

FELLOWSHIP: PERIOPERATIVE ULTRASOUND IN ANESTHESIA

Fellowship Directors:

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Associate Faculty: Dr. Stephen Yang, MDCM, M.Sc., FRCPC

Type of Fellowship: Clinical

Duration: 1 year

Number of positions per year: 1

Hospital Sites: Jewish General Hospital (JGH) and Montreal General Hospital (MGH)

Mission Statement and Objectives:

The goal of the fellowship is to create leaders in perioperative ultrasound in anesthesia. We aim to provide the candidate with an in-depth foundation of the techniques, knowledge, and applications of whole-body ultrasound in the perioperative period. The candidate will gain experience in transthoracic and transesophageal echocardiography, pulmonary, abdominal and neurological ultrasound. The candidate will gain an understanding of the applications of whole-body ultrasound in preoperative assessment, intraoperative evaluation of physiologic derangements, and in postoperative care both in the post-anesthesia care unit and in the intensive care unit. By the end of their fellowship, the candidate should have an understanding of how to implement a perioperative ultrasound program, with the goal of integrating it into the setting in which they will work, and of mentoring subsequent anesthesiologist trainees.

Fellowship Organization

The fellow will spend one half of the year-long fellowship at the JGH and the other half at the MGH.

JGH

The educational objectives will be met through a combination of time spent in the operating room, the postoperative care unit, and the intensive care unit. The scheduling of the fellow will be intentional flexible, to allow for the maximum exposure to pathology of interest for ultrasonography. However, typically, the fellow will be assigned to operating room lists 4 days per week. These lists will be chosen to be of high utility for perioperative ultrasound, having patients with pathology, requiring transesophageal echocardiography for potential instability, or requiring techniques that utilize ultrasound, such as regional blocks or line placement. Roughly one day per week the fellow will be assigned to the cardiac room, where they will perform transesophageal echocardiography. The fellow will also be expected to be involved in the management of any unstable patients in the post-operative care unit, performing any required ultrasound techniques. Roughly one week per month, the fellow will be assigned to the intensive

care unit. This will be scheduled to coincide with the presence of the intensivist Dr. Yang. The fellow will round with Dr. Yang, performing ultrasound examinations of the patients, and have opportunities to perform ultrasound guided procedures such as paracentesis, line insertion among others.

MGH

The educational objectives will be met at the MGH through a combination of time spent in the operating room, the post-operative care unit, and preoperative clinic. The scheduling of the fellow will be intentional flexible, to allow for the maximum exposure to techniques and pathology of interest for ultrasonography. Roughly 4 days per week will be spent in the operating room, where the fellow will be assigned to rooms that could utilize ultrasound techniques. These will also include rooms requiring regional anesthesia. During the day, the fellow will be called for any anesthesia involvement in trauma patients to perform ultrasound techniques. When there is anesthesia involvement in the placement of ECMO, the fellow will be expected to assist with the ultrasound guidance of placement. The fellow will also spend the equivalent of one week per month in the preoperative clinic, where they will perform patient consultations, but also perform any required ultrasound examinations.

Elective time

Elective rotations can be organized, at the discretion of the fellow and the supervisor. It will be possible to arrange 4-week rotations in the cardiac echocardiography lab, the ICU echo consult service, a cardiac anesthesia operating room, or other ultrasound pertinent exposure.

Academic responsibilities

Research and Pedagogical Goals:

The candidate is expected to complete at least one clinical research or educational project during the year. The candidate will be provided support and guidance for this project by the site supervisors.

They are also expected to participate in departmental initiatives and projects related to perioperative ultrasound in anesthesia, including course design and instruction. Course creation and instruction may occur at either departmental, institutional, or conference level. Although it is not known how many courses may occur during the fellowship, the fellow would not be expected to participate in more than 4 throughout the year.

To meet these objectives, the fellow will be provided with one non-clinical day per week, which will be scheduled around the clinical opportunities available.

Once the fellow has acquired sufficient expertise in POCUS imaging acquisition and interpretation, they will be expected to be involved in teaching residents on their POCUS rotations.

Certifications/Exams:

Training undertaken during this clinical fellowship cannot be recognized for credentialing purposes as training leading to certification by the Royal College of Physicians and Surgeons of Canada or the College of Family Physicians of Canada.

However, the fellow will be expected to complete certification in Special Competence in Basic Perioperative Transesophageal Echocardiography (BasicPTEeXAM), and the Examination of Special Competence in Critical Care Echocardiography (CCEeXAM) by the National Board of Echocardiography. The fellow is additionally encouraged to work towards Certification of Competence in Critical Care Ultrasonography by the American College of Chest Physicians.

Trainee evaluation: Informal feedback will be provided by the anesthesiologist who is responsible for supervising the fellow on any given day. Every three months the fellow will receive formal feedback from the site supervisor. This feedback will be in person, and will also be documented using McGill's one45 system.

Call Duty:

The fellow shall perform call duties in the department of anesthesia where they are based. Call duty will not exceed limits outlined by the FMRQ guidelines, and so may total no more than 6 per four week period, with no more than 2 weekends on duty. Call duty load must respect the FMRQ (or equivalent) contract under which the fellow is training.

Description of academic sites and case variety:

- 1 Jewish General Hospital: variety of ortho trauma, major oncology, vascular, cardiac and other cases, as well as participation in perioperative and intensive care consult assessments
- 2 Montreal General Hospital: variety of trauma, thoracics, regional and other cases, as well as participation on the ECMO cannulation team

Funding:

At this time, the Fellowship program can only accept candidates who obtain funding for a "formation complémentaire" from the RAMQ, or those who obtain funding from their home institution. The bursary from the sponsoring institution must cover salary and tuition fees.

Vacation:

The fellow shall be entitled to vacation and conference leave as outlined by the collective agreement of the FMRQ.