care, judgment, teaching, and research in quality improvement and patient safety. We are committed to providing the highest quality experience and education for each of our fellows.

***Clinical Objectives***

Fellows will be expected to provide independent anesthesia coverage based on clinical needs and in negotiation with the department leadership at Hamilton Health Sciences. The QI/PS fellow must develop an appreciation for all clinical services within McMaster University and Hamilton Health Sciences. By the end of the fellowship the QI fellow will be able to:

- Develop a systematic plan to improve efficiency in the perioperative period
- Describe and implement risk reduction strategies in the perioperative setting
- Use a systems-based approach to analyze adverse events as per the Canadian Patient Incident Reporting System
- Develop local quality and actively contribute to patient safety database entry (e.g. Canadian Anesthesia incident Reporting System)
- Master quality measurement and data analysis and improvement tools (e.g. PDSA, process mapping, knowledge-to-action cycle)
- Demonstrate exemplary skills in the handover of care of a patient to other health professionals

The QI/PS fellow will work in a team environment, communicating and collaborating with anesthesiologists, surgeons, nurses, pharmacists, residents and medical students.

## Call Schedule

Weekly assignment schedule split (unevenly) into:

1. **Subspecialty days** [2 - 3 days] in specialty anesthesia. Fellows are assigned one-to-one with specialty anesthesia staff.
2. **Service days** [2 days] in the operating room performing adult anesthesia lists. Fellows are assigned to an OR list and operate independently while being covered by anesthesia staff operating in another adjacent OR
3. **Non-clinical days (NCDs) or academic days [1 day]**: This is granted according to the fellow's academic engagement (research, teaching, journal clubs etc).

On-call duty:

- 2 weekdays and 1 weekend per month.
- Fellows are assigned on-call at the Juravinski hospital from 5:00 pm - 8:00 am.
- Fellows are assigned with anesthesia staff working in the OR.
- The next day is post-call

## Educational Objectives

The QI/PS fellow will be required to complete the web-based Institute of Healthcare Improvement (IHI) Open School Basic Certificate in Quality and Safety. The contents of the basic certificate program will be discussed two times a week with the fellowship director. The QI/PS fellow will be required to attend and participate at QI rounds at HHS, present one Department of Anesthesia Grand Rounds focusing on Patient Safety and/or Quality Improvement and teach one anesthesia resident seminar in Patient Safety and/or Quality Improvement. Additionally, the QI/PS fellow will participate in adverse event analysis at HHS.

By the end of the fellowship, the QI/PS fellow will be able to:

- Describe and distinguish the components of a healthcare safety and quality model.
- Describe the core principles of patient safety and quality improvement.
- Identify key strategies for designing and delivering safer/higher quality healthcare
- Explain the critical role that microsystem and macrosystem leadership has for patient safety
- Identify adverse management strategies, including adverse event reporting for “near misses”
- Describe how a healthcare system should respond when the outcomes of healthcare design and delivery are not optimal
- Discuss basic health economics and understand how quality improvement relates to health economics

- Develop and present a patient safety/quality improvement project under the guidance and supervision of faculty mentors
- Support the dissemination of advancements in patient care or systems designs through multiple methods (e.g. poster day, abstract submissions, publications)

The fellow will also assist in the promotion of continuous quality improvement and patient safety education to low and high-risk patients at HHS.

### **Research Objectives**

The QI/PS research project will be the central focus of the fellowship, as it will ask fellows to apply the cognitive skills that they have learned during QI journal clubs, QI rounds, and web-based discussion sessions. The QI/PS fellow will be able to choose a project based on their interest, after receiving approval from the fellowship director. It is expected that the fellow will complete the project during the twelve months of the fellowship. The QI/PS fellow will receive two days a week of protected academic time and will be encouraged to devote the majority of the protected time to the research project. The fellow will be strongly encouraged to present results (actual or preliminary) at the Institute for Health Care Improvement (IHI) conference and the Canadian Society of Anesthesiologists (CAS).

By the end of the fellowship, the QI/PS fellow will be able to:

- Understand and critique scholarly papers in the field of quality improvement and patient safety
- Understand the concept of knowledge translation, barriers to its adoption, and integrate best evidence practice
- Contribute to the dissemination of knowledge in quality improvement and patient safety
- Initiate the design of quality improvement and patient safety project(s)

The QI/PS fellow will also strongly be encouraged to disseminate the research project through publication(s).

For inquiries about the Quality Improvement and Patient Safety Fellowship Program, you may contact the Department of Anesthesia at [purchas@mcmaster.ca](mailto:purchas@mcmaster.ca).