



MSERG



2018 RECIPIENTS

Medical Student Education Research Grant

The Ontario Medical Students Association (OMSA) is pleased to recognize the winners of the 2018 Medical Student Education Research Grant (MSERG). Eight grants valued at \$5,000 each were awarded to medical students across Ontario's six medical schools. These awards included four **Compassionate Care OMSA Associated Medical Services MSERG awards** for projects with a specific focus on patient-centred care or health care provider wellness and resilience, and four **Open MSERG awards**. The MSERG program was created to provide Ontario medical students with an opportunity for recognition and financial support when completing research projects in the field of medical education. A summary of each winning MSERG project is provided below.

Compassionate Care MSERG Award Recipients

PROJECT: Weaving with Common Threads:
Using Multi-Voicedness Methodology to Explore
Surgeons' Reflections and Experiences with
Complex Cases

By Meredith Barr, Western University, Med Class 2019

Using interviews and hand-drawn reflections based on complex cases, this study aims to analyze how surgeons interact introspectively versus with others, to better understand themes

within these reflections. In the interviews alone, several surgeons depersonalized themselves from complex cases that progressed unfavourably. Conversely, in the drawings, many surgeons illustrated themselves as a focal point, integrating their personal selves with the clinical situation. It is our hope that this project will illustrate the utility of different modes of reflection to help health care providers process and learn from difficult experiences. Furthermore, it may constitute an avenue for reflective education as trainees transition to staff roles.

Initially, I became involved through my parallel interests in narrative medicine and surgery; this project was a perfect marriage of the two. To date, we have presented our preliminary findings at the Canadian Conference for Medical Education (CCME).

It is widely believed that health care practitioners must imagine what it would be like to be a patient. Similarly, medi-

cal education requires some imagining of what it would be like to be a clinician who faces imperfect outcomes and emotional challenges. My involvement in this project has had a profound impact on my own education and future career, as well as on my perspectives toward becoming a future surgeon. I have learned that I will have the power and privilege to cultivate compassionate care within a clinical domain that has traditionally focused on technical prowess.

PROJECT: Examining a Simulation-Based Cultural Competency Education Program and its Perceived Impact on Patient-Centred Care: A Pilot Study

By Roslyn Graham, Northern Ontario School of Medicine, Med Class 2021

The aim of this research is to explore how simulation can enhance cultural competency training for improving the delivery of compassionate and patient-centred, culturally safe care.

Objectives of the research are to conduct a literature review of simulation-based training for enhancing safe care, and to develop a qualitative assessment tool for evaluating the impact of a simulation-based cultural competency training program, such as The Respect Project, a program implemented in May 2018 which aims to build a respectful work and care environment at the Thunder Bay Regional Health Sciences Centre.

In summer 2018, I conducted a literature review of current cultural competency training assessment tools, particularly in relation to simulation trainings. I also performed an analysis of The Respect Project program evaluations to determine themes that employees perceive as important to a respectful environment. We developed a preliminary qualitative assessment tool which involves 10 open-ended questions with prompts for post-training focus groups and interviews. We developed a patient recruitment strategy and began the interview process in August 2018.

As focus groups and more interviews are completed, the transcripts will be analyzed for themes to help inform further development of The Respect Project, and to inform cultural competency simulation training assessment tools to be used in a health care setting.

My interest in this project was to further explore cultural competency and cultural safety concepts discussed in case-based learning courses taken in my first year at NOSM. This project has helped me better understand the qualitative research process and different educational approaches that can contribute to improved cultural competency and safety to create respectful environments, approaches which I hope to take forward as I aim to be part of a respectful environment with patients and colleagues as a future family physician in the community.

PROJECT: Post-Operative Prevalence of Depression and Anxiety in Patients with Meningiomas: a Combined Quantitative and Qualitative Analysis

By Graham Kasper, University of Toronto, Med Class 2021

Depression and anxiety are common in patients with brain

tumours. Coping with the diagnosis and worrying about recurrence are related to increased levels of stress and a diminished quality of life.^{1,2,3,4} However, the vast majority of studies investigating this relationship have focused on aggressive brain tumours.^{5,6} In comparison, patients with meningiomas – tumours that are typically benign in nature with near negligible chances of recurrence – have been largely left out of these prior analyses.

To those ends, our project is employing a mixed-methods approach, using screening questionnaires and semi-structured interviews to explore the prevalence and burden of symptoms of depression and anxiety in this patient population. Importantly, by using qualitative measures, we are capturing common themes emerging from patient experiences. With this data, we aim to recognize gaps in care, identify discrepancies between patient and physician perspectives, and promote remedies to current shortfalls in treatment and follow-up protocols.

Preliminary results from patient interviews have revealed several common themes: the importance of strong family support as an origin of resilience, especially during the period from diagnosis/discovery to treatment, the presence of heightened anxiety in the days or weeks between follow-up imaging and follow-up clinic appointments, and the desire for the creation of patient support groups. Other themes continue to emerge as data collection and analysis continue.

As this study has evolved, our research team, supervised by Dr. Sunit Das, has decided to continue this investigation into the coming months, and as such, questionnaire analysis is currently ongoing. Moving forward, we hope to correlate our findings with other clinical variables.

My experience working on this project has deepened my appreciation for mixed-methods and qualitative studies, as the richness of information that patients provide is paramount to understanding how health care professionals can improve the patient-centred care we deliver. This research has given me a solid foundation on which to build my future involvement in compassionate, patient-centred medical research.

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PROJECT: Understanding Medical Students' Perspectives on Fatigue and Fatigue Risk Management in Academic and Rural Communities

By Alexandra Raynard, Western University, Med Class 2021

Fatigue Risk Management (FRM) strategies assume a shared perception of fatigue as a threat. Despite the growing body of evidence suggesting that fatigue leads to burnout and medical errors, residents perceive fatigue as a personal, surmountable burden rather than an occupational hazard. It is unclear when and how such problematic notions of fatigue are adopted by medical trainees. This research describes how third-year medical students perceive fatigue experienced during their first year of clinical rotations.

From June to August 2018, 21 third-year medical students participated in semi-structured interviews exploring their perspectives of workplace fatigue. Data collection and analysis occurred iteratively in keeping with constructivist grounded theory methodology, and was informed by theoretical sampling to sufficiency.

Implicit and explicit messages embedded within the clinical learning environment reinforce participants' perceptions of fatigue. Trainees predominantly described their workplace fatigue in three ways: 1) as a personal health risk; 2) irrelevant to patient safety, since they perceived minimal impact of their contribution on patient care; and 3) a more significant, yet unsolved problem for their future selves as residents.

Our study expands upon how perceptions of fatigue are constructed and reinforced by the clinical training environment. Though many participants anticipate that fatigue during residency will pose a legitimate risk to patients, prior research suggests that residents are less likely to see fatigue as a patient safety threat. Thus, current FRM efforts may be better directed toward transitioning medical students, who may be more receptive to, and more likely to employ, such strategies in their future practice.

Open MSERG Award Recipients

PROJECT: Quick Refresher Sessions (QRS): Improving Chest Compression Training for Medical Students

By Alexander Cormier, Queen's University, Med Class 2019

The goal of this project was to provide medical students with access to efficient and effective chest compression training. Our training program, titled Quick Refresher Sessions (QRS), was inspired by the "Just-in-Time" and "Rolling Refreshers" models of high frequency short practice sessions to maintain skill competency.^{1,2} Depending on group assignment, students attended five-minute-long training sessions every two or four months. Each session, students watched a focused video

reviewing essential skills and then practiced compressions on a training manikin which provided real-time visual feedback on compression performance.

Over the past year, we have collected quantitative data showing that our training model works: leading to immediate and sustained improvements in participants' skill competence and confidence. Furthermore, we have real-life testimonial evidence from a participant who felt better prepared to handle an unexpected situation. Finally, we have received very positive feedback from our participants: everyone "agreed" or "strongly agreed" that the QRS training program helped to fill a gap in their medical education, and all participants expressed interest in participating in a similar initiative in the future.

Moving forward, we are launching our program in the hospital and inviting the nursing department to participate. We are also in discussion with administrators and curriculum directors to establish access to this program for future medical students. Lastly, we are transitioning to a competency-based model where one's performance determines the frequency of future refresher sessions.

Overall, I have been thrilled by the success and positive reception of our project. This experience has encouraged me to continue to seek out creative solutions to address gaps in medical education. Similarly, in the future I see myself in the rural family medicine setting working on new initiatives to best serve the needs of my community.

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PROJECT: Advocating for Advocacy: the State of the Advocate Role in Canadian Family and Emergency Medicine Training Programs

By Madeline McDonald, University of Toronto, Class of 2021

Health advocacy training is a fundamental part of postgraduate medical education as one of the core CanMEDS competencies. There are considerable challenges with teaching and assessing advocacy, including knowledge gaps, perceived time constraints, inconsistencies around the definition and scope of health advocacy, etc. My co-authors and I set out to complete a critical review of published and grey literature on teaching and assessing health advocacy in postgraduate medical education to develop practical recommendations for the design of advocacy training programs.

We identified 91 relevant peer-reviewed and 32 grey-literature papers, which represented a range of intervention studies, opinion pieces, surveys, formal and informal curricula, policy statements, reports, etc.

Ultimately, four overarching themes emerged: 1) longitudinal

curriculum is preferable to siloed advocacy blocks; 2) hands-on learning versus theory-based is the best way to hone advocacy skills and build competence; 3) advocacy requires collaborative community partnerships, and should be driven by community-identified needs; and 4) residents should be included in the planning and implementation, and allowed to advocate in areas of their interest. Few assessment tools are reliable for assessing advocacy, and there is no gold standard.

We presented preliminary findings at the Canadian Association of Emergency Physicians (CAEP) conference in May 2018, and are now preparing the paper for publication. We have started the next phase of the project, which will include interviews with Canadian residency program directors, as well as experts from national accreditation bodies.

I would like to thank the generous support of OMSA, Dr. Jennifer Hulme, Dr. Conor Lavelle, and medical student Ms. Mei Wen. It has been a great learning opportunity to be able to lead this project, and has closely aligned with my interests in advocacy. We hope that this project will further inform educators to train the next generation of physicians as health advocates.

PROJECT: Family Violence in Medical Education: Qualitative Perspectives from Medical Students

By Stephanie Napoleone, McMaster University, Med Class 2019

Family violence contributes to significant morbidity and mortality among Canadians. Yet, evidence indicates many doctors feel unable to identify and respond to family violence.

As part of a national project called VEGA (Violence Evidence Guidance Action), our study is recruiting preclerkship students from three Ontario-based medical schools to describe these students' perceptions and experiences of their medical education about family violence.

We also hope to understand any differences in this education across the medical schools, and to identify potential curriculum changes that would support future physicians in recognizing and responding to family violence.

Following the principles of fundamental qualitative description, we have analyzed data from seven semi-structured interviews of students at one school, and several preliminary data patterns have emerged.

Notably, participants shared that their education has focused on mandatory reporting of child physical abuse and using screening to facilitate identification of this abuse. In contrast, participants indicated that their curriculum provides little to no coverage of intimate partner violence (IPV) or children's exposure to IPV.

Participants perceived interest in family violence among their peers to be low, as it is viewed as a "less scientific" topic deemed primarily relevant to certain medical specialties (e.g., psychiatry). Furthermore, students generally did not feel prepared to identify and respond to family violence in practice. However, they expressed a desire to enhance their education through practical learning opportunities, including role play.

While there may be important gaps in our education on family violence, it is encouraging that medical students have identified possible solutions to these issues.

Thanks to the generous support of the OMSA MSERG Award, and to my team led by Dr. Harriet MacMillan and Dr. Melissa Kimber, I have had the privilege of contributing to research that will help inform education on family violence within Canadian, and potentially global, contexts.

PROJECT: Perceptions Around Competency-Based Postgraduate Medical Education and Resident Hour Restrictions: A Qualitative Study of Online Canadian and American Medical Student Discussion Groups

By Anahita Dehmoobad Sharifabadi, University of Ottawa, Med Class 2020; Chantalle Clarkin, RN, PhD, Bruyère Research Institute; and Asif Doja, MEd, MD, Children's Hospital of Eastern Ontario

Competency-based medical education (CBME) is becoming widely implemented in postgraduate education curricula. Our work was aimed at analyzing online discussion forums, such as Premed101 and Student Doctor Network (SDN), to explore trainees' perceptions of CBME in residency training. We used an inductive content analysis approach to develop a data-driven coding scheme that evolved throughout analysis.

Medical students and residents participating in the discussion forums emphasized select themes regarding the implementation of CBME; specifically, its implications on the length of residency and post-residency opportunities.

Posts on SDN had a prominent focus on differing areas such as the subjectivity in assessment of core competencies and the role of CBME in terminating resident contracts. The concerns presented illustrate the importance of providing clarification to trainees regarding the length of training and evaluation structures from those involved in designing CBME programs.

This project allowed me to gain perspective into two insights: 1) medical education research is a field with broad implications in every aspect of medicine, and 2) qualitative research is a systematic approach that can provide a comprehensive perspective.

In first year, I decided to pursue this project because I was curious about the student voices presented in online forums. With the help of MSERG, I am grateful to have had the opportunity to systematically analyze these posts in a research project. This work subsequently exposed me to the world of medical education and its impacts both within each specialization and more broadly across medicine.

Moreover, qualitative methodology is under-explored in medical research. The systematic nature and the invaluable insights gained from qualitative methods make it a powerful approach. I am grateful to have had the exposure to competency-based medical education research and will be incorporating it in my future research projects. **SI**

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