Objectives for Post Graduate Health Informatics elective rotations
McGill Emergency Medicine Program.

General Objectives: 1 (or 2) Period EDHI Electives

The elective rotation in health informatics of the Emergency Medicine Program is a one-period rotation open to qualified residents who are pursuing an accredited residency program in Canada in Emergency Medicine. Residents have to acquire a basic understanding of health informatics as well as be able to apply this knowledge in clinical environment.

It is expected that at the end of their rotation residents will have acquired foundational knowledge in Clinical information systems and IT architecture (including cybersecurity), critical assessment of human computer interfaces and knowledge of secondary use of health data. A second month can be added where the resident can choose an added focus on one of the core topics (support of IT, change management, etc.) or intro to one of advanced topic (data analytics, big data, AI, digital health innovation).

The curriculum aims at providing a basic exposure to health informatics. It will allow candidates to further explore their interest in this field.

The rotation will involve clinical and non-clinical work. The clinical aspect of the training will involve rotations in one of the four adult teaching hospitals (JGH, MGH, RVH, St Mary's). Selection of the site will be based on the trainee's goals and the availability of rotations at a given site. The goal of the clinical rotation for the trainee to develop a critical mindset towards challenges of human computer interface. Each hospital presents a different challenge either with the IT software profile or the level of integration into the workflow allowing for a broad exposure to different dynamics.

Number of positions at any given time: depending on availability; maximum 2 per period

Details of rotation:

- ❖ Clinical rotation of 1 (or 2) academic period duration at 1 site with log book and discussions of clinical workflow and human computer interface issues that could be improved using health informatic improvement
- ❖ Attend IT academic half days (every 2 weeks)
- ❖ 1months targeted project which will need to be agreed upon prior minimum 2 periods prior to start of rotation. The aim of this project is introduction to mapping, data collection and basic of data analytic . The project can be a quality assurance project or can link into the trainees on-going research project.
- ❖ Must present project at the end of rotation
- ❖ Assigned reading and or-pre-recorded sessions on targeted topics
- ❖ An optional journal club article appraisal is suggested if the trainee opts for a 2 academic period rotation.

SPECIFIC OBJECTIVES

Medical Expert

Residents should be able to

Demonstrate basic knowledge of clinical/ health informatics interface
Discuss the impact of health informatics on clinical care
Integrate health informatics into his daily clinical work

Communicator
Residents should be able to demonstrate effective communication skills by their ability to

- Develop strategies to communicate with user of ED IT systems
- Address concerns in change management

Collaborator

- Seek/understand issues users face

Manager

Demonstrate basic knowledge of hardware configuration (the user will not be expected to know how to code)
Demonstrate basic knowledge of configuration of contingency plans and cybersecurity
Have working knowledge of Quality Improvement processes

Health Advocate

Be able to articulate positive and negative impacts of deployment of IT platforms and use of AI on the care of patients.

Scholar

Fellows should be able to demonstrate an intellectual approach to IT in the emergency department in the following areas during participation on patient rounds, teaching sessions, journal clubs.

- Continuing medical education;
  - o show interest in self-education skills by demonstrating knowledge in the evolving concepts in the IT field

- Critical Appraisal of the Literature both medical and non-medical as it applies to IT
  - o demonstrate the ability to research the literature and identify the best available articles (for the 2 month rotation)

- Teaching skills

  - o Should be available to answer questions or discuss common difficulties users experience.

Professional

Residents should be familiar with medical, social aspects of IT in day-to-day work as well as it pertains to Big Data management and cybersecurity. They should approach situations with the highest level of integrity and honesty being able to identify areas of potential conflict of interest. They should show responsibility and reliability in the exercise of their function and demonstrate awareness of their own limitations and seek advice appropriately. Resident should more specifically demonstrate professionalism in the following issues:

- Be aware of privacy issues and how to address them with users

- Recognize the limitation IT and AI in medical practice in the face security of information

- Recognize areas of conflict of interest in IT