



RESEARCH SCHOLAR PROGRAM – 2018

SUPERVISOR & PROJECT INFORMATION FORM

Please complete and return, via email only (crems.programs@utoronto.ca) by **November 3rd 2017** (*forms received after this date will not be posted*).

Supervisor Information

Name: Catharine Walsh

Email: catharine.walsh@sickkids.ca

Degree: MD, MEd, PhD, FRCPC

SGS Appointment (IMS, IHPME, LMP etc.): **IHPME**

Academic Rank: Assistant Professor

Field of Research: **Health Professions Education**

Research Institution Affiliation (if applicable): **SickKids Research Institute**

Allocation of student contact time (number of hours per week YOU are available to the student for any concerns or to review progress):

I am a Clinician-Scientist with 80% protected time for research. I will meet with the student, at minimum, 1 hour per week over the summer intensive research blocks and at least once per month during the longitudinal research time.

Project Information

Title:

Effective integration of cardiopulmonary resuscitation feedback devices into health professions training: A randomized control trial

Description (max 500 words):

Cardiopulmonary resuscitation (CPR) is provided for thousands of children in North America every year and CPR quality directly affects survival following cardiopulmonary arrest. Unfortunately, health care providers struggle to retain effective CPR skills after Basic Life Support (BLS) training and even well-trained providers fail to consistently perform CPR within established guidelines during pediatric cardiopulmonary arrest scenarios. Effective CPR training requires accurate assessment of skills and feedback to help learners improve subsequent performance. However, inadequate CPR training is common as errors are challenging for instructors to detect, thereby making it difficult to provide accurate feedback to improve future performance. CPR feedback devices have been introduced as an instructional aid to provide corrective feedback to learners during training. There is increasing evidence to suggest that CPR feedback devices used during training improve subsequent performance quality with regard to compression rate, depth and recoil. While feedback devices are a beneficial educational adjunct for CPR skills training, the optimal manner in which to integrate the devices into training remains unclear. The planned prospective randomized trial will investigate the optimal use of a CPR-quality visual feedback device during BLS training for pediatric health professionals (physicians, nurses and respiratory therapists). The device attaches to a CPR manikin and provides real-time visual feedback via light-emitting diodes for chest compression rate, depth and recoil and hand positioning. Three different training regimens integrating the CPR feedback device will be compared prospectively. The primary outcome will be CPR quality during a team-based simulation as measured by, chest compression depth, compression rate and compression fraction. The outcome of this trial will help to elucidate the optimal use of CPR feedback devices during BLS training to improve retention of the important skill.

If human subjects are involved, have Ethics been obtained?

YES NO Application Submitted N/A

Do you expect this work will be published within the 20 months?

YES NO Uncertain

Student's roles and responsibilities (please be specific)

The CREMS student will report directly to myself, as the PI. The student's responsibilities include:

- Helping to prepare research ethics board submission
- Developing and monitoring timelines for study

- Assisting with design of questionnaires and data collection instruments
- Coordinating participant recruitment
- Coordinating and conduct data collection
- Managing and organizing study data, assist in data analysis
- Preparation of study results, including presentations and manuscript
- Attending relevant meetings/rounds to increase knowledge and understanding of health professions education research