FUNDED MASTER’S RESEARCH PROJECT OPPORTUNITY
WITH THE OPERATING ROOM BLACK BOX

- Suitable for thesis and/or research paper topic
- 1 year of funding: $19,000 (OHRI pay scale)
- First authorship possibility (as per international criteria)

Enhancing surgical care and outcomes through education and knowledge translation (Phase 1): Advancing intraoperative teamwork assessment with the Operating Room Black Box

Background: Almost every Canadian will undergo surgery at least once in their lives; 1 in 10 will experience complications resulting from surgical errors. In 2 out of 3 cases, ineffective teamwork in the operating room (OR) is a primary contributing factor. The study of teamwork in the OR has been limited by the practical challenges associated with obtaining high quality OR data across a large number of surgical cases with minimal observation bias. Our group belongs to the international Surgical Safety Network, which uses OR Black Box technology to improve practice and patient outcomes. Like black boxes used in aviation, the OR Black Box is an innovative tool that records detailed information from the surgical environment (e.g. audio, video, patient vitals).

Objective: Explore barriers and facilitators to OR Black Box use with relevant stakeholders using qualitative interviews to implement the OR Black Box at The Ottawa Hospital.

Methods: This is the first objective of a multistep research project. This step will use qualitative methods. Semi-structured interviews will be conducted with patients, clinicians, and administrators. The interview guide will be based on the Theoretical Domains Framework to identify barriers and facilitators that affect the willingness of healthcare professionals to work or have surgery in an OR equipped with the ORBB. Interviews will be audio-recorded and transcribed verbatim. Transcripts will be de-identified and analyzed in duplicate using qualitative analysis software (NVivo).

Implications: This project is the foundation of a research program aimed at enhancing surgical patient care and outcomes using the ORBB. Results will enable TOH and other hospitals to identify and learn from effective and ineffective team performances, addressing current evidence-practice gaps and existing limitations in performance-tracking mechanisms. Improved analysis of teamwork during surgery will help identify and subsequently minimize errors, ultimately leading to fewer complications for patients and reduced healthcare expenditure.

INVESTIGATORS/CO-SUPERVISORS:

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STUDENT ROLE: Develop skills in knowledge translation. Learn about all steps of conducting an original qualitative research project and will contribute to data collection, analysis and writing of manuscripts that will be submitted for peer-reviewed publication.

THESIS OPPORTUNITY: Develop secondary analyses from the larger project objectives and contribute to future intervention design.