



MCMaster EDUCATION RESEARCH, INNOVATION & THEORY

2022 Annual Report



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MESSAGE FROM THE ASSISTANT DEAN



Jonathan Sherbino

2022 marks the completion of my first term leading MERIT. Our community has evolved and grown during this time. This annual report seeks to highlight the sustained efforts of our members to “grow a community of clinicians and scientists to advance health professions education through research and applied science.”

Since 2017, our community has expanded to welcome new [scientists, fellows, scholars and members](#). Our community has connected via new programming, such as rounds, workshops, journal clubs, a consultation service, retreats, an annual conference, and more. On-line resources have been built, including a [video lecture archive](#), a [curated reading list](#), a [primer on education research](#), and a [networking tool to identify connections between McMaster scholars](#). Of course, these markers of growth compliment the sustained, high quality education research produced, presented, and published by our community. Research is the foundation of MERIT, serving as the organizing principle for all our work.

In 2022 we added a project officer and a research coordinator position to support our growing research enterprise. The MERIT Faculty Fellowship (Dr. X. Catherine Tong, inaugural fellow) and MERIT Visiting Professor (launching in the Fall of 2023) were announced to support the continued development of our community. An external operational review of MERIT was completed, the first review of MERIT since 2014. The report, shared with faculty leaders and the MERIT community, identified opportunities for growth. Most significant among the recommendations was the directive to proceed with a strategic consultation. This multi-stage, consultation process will be complete in early 2023 with input from schools, departments, regional campuses, and programs. The goal of the process is a shared understanding of “who” is MERIT and “what” we do.

As I begin my second term with MERIT, I am excited to see where we go together. I could never have imagined the journey of the past five years.

Best wishes for a happy and healthy 2023!

SCIENTISTS



Elif Bilgic, PhD
Assistant Professor, Pediatrics

Dr Elif Bilgic is an Assistant Professor and Education Scientist in the Department of Pediatrics and MERIT program. She received her PhD from McGill University in Surgical Education, and completed 2 postdoctoral fellowships at McGill; one at the Steinberg Centre for Simulation and Interactive Learning, and second at the Simulation, Affect, Innovation, Learning, and Surgery Lab, second fellowship as a Canadian Institutes of Health Research (CIHR) awarded fellow. Additionally, she was previously awarded a Royal College Medical Education Research Grant for her research in developing a curriculum to teach and assess advanced laparoscopic suturing skills, taking first steps in the development of an advanced laparoscopic surgery program.

Currently, Dr Bilgic's program of research is in the field of performance assessment in the simulation and clinical settings, focusing on technology, innovation, and collaboration, ensuring that trainees are gaining the necessary skills to provide the best patient care possible.

In relation to her program of research, Dr Bilgic was awarded a Social Sciences and Humanities Research Council (SSHRC) Insight Development Grant with co-applicant Dr Jason M Harley, and collaborators Drs Jonathan Sherbino and Ereny Bassilious, for her work titled 'How are emotions of medical trainees and faculty impacted by new assessment mandates implemented in medical education?'. The ultimate goal of this study is to provide education and Competence by Design (CBD) leads with concrete evidence and guidance in understanding and addressing the unique psychological challenges that trainees and faculty are facing with the entrustable professional activity (EPA) assessment mandates, and their long-term effect in trainee's beliefs about successfully completing their medical training.

Additionally, Dr Bilgic has a keen interest in exploring performance assessment from a procedural skills lens, since intraoperative and outside of the operating room procedures are an important part of patient care across multiple specialties. Nonetheless, needs assessments have shown that trainees do not have competence in various essential procedural skills and that it is not clear how the residency programs are training their residents to acquire procedural skills, yet alone make sure that residents are competent by the end of residency. Therefore, Dr Bilgic is leading studies aimed at identifying simulation platforms available for training and assessment of procedural skills, determining the characteristics of the platforms and the procedural skills that are targeted, and exploring the types of outcomes that have been studied to date regarding procedural skills (e.g., metrics associated with trainee performances, and patient and hospital level outcomes).

SCIENTISTS

Teresa Chan, MD
Associate Professor, Medicine



Teresa Chan was appointed as a MERIT Clinician Scientist in July 2021. Her primary appointment is associate professor within the Department of Medicine's Division of Emergency Medicine and she is also cross appointed the new Division of Education & Innovation. Teresa received her Masters of Health Professions Education from the University of Illinois at Chicago (UIC).

Currently, Teresa is the Associate Dean, Continuing Professional Development. She previously was the Assistant Dean, Program for Faculty Development in the Faculty of Health Sciences at McMaster from 2019-2021. In 2021 she completed her term as the Director of the RCPSC Clinician Educator Area of Focused Competency Diploma program but will continue to serve as the AFC's specialty committee chair at the national level until 2023.

Dr. Chan serves on the editorial boards of several important health professions education journals including: Academic Medicine, Journal of Graduate Medical Education, and Perspectives on Medical Education. Dr. Chan is well known for her education research and innovation. She is a principal investigator in the METRIQ Study Group. She has also recently helped to co-found the Games As Medical Education Research (GAMER) Collaborative, which seeks to advance the theory, innovation, and science behind using game-based learning.

For her innovations and education research within the field of faculty development, Dr. Chan was awarded a top award this year: the 2022 Association of Faculties of Medicine of Canada (AFMC) Excellence in Faculty Development.

Dr. Chan's current programs of research include: contextualized clinical decision making; improving knowledge translation using education theory and innovation. Recently, she was quite proud to see her HSED Masters Thesis student (Victoria Tran) defend her thesis. We wish her luck as she begins her studies at the University of Toronto's Temerty School of Medicine this Fall.

Dr. Chan continues to work with Postdoctoral Fellows Dr. Yusuf Yilmaz & Dr. Ari Mazzeo who continue to work with her to explore the intersections of technology and continuing professional development. Dr. Mazzeo was also the selected postdoctoral fellow for the illustrious McCall MacBain fellowship in teaching and leadership from the Faculty of Health Sciences in 2021-2022. Both Drs. Yilmaz & Mazzeo were also the named postdoctoral fellows within MITACS Accelerate grants that were awarded this fall and will embark on new projects with industry partners. Dr. Yilmaz is working with two non-profit organizations (Canadian Health Leadership Network and LEADS Global) to help explore and define the nature of healthcare leadership development in a post-COVID world. Dr. Mazzeo will work with the MusicTechnic Music School to assess the nature of how artificial intelligence, augmented reality, and music might be applied in healthcare settings, with special attention to understanding the role of music in supporting healthcare providers.

This past year Teresa is proud to announce that she will be a part of a team of scholars from two Ontario Microcredential grants to create new learning experiences in the areas of both Health Ventures/ Entrepreneurship and Social Media for Healthcare Providers.

SCIENTISTS



Lawrence Grierson, PhD
Associate Professor, Family Medicine

Dr. Lawrence Grierson is Associate Professor with the Department of Family Medicine at McMaster University and an Education Scientist with the McMaster Faculty of Health Sciences' Program for Educational Research, Innovation, and Theory (MERIT) at McMaster University; appointments through which he leads a variety of research pertaining to Health Professions Education. He obtained his PhD in Kinesiology at McMaster University before completing concurrent postdoctoral fellowships with the Toronto Rehabilitation Institute, Sick Kids Learning Institute, Lawrence S. Bloomberg School of Nursing, and The Department of Occupational Therapy and Occupational Science at the University of Toronto. Lawrence serves as Assistant Dean of McMaster's Health Science Education Graduate Program and on the CFPC's Education Reform Taskforce. Lawrence leads the FSG Med Ed Lab (www.fsgmededlab.com) wherein he supports postdoctoral fellows, doctoral trainees, masters and undergraduate thesis students, and a compliment of research staff as they collaborate on a wide array of research concerned with education for primary care, admissions, education data capacity, and the acquisition of precision technical skills.

Among Lawrence's most relevant scholarship involves establishing the foundation for big education data platforms for the longitudinal appraisal of medical education metrics collated across physicians' learning trajectory; from medical school into practice. This work began with examinations of the factors that influence the policy intervention of matriculating International Medical Graduates (physicians trained abroad) into Canadian residency programs with the ultimate goal of improving physician distribution in Canada and continues with provincial collaborative work aimed at determining the admissions and training factors associated with trainee performance on the national licensure examinations. This research has continued to grow, and Lawrence now leads national and international groups of training institutions, data stewards, regulatory authorities, medical education researchers, and student and resident organizations in the development of jurisdictionally-relevant consensus statements for the ethical conduct of inter-institutional data-driven medical education research. Dr. Grierson receives funding from the SSHRC Insight Development and Connection programs, Digital Research Alliance of Canada, and Compute Ontario in support of this work.

As a member of the Department of Family Medicine, Dr. Grierson is also active in research that considers the way in which medical training and credentialing influences the delivery of continuous, comprehensive, and community-adaptive care across the country. Upon completing a CFPC-sponsored multiple-case study of the impact that the Certificates of Added Competence program is having on the delivery of family medicine in Canada, Lawrence is working through new research aimed at determining the relationships between family physicians' geographic disposition before medical school, during training, and when in independent practice. This research uses regression modeling techniques alongside qualitative methodology to determine the degree to which regional selection policies and distributed training practices influence physician practice choices. This work is supported by funding from the Academic Family Medicine Associates of Hamilton.

Renate Kahlke, PhD
Assistant Professor, Medicine



Dr. Renate Kahlke is a researcher, qualitative methodologist, theorist, and educator. After working in curriculum design and faculty development for interprofessional education and simulation at the University of Alberta, she earned a PhD in Educational Policy Studies there in 2016. She then completed a postdoctoral fellowship at the Centre for Health Education Scholarship at the University of British Columbia in 2018. She previously led program evaluation and research as a Research Associate at the Royal College of Physicians and Surgeons of Canada. In May 2021, Renate joined the Department of Medicine and MERIT as Assistant Professor and Scientist. She continues to hold an appointment as Adjunct Professor in the Department of Innovation in Medical Education at the University of Ottawa.

Currently, Renate is developing a program of research that uses a range of qualitative methods to explore how social and systemic pressures influence health professionals' and trainees' decisions, and how these factors may prevent them from doing what they think is best. This research is currently focused on two spaces in which these issues often occur. First, she examines moments when trainees' sense of agency is compromised in their clinical learning and work. She was recently funded by the Social Sciences and Humanities Research Council (SSHRC) to lead a longitudinal study across four institutions (McMaster University, University of British Columbia, University of Ottawa, and Western University) to identify social and systemic factors that impact racialized trainees' sense of agency when they encounter interpersonal or systemic racism. This study uses constructivist grounded theory, and will generate data through solicited diaries and interviews with racialized trainees as they progress through two years of their education.

Second, Renate's research looks at moments when practicing health professionals struggle to make change based on their learning in clinical settings. She is co-PI on a study with Dr. Meghan McConnell that examines learning among physicians when they conduct workplace-based assessments for trainees, funded by the Royal College of Physicians and Surgeons of Canada. This study is part of a larger investigation of the micro-learning that might occur in daily practice, and the features of clinical environments and interactions that facilitate or inhibit learning and practice change. This study also uses Constructivist Grounded Theory and a combination of interviews and observations to generate rich data on under-explored aspects of learning in clinical practice.

Influences on decision-making are often subtle and difficult for research participants to identify or articulate, particularly when their decisions are not aligned with what they feel is best. To support investigation of these difficult-to-articulate issues, a branch of Renate's work focusses on advancing methodological innovation, theory development, and meta-research. As an example, she is currently leading a large-scale integrative review focused on innovative interview elicitation techniques – or the use of artefacts such as drawings, photography, diaries, or maps to prompt participants to think and talk about a topic in new ways. The review compiles techniques from a broad range of disciplines – from anthropology to psychology – with the goal of improving participant engagement and data quality in qualitative interviews.

SCIENTISTS



Sandra Monteiro, PhD
Associate Professor, Medicine

Dr. Sandra Monteiro is a Faculty of Health Sciences MERIT Scientist appointed to the Department of Medicine. Sandra has a second appointment to the Centre for Simulation Based Learning as the Director of Scholarship. Sandra received her PhD in Psychology from McMaster University in 2013 and currently manages a successful international collaboration investigating theoretical models of cognitive processes behind clinical reasoning with application for education and assessment. In 2020, Sandra received the Excellence in Graduate Student Supervision Award from the Faculty of Health Science. In 2021, she received the Meridith Marks New Educator Award.

In addition to her primary research program on clinical reasoning, Sandra has expertise in competence assessment and best practices for education strategies. Sandra's contribution to these programs is mainly as a content expert on theories of learning, cognition more broadly, data analysis and research design. Within her main research focus on clinical reasoning, she is part of an internationally recognized research collaboration with Geoff Norman, Matthew Sibbald and Jonathan Sherbino. This research collaboration extends to research partners including Jonathan Ilgen from the University of Washington and Henk Schmidt and Laura Zwaan from Erasmus University. Recently, we evaluated the utility of electronic diagnostic support systems in improving and assessing diagnostic reasoning skills.

Sandra is currently working on two projects which will contribute to the understanding of expert medical diagnosis and the potential for new learning techniques in medical education to reduce diagnostic errors. In the first project, trainees and faculty will view images of ECGs and x-rays for very brief moments of time (less than a second). The images will include exemplars of certain medical diagnoses as well as normal exemplars. The study participants will then be assessed, allowing us to determine if their visual diagnostic skills have improved as a result of this intervention.

The second project investigates the influence of individual variation in the capacity for spatial processing and right-left discrimination. Right-left discrimination is a complex neuropsychologic process that utilizes several higher functions, including visuospatial processing, memory, language and integration of sensory information. It is possible that errors of right-left discrimination occur more commonly in health care than is reported. This study will utilize the Bergen Left-Right Discrimination (BLRD) test to measure participants' ability to rapidly perform spatial processing and whether their ability can improve with time and practice.

Geoffrey Norman, PhD
Professor Emeritus, Health Research Methods,
Evidence and Impact



Dr. Geoffrey Norman is Professor Emeritus of the Department of Health Research Methods, Evidence and Impact (formerly the Department of Clinical Epidemiology and Biostatistics). He has been involved with MERIT since 1971, first as a research associate (1971-1976) and then as a professor/scientist (1977-present). Geoff received a BSc in physics from the University of Manitoba in 1965, a PhD in nuclear physics from McMaster University in 1971, and a Masters in educational psychology from Michigan State University in 1977. Geoff has held an appointment at the Ontario Institute for Studies in Education since 1992 and has been an associate member of McMaster's Department of Psychology, Neurosciences and Behaviour since 1994.

Dr. Norman has received many honours and awards over the course of his career, including an Induction into Community of Excellence (McMaster, 2017), the President's Award for Excellence in Graduate Supervision (McMaster, 2013), the John Ready Award for Innovation (Association of Faculties of Medicine of Canada, 2012), Querido Visiting Professorship from Erasmus University, Rotterdam (2012), an honorary degree from Erasmus University (2010), the Karolinska Award for Research in Medical Education (2008), and the Award for Outstanding Contribution to Assessment of Clinical Competence (Medical Council of Canada, 2001). In addition, he also held a Canada Research Chair from 2001 to 2014.

Geoff's long-standing interest is in cognitive psychology, particularly as it applies to clinical reasoning, learning, and decision-making. Geoff has particular expertise in statistics and measurement and has authored several popular books in this area with David Streiner. He has taught these subjects for many years at the undergraduate and postgraduate level and has published more than 300 journal articles on these topics. Recent investigations have expanded into two areas: 1) the role of computerized decision support systems; and 2) visual diagnosis at extremely brief times in radiology and electrocardiography. Another recent area of interest is the role of simulation in learning and assessment in areas ranging from anatomy learning to critical care decision making.

Since 2017, McMaster's Faculty of Health Sciences has organized the Norman Education Research Day. This yearly event, named after Dr. Norman, is dedicated to celebrating the rich history and future of Health Professions Education research and scholarship across the Faculty of Health Sciences and McMaster University.

SCIENTISTS



Jonathan Sherbino, MD
Professor, Medicine

Dr. Sherbino is the assistant dean of MERIT. An emergency physician, he is a professor in the Department of Medicine. Jonathan is the past chair of the Royal College Emergency Medicine Specialty Committee, the co-editor of CanMEDS 2015 Framework, and co-founder of the Royal College Area of Focused Competence – Clinician Educator program. Jonathan is an award-winning teacher and educator, including recognition from the Society for Teaching & Learning in Higher Education as a 3M Fellow and via fellowship in the Academy of Medical Educators (United Kingdom). As an education scholar Dr. Sherbino has more than 180 publications and nearly 13,000 citations. Jonathan has presented his work more than 250 times, including a number of plenaries at international conferences.

The collaborative research program in clinical reasoning (with Sandra Monteiro, Matt Sibbald, Geoff Norman) continues with several successful projects. A Royal College Medical Education Research Grant funded a randomized trial that investigated the influence of crowdsourcing to improve diagnosis. The study demonstrated that group diagnosis is superior to individual diagnosis. However, a group of six does not perform more accurately than a group of 3. A study conducted in partnership with the Medical Council of Canada examines whether decision support software (e.g., artificial intelligence) influences on-line testing of clinical reasoning. This study builds on our previous work that shows artificial intelligence can help clinicians more accurately diagnose patient presentations.

Building on a previous multi-centre randomized trial, a new study on driving safety and learning effectiveness is ongoing. In collaboration with faculty from the Department of Psychology, Neuroscience & Behaviour, a fully immersive driving simulator tests driving effectiveness as participants seek to learn via podcasts.

Finally, in collaboration with Teresa Chan and others a novel leadership framework has been developed that integrates the LEADS framework with developmental competencies. This framework may assist organizations and emerging leaders to articulate the combination of leadership roles they hold in complex health systems.

SCIENTISTS

Matthew Sibbald, MD Associate Professor, Medicine



Dr. Matt Sibbald is a scientist at McMaster Education, Research, Innovation and Theory program with interests in simulation-based education, competency-based education, and clinical reasoning. He is an Associate Professor of Medicine, McMaster University and Interventional cardiologist at Hamilton Health Sciences and Niagara Health System. Matt graduated from the University of Toronto with an MD in 2004, completing residencies in internal medicine (2008), cardiology (2011) and fellowship in Interventional Cardiology (2013). Matt holds a Master in Health Professions Education in 2011 and a PhD in 2013 – both from Maastricht University, Netherlands. He is currently the Associate Dean of Undergraduate Medical Education, Cardiology Residency Program Director, and Chair of the AFC Committee for Intervention Cardiology at the Royal College of Physicians and Surgeons of Canada.

One focus of research for Matt is how technology assists in the diagnostic process, with a recently completed project using the electronic diagnostic support platform Isabel. The goal was to understand physician perceptions and barriers to the uptake of electronic diagnostic support in the emergency department. The study used a human prototype model to embed the tech into the triage process and interviewed physicians immediately after their experience. Read more about it in the *JMIR Human Factors* 2022;9(3):e39234 doi:10.2196/39234.

A second focus of research is around simulation support for health professions training programs. Matt has a Royal College funded project to interview educators who have published on the use of standardized patient programs to deliver curriculum addressing equity, diversity and inclusivity (EDI) mandates for health professions trainees. This builds on a scoping review Matt's group published in *Academic Medicine* reviewing use of standardized patient programs for EDI.

Finally, Matt received a Faculty of Health Sciences grant to study how healthcare training programs can best support trainees when professionalism lapses are identified. We recognize that professionalism lapses are increasing in all health professions training programs, with unique challenges emerging (social media, pandemic virtual curricula, strains on the healthcare system and so on). As part of this study, we will be recruiting current and recent graduates of health professions training programs with experiences around professionalism development.

Matt mentors trainees and faculty members studying virtual education, simulation education, competency based education and interprofessional education.

ADJUNCT SCIENTISTS

Anita Acai, PhD
Assistant Professor, Psychiatry and
Behavioural Neurosciences



Dr. Anita Acai is an Assistant Professor and Education Scientist in the Department of Psychiatry and Behavioural Neurosciences at McMaster University. Dr. Acai's interdisciplinary research program combines qualitative and quantitative research methods to understand and address issues related to equity and wellbeing in the health professions. She also conducts research in the areas of competency-based medical education, learner engagement in classroom-based teaching sessions, and the scholarship of teaching and learning. Dr. Acai obtained her PhD in Psychology from McMaster University in 2021. In addition to her primary academic appointment, she is an Associate Member of the Department of Psychology, Neuroscience, & Behaviour and an Adjunct Scientist with MERIT.

A major research focus for Dr. Acai in the past year has been equity and wellbeing in the health professions. This has included leading and analyzing a survey on equity, diversity, inclusion (EDI), and wellbeing in the Department of Psychiatry and Behavioural Neurosciences, as well as serving as the Lead Analyst for the Faculty of Health Sciences' Diversity and Climate Survey. With support from the Faculty, Dr. Acai recently welcomed Master's student Kathleen (Kat) Howcroft (Health Science Education Program) to undertake a project aimed at understanding the role of education and training in promoting EDI within the health sciences. Over the past year, Dr. Acai has also worked closely with medical student Cezara Ene to explore the pedagogical impacts of physician self-disclosure of illness experiences during educational encounters. Cezara's enrichment year project recently received funding through a McMaster University's Partnered in Teaching and Learning Seed Grant.

Another prominent research focus for Dr. Acai has been studying the impacts of competency-based medical education (CBME) curriculum implementation on residents, faculty, and program leadership. To this end, Dr. Acai recently welcomed Master's student Sakshi Sinha (Health Science Education Program) to study the emotional impacts of CBME implementation in psychiatry, and Master's student Dr. Spencer van Mil (Health Science Education Program, Clinician Investigator Stream) to examine the impacts of CBME implementation on resident wellbeing in pediatrics. Dr. Acai is also engaged in several other projects pertaining to CBME that seek to understand: (1) CBME implementation in subspecialty programs and (2) assessment processes in CBME, including the quality of narrative comments and the decision-making processes of competence committees.

Dr. Acai is additionally passionate about projects in which she can use her education science lens, methodological expertise, and strengths in interdisciplinary collaboration to contribute to "big R" research projects—for example, projects that have the potential to transform clinical care. Her numerous, ongoing collaborations span multiple departments including Medicine, Nursing, Pediatrics, Psychiatry, and Surgery. Examples include projects that seek to help healthcare providers more effectively recognize and respond to family violence; improve the experiences of informal caregivers, particularly those belonging to equity-deserving groups; and improve patient outcomes and reduce potential harm by understanding the factors that lead to opioid overuse in surgery and how they can be mitigated.

ADJUNCT SCIENTISTS



Ranil Sonnadara, PhD
Associate Professor, Surgery

As Director of the Office of Education Science for the Department of Surgery, Dr. Sonnadara's mandate is to integrate recent advances and best practices in education science into surgical curricula whilst training the next generation of surgical educators. This includes overseeing the transition to the new Competence By Design Curriculum for all surgical programs. Ranil is also a Faculty Affiliate with the Vector Institute for Artificial Intelligence, a member of the Schools of Computational Science and Engineering and Biomedical Engineering, and is an Adjunct Scientist with MERIT. Ranil also serves as the Creative Director for McMaster's LIVELab, and is currently appointed as the President, Chief Research Officer and CEO for Compute Ontario.

Musculoskeletal medicine in undergraduate medical education:

Musculoskeletal conditions are extremely common in the general population and are frequently seen by physicians in their day-to-day practice. Despite the relevance of musculoskeletal education for medical practice, ongoing research suggests that medical students are not receiving the training they need to manage musculoskeletal conditions after they graduate. To better understand the current gaps and design sustainable solutions, we assessed the musculoskeletal curriculum at the DeGroot School of Medicine. Based on the strengths and weaknesses of the curriculum identified, an online learning tool was developed for students to use during their clinical rotation in orthopedic surgery through a survey and MSK knowledge assessments. The results of the evaluation demonstrate that the learning tool holds promise in helping students to learn about musculoskeletal medicine.

ADJUNCT SCIENTISTS

Lara Varpio, PhD Adjunct Assistant Clinical Professor, Medicine



Dr. Lara Varpio is Professor of Pediatrics at the Perelman School of Medicine at the University of Philadelphia and the Co-Director of Research in Medical Education at The Children's Hospital of Philadelphia. She started these positions in 2022, after serving for 9 years at the Uniformed Services University of the Health Sciences (USUHS). Prior to that, She spent the first 6 years of her career at the University of Ottawa, Canada.

Dr. Varpio's research investigates how individuals (e.g., clinicians, patients, researchers, etc.) collaborate and perform in teams and organizations; she is interested in how individuals can shape larger groups and how groups shape individuals. Dr. Varpio uses qualitative methodologies and methods, integrated with theories from the Social Sciences and Humanities. Her most recent work is related to: (i) interprofessional care teams (e.g., how interprofessional collaboration can meaningfully contribute to the landscape of practice); and (ii) health professions education scholarship units and scholars (e.g., the factors affecting the success of these units in Canada, the US, Australia, and New Zealand). Dr. Varpio mentors many individual health professions educators from several specialties (e.g., surgery, pediatrics, nursing, social work, etc.) and in a wide range of topics (e.g., experiences of shame in medical learning, professional identity formation, etc.). Dr. Varpio is internationally recognized for her expertise in qualitative research methods and methodologies, and with many different theories.

Dr. Varpio has won many awards over her career. She was recently selected by the Fulbright Scholarship committee to mentor and host a Fulbright Scholar award winner from Australia. In 2019, she was selected as one of twelve inaugural Karolinska Fellows. She was also selected as the Early Career Medical Educators of Canada's 2020 award winner for mentorship. Furthermore, her research is often acknowledged via awards given to individual manuscripts (e.g., one of her PhD students won the 2022 Best Paper award in the Association of American Medical Colleges' (AAMC) Research in Medical Education (RIME) selections). She is regularly the author of the top downloaded article in individual journals (e.g., in 2020 for Perspectives on Medical Education).

Dr. Varpio is an Associate Editor for Perspectives on Medical Education creator of Failures Surprises column) and for Advances in Health Sciences Education (creator of Theory Matters column). She was invited to edit special issues for Academic Medicine and Perspectives on Medical Education, and two special manuscript series in the Journal of Graduate Medical Education. She has served on the Association of American Medical Colleges' (AAMC) national Medical Education Meeting planning committee since 2013 (and has served as Chair since 2019). She is past-Chair of the Association for Medical Education in Europe's (AMEE) grant committee and sits on the Royal College of Physicians and Surgeons of Canada's (RCPSC) grant committee. In 2017, Dr. Varpio joined the RCPSC's Key Literature in Medical Education (KeyLIME) podcast as co-host (KeyLIME has followers in +80 countries and has +300,000 downloads annually).

SCHOLARS



Ellen Amster, PhD
Associate Professor,
Family Medicine & Religious
Studies

Dr. Ellen Amster is the Jason A. Hannah Chair in the History of Medicine at McMaster University and appointed to the Departments of Family Medicine and Religious Studies. Her research engages transnational medical histories and public health, focusing especially on global health, traditional healing, women's histories, and imperialism. From her 2013 book, *Medicine and the Saints: Science, Islam, and the Colonial Encounter in Morocco, 1877-1956* (Austin: University of Texas Press), she developed a global health and Arabic study abroad program for McMaster students in Morocco. She founded the Morocco-Canada network in maternal and infant health with support from a 2017 CIHR global health population health grant and her 2020-2025 SSHRC IG project is entitled, "The Other is Me: Transvestism, Hybridity, and Cosmopolitan Identities in Colonial and Post-Colonial Morocco."

At McMaster, Dr. Amster provides a regular speaker series open to the campus in the history of medicine. Her teaching includes history of public health for the MPH and MD programs, research electives and professional competencies for MD students in the Michael DeGroote School of Medicine, and Islamic and gender studies in the Department of Religious Studies. Dr. Amster developed the AMS-funded history of medicine and medical humanities research portal, with hundreds of libraries, archives, museums, digital collections, and grants for research projects and the medical community.



Daniel Brandt Vegas, MD
Associate Professor,
General Internal Medicine

Dr. Daniel Brandt Vegas is a Clinician Educator in the Department of Medicine at McMaster University. He received his MHPE from the University of Illinois at Chicago, and is currently focused on developing a novel program evaluation strategy for post-graduate medical education programs to increase the amount and quality of data gathered and enable advanced analyses to inform goal focused, achievable program specific strategic plans. He is the deputy program director for the Clinician Educator AFC diploma program at McMaster University.

His other interests are systems improvement, end of life care, and clinical reasoning. Daniel is mainly focused on the interface between clinical practice and medical education scholarship, and the tension that exists between the pressing urgency of the clinical world and the growing body of science in different areas of medical education. Daniel's role as a Clinician Educator, and world view in general, are largely informed by his erratic background in life, making his way from his native Venezuela, eventually zig-zagging up to McMaster. Daniel strongly believes in language, in a broad sense. This is often the source of arguments, but also many interesting conversations.



Deepak Dath, MD
Professor, Surgery

Dr Deepak Dath is a professor of surgery at McMaster University. His current educational projects include research on validating a simple tool to measure the quality of educational materials and understanding how medical students decide to choose a career in general surgery. His main focus is in leadership in education. Dr. Dath is co-founder of the TISLEP leadership summit and the sanokundu (<https://www.sanokundu.com>) group of educators who aim to make leadership education accessible to physician trainees and training programs worldwide. He is a faculty of the CLIME (Canadian Leadership in Medical Education) course and the co-chair of developing CLIME II. Dr. Dath is working to develop value based or character based leadership training.



Farah Hasan, BSc
HSED/MERIT
Graduate Fellow

Farah Hasan completed her BSc in Biology and Psychology, Neuroscience and Behaviour, and is currently pursuing her MSc in Health Science Education at McMaster University. She currently holds an HSED/MERIT Graduate Fellowship and is the HSED student representative for her cohort. For her graduate thesis, she is conducting research on the efficacy of a clinical virtual reality module for anatomy education under the supervision of Dr. Ranil Sonnadara and in collaboration with Dr. Bruce Wainman. In the community, Farah is a speaker with Project Sleep's Rising Voices program, where she works to improve public understanding of sleep disorders, and shares insights from her own experience as a patient and advocate.



Leslie Martin, MD
Assistant Professor,
General Internal Medicine

Dr. Leslie Martin is an Assistant Professor with the Department of Medicine, within the Division of General Internal Medicine. She completed a Masters in Health Professions Education at Maastricht University. Dr. Martin is the Program Director for the Internal Medicine Residency Program. She is involved in the McMaster University Clinician Educator Program as a Unit Supervisor. Her research interests include applying qualitative methodology to explore workplace-based learning in postgraduate medical education during the era of competency-based medical education (CBME). She has been involved in the design, implementation and now evaluation of the CBME for the Internal Medicine Residency Program at McMaster University. Lastly, she has a clinical focus on caring for people who use drugs, and is the outgoing Co-Lead of the Inpatient Addictions Medicine Service at St. Joseph's Healthcare Hamilton and Hamilton Health Sciences.

SCHOLARS



Monica Molinaro, PhD
Postdoctoral Fellow,
Family Medicine

Dr. Monica Molinaro is currently a Banting Postdoctoral Fellow in the Department of Family Medicine at McMaster University, where she is also a MERIT (McMaster Faculty of Health Sciences program for Education, Research, Innovation, and Theory) Scholar, and instructor in the Bachelor of Health Sciences Undergraduate program. Dr. Molinaro completed her PhD in Health and Rehabilitation Sciences at the University of Western Ontario, where she conducted a critical narrative analysis on pediatric oncology nurses' stories of moral distress, and worked as a research associate at the Centre for Education Research and Innovation (CERI). Dr. Molinaro uses a variety of qualitative critical and interpretive methodologies to study health care provider experiences of difficult aspects of professional practice. Funded by the Banting Postdoctoral Fellowship and a CIHR operating grant, Dr. Molinaro is currently leading projects which aim to better prepare primary care providers to care for patients whose medical and social needs are entwined, and to help alleviate the moral distress experienced by clinicians engaged in morally and ethically complex aspects of healthcare.



Som Mukherjee, MD
Associate Professor,
Oncology

Dr. Som Mukherjee is an Associate Professor in the Department of Oncology, Division of Medical Oncology at McMaster University. He completed a two year oncology research fellowship combined with a Masters in Health Research Methodology at McMaster University. He recently completed a 9+ year term as program director for the McMaster medical oncology residency training program and a 2 year term as national program director subcommittee chair for the Royal College of Physicians and Surgeons Medical Oncology Specialty Committee. His research interests in education include evaluation of resident wellness programs, assessment of teaching using electronic modules for resident education, integration of entrustable professional activity (EPA) assessments within objective structure clinical skills examination (OSCE) and evaluating various aspects of new competency based medical education (CBME) programs within existing residency training programs. His clinical areas of interest include the management of patients with breast and genitourinary malignancies.



Alison Scholes, MD
HSED/MERIT
Graduate Fellow

Alison graduated from Queen's University in June where she majored in Life Sciences. During her undergraduate studies, Alison's work as a research assistant at Brantford General Hospital and involvement with the 3 Wishes Program sparked her interest in end-of-life care and ethical dilemmas. Having received the MERIT-HSED fellowship award, Alison will be pursuing a Masters Degree in Health Science Education at McMaster University beginning this fall. The focus of Alison's thesis will be triage decisions during COVID-19 and the issue of moral distress.



Quang Ngo, MD
Associate Professor,
Pediatrics

Dr. Quang Ngo is an Associate Professor and clinician educator in the Department of Pediatrics at McMaster University and a practicing pediatric emergency medicine physician at McMaster Children's Hospital. He is the founding program director for the Pediatric Emergency Medicine subspecialty residency program at McMaster University and chair of assessment with the DeGroot School of Medicine. He has previously served as the associate and interim program director for the core Pediatrics program at McMaster University and is core faculty in the Clinician Educator Area of Focused Competence at McMaster University. He is currently completing his Masters of Health Professions Education at the University of Illinois at Chicago. His educational and scholarly interests are in simulation based assessment, teaching and feedback, and has given talks and workshops nationally and internationally on these topics.



X. Catherine Tong, MD
Associate Clinical Professor,
Family Medicine

Dr. X Catherine Tong is a family physician with a practice in emergency medicine and prison health in Kitchener-Waterloo. She leads the faculty development portfolio for the Enhanced Skills Program at the Department of Family Medicine. She is the Program Director of the Royal College Clinician Educator Area of Focused Competence Diploma program at McMaster University. Recently, she has worked towards designing and delivering effective faculty development activities to address learning needs in equity, diversity and inclusivity in the clinical teaching environment.



Mohammad Zubairi, MD
Assistant Professor, Pediatrics

Dr. Zubairi is a Developmental Pediatrician at Ron Joyce Children's Health Centre & Associate Professor in the Department of Pediatrics at McMaster University. He is the Division of Developmental Pediatrics Educational Resource Person (ERP), and also lead for training and education with the McMaster Autism Research Team (MacART). He is co-leading the development of the Equity Advocate and Allyship Program through Faculty Affairs and the Equity, Diversity and Inclusion Advisory Committee (EDIAC). He is a member of the Creativity and Humanism team with the Program for Faculty Development. As a MERIT Scholar, Dr. Zubairi is leading several studies in health professions education including an understanding of the knowledge-to-practice continuum in the emergency room care of children and youth with autism spectrum disorder, and how to enhance reflection on culture among undergraduate and graduate health professions students. He has also been the Department of Pediatrics lead on a project looking at pandemic adaptations in education, and the impact on trainees and faculty in collaboration with MERIT Scientists.

MEMBERS

Bashayer Abdulla

Tala Abu-Hijleh

Ali Al Maawali

Arden Azim

Bojana Babic

Alison Baker

Ereny Bassilious

Amanda Bell

Emilie Beyls

Emily Block

Joanne Britto

Kat Butler

Kyla Caners

Alice Cavanagh

Alexander Chorley

Shivani Dadwal

Victoria David

Chante de Freitas

Anahita Dehmoobad Sharifabadi

Crystal Fong

Jen Hoogenes

Shera Hosseini

Michelle Howard

Andrea Hunter

Bronte Johnston

Sarrah Lal

Tiff Lam

Marissa Laureano

Claire Lee

James Leung

Marie Leung

Robin Mackin

Arianna Mazzeo

Zahra Merali

Siraj Mithoowani

Shawn Mondoux

Omar Mourad

Trishana Nayiager

Syed Osmani

Simon Overduin

Sean Park

Maurine Parzen

Jose Pereira

Dilshan Pieris

Maria Pratt

Jason Profetto

Claire Ramlogan-Salanga

Inge Schabort

Natasha Snelgrove

Danielle Soucy

Lisa Tucker

Hugh Traquair

Spencer Van Mil

Yuding Wang

Heather Waters

Erin Williams

Michael Wong

Sherwin Wong

Jason Woodfine

Marco Zaccagnini

"In just a few short months, MERIT has already helped me build my network of collaborators in education scholarship. It is now my home-base to learn about new research developments in education and to get feedback on my own innovation or research ideas. NERD has been a great venue to showcase my work and to learn about what's new and exciting in education across the Faculty of Health Sciences."

Dr. Siraj Mithoowani,
Member

MERIT STAFF



Sneesha Anandkumar
Multimedia Assistant



Heba Khan
Research Assistant



Samantha Applewhaite
Program Coordinator



Mark Lee
Research Support Manager



Sonaina Chopra
Research Assistant



Mary Lou Schmuck
Research Assistant



Betty Howey
Research Assistant



Danielle Stayzer
Manager



Amy Keuhl
Project Officer



MERIT MEMBERSHIP

The MERIT program is dedicated to building a community of practice around health professions education. There are two levels of membership for application:

Member and Scholar



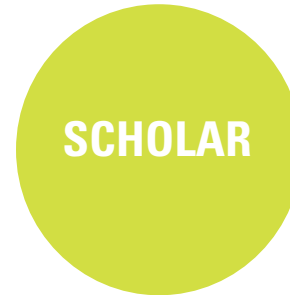
MEMBER

Benefits:

- Profile in MERIT communications
- Opportunity for project consultation with one of our scholars or scientists
- Membership on Masters in Health Science Education thesis committee(s)

Responsibilities:

- Regular attendance at our monthly MERIT Rounds
- Presentation at MERIT rounds



SCHOLAR

Benefits:

- Profile in MERIT communications
- Opportunity for project consultation with one of our scholars or scientists
- Internal competition for pilot research funding
- Access to office space and research assistant support (limited)
- Access to internal peer review of applications, publications and academic mentorship

Responsibilities:

- Peer consultations with Scholars and Scientists
 - Scholarly paper review
- Regular attendance at our monthly MERIT Rounds
- Presentation at MERIT Rounds

Interested in joining MERIT's community of practice?
Learn more and join here: <https://bit.ly/MERITMembership>

AWARDS AND HONOURS



Anita Acai

Health Science
Education Graduate
Program, Faculty of
Health Sciences
Faculty Contribution
Award



Teresa Chan

Association of Faculties
of Medicine of Canada
(AFMC)
Award for Outstanding
Contribution to Faculty
Development in Canada

U21 Health Sciences
Group
Teaching Excellence
Award



Sandra Monteiro

Canadian Psychological
Association Section on
Women and Psychology
(SWAP)
Feminist Mentoring
Award (nominee)



Jonathan Sherbino

Memorial University,
Faculty of Medicine
Meridith Marks
Mentorship Award



Matthew Sibbald

Canadian Association
for Medical Education
(CAME)
Meridith Marks New
Educator Award



Lara Varpio

Association of American
Medical Colleges (AAMC)
Research in Medical
Education (RIME)
selection
New Investigator
Award (primary degree
supervisor for graduate
student awardee)

ACTIVE GRANTS

**TOTAL
FUNDING:
\$3.4M**

Academic Family Medicine Associates Research Grant Competition

Undergraduate medical education policies that influence the choice of Family Physician practice location: A mixed methods study of geographic disposition during training and in practice

CAEP Emergency Medicine Advancement Fund

Using Natural Language Processing and Machine Learning to rate narrative assessment comments in Competency Based Medical Education

Canadian Institutes of Health Research

Moral distress in critical care and family medicine during the COVID-19 pandemic

College of Medicine Research Award (CoMRAD)

Enhancing competency-based medical education assessment with machine learning, natural language processing, and other advanced analytic techniques

Digital Research Alliance of Canada

Data Champion Pilot Project: Research Data Management Champion in the Medical Education Research Sector

Dr. Parveen Wasi Resident Research Grant in Medical Education

Connecting Interprofessional Competencies to CanMEDS: Towards a Blueprint of IPE in PGME

eCampus Ontario Virtual Learning Strategy

- Faculty Development 2.0: QUESTs for the future
- Healthcare Leadership Case Development
- McMaster health professions education research: A digital primer
- Preparing health professional learners for clinical workplaces: a digital, interprofessional course
- Problem-Based Learning 2.0: Outcomes-based core educator and leader training for the health professions
- Taking HPE into the Metaverse: A design-based research study to create an emergency department simulation space

EM:RAP Foundation Medical Education Research Grant

The Impact of Exercise on Podcast Knowledge Acquisition and Retention Among Emergency Medicine Resident Physicians

Future of Canada Project Research Grant

Bringing hope and well-being to community-dwelling older Ontarians in the pandemic world through creative writing and digital literacy learning

MacPherson Institute Priority Areas for Learning and Teaching Grant

Assessing the quality of narrative comments in psychiatry

MacPherson Institute Student Partners Program Grant

Designing and evaluating an educational intervention in geriatric psychiatry

McMaster University Department of Pediatrics Education Endowment Fund

- Community physician engagement and outreach program
- Evaluating the impact of competency-based medical education on the experience and wellbeing of pediatric residents
- MacPeds SMaRT Tool: Evaluation of an Innovative Educational Electronic Resident Research Tool

McMaster University Department of Psychiatry and Behavioural Neurosciences Innovation Award for Education

- Competency-based medical education evaluation: Assessing provision of feedback
- Competency-based medical education implementation: Understanding the emotional effects for postgraduate learners
- Electroconvulsive therapy curriculum for PGY5 and 6 geriatric psychiatry subspecialty residents

McMaster Faculty of Health Science PGME Medical Education Research Grant

- EEG Point of Care Learning Resource
- Managing disorienting dilemmas on the route towards professionalization: a qualitative study of a Canadian adult cardiology residency training program
- Virtual Interprofessional Simulation for Junior Learners

McMaster University Partnered in Teaching and Learning Seed Grant

Physician self-disclosure of illness experiences during educational encounters

Medical Council of Canada Education Research Grant

- Examining the Role and Practical Implications of Philosophical Positions in Assessment
- Therapeutics Decision Making Exam for International Medical Graduates

Medical Education Research Grant

Peer Observation of Teaching: Multiple-Site Case Study Guided by Diffusion of Innovations Theory

MERIT Scholar Research Pilot Grant

Evaluating the implementation of Competence by Design in psychiatry

MITACS Accelerate

- *Accelerating the Healthcare Leader's Career Pathways: Determining pathways of leadership, and developing and testing a mobile app prototype*
- *Appraising medical school admissions tools for implicit bias*
- *Understanding design principles of music and health care education as interdisciplinary field and developing an online education program: a qualitative study*

Northumbria University Application Seed Funding Scheme

Pose estimation for health professional education: Development of an objective computerized approach for measuring and assessing technical competencies in nursing

Ontario Microcredentials Challenge

- *Health Ventures Microcredentials*
- *Social Media for Healthcare Providers*

Physicians' Services Incorporated Operating Grant

Intimate partner violence during recovery from a musculoskeletal injury: A pilot prospective, multicentre cohort study.

Physicians' Services Incorporated Research Grant

Diagnostic Error and Decision Support Systems

Physicians' Services Incorporated Starter Fund

Parental leave policies and the effects of becoming a parent: A nationwide survey of surgical trainees and staff at Canadian academic centres

Program Objective Memorandum (POM) Funding, US Department of Defense

Implicit and risky - exploring translational activities in developing assessment program for competency based medical education

Royal College of Physicians and Surgeons of Canada - Associated Medical Services CanMEDS Research Grant

Canvassing for CanMEDS: How are the Intrinsic CanMEDS Roles integrated into EPAs.

Royal College of Physicians and Surgeons of Canada - Associated Medical Services Phoenix Call-to-Caring Funding

Connecting Interprofessional Competencies to CanMEDS: Towards a Blueprint of IPE in PGME

Royal College of Physicians and Surgeons of Canada - Intramural Grant

Reframing learning and assessing: How do assessors learn in the context of workplace-based assessment?

Royal College of Physicians and Surgeons of Canada - Strategic Initiatives Grant

- *Exploring the development of standardized patient educational experiences to support equity, diversity, and inclusivity mandates of healthcare training programs*
- *Framework for Simulation Based Equity, Diversity and Inclusion: Exploring the validity of simulated diversity*

Royal College of Physicians and Surgeons of Canada - Medical Education Research Grant

When are we done? Exploring the longevity of CBME implementation

Social Sciences and Humanities Research Council (SSHRC) Connection Grant

Research data management capacity building initiative: health professions education

Social Sciences and Humanities Research Council (SSHRC) Insight Development Grant

- *From synthesis to consensus: Characteristics of successful research teams in an interprofessional and interdisciplinary field*
- *How are emotions of medical trainees and faculty impacted by new assessment mandates implemented in medical education?*
- *Links in the chain: A data-driven approach to understanding the relationship between professional education and its outcomes*
- *Racial equity in medical education: Exploring sociocultural factors that help and hinder agency among racialized learners*

U21 Health Science Group International Projects Fund

A multi-site investigation into the effectiveness of an artificial intelligence powered clinical decision support technology on students' clinical reasoning when using virtual and real patients

Uniformed Services University of the Health Sciences Intramural Fund

Leadership and Followership within Healthcare Teams: Exploring the Roles and Collaborative Dynamics in Interprofessional Teams

University of Calgary Health Science and Medical Education Research and Innovation Funding Competition

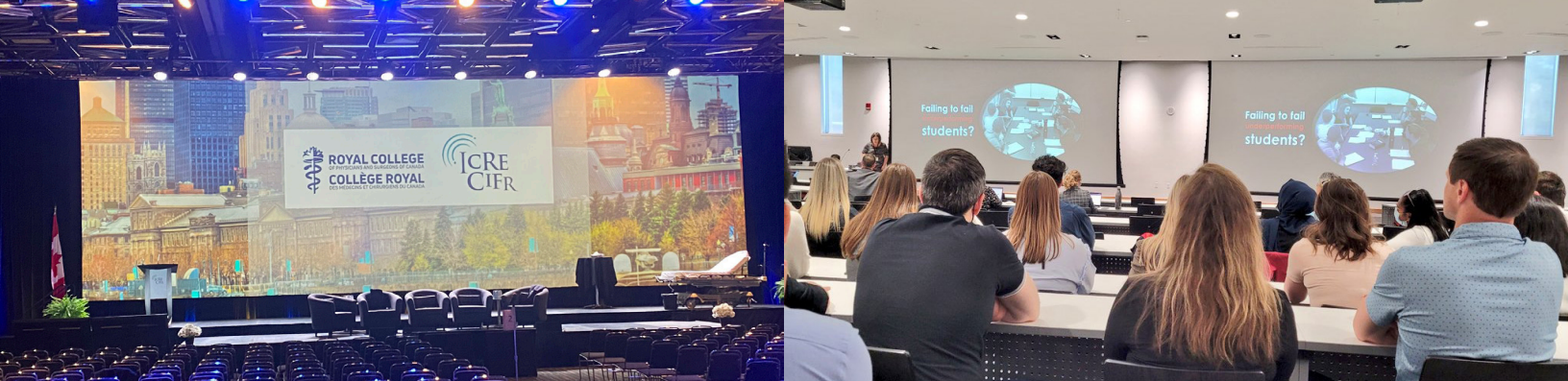
Exploring the normalization of Competency-based Medical Education across Canada

University of Ottawa Anesthesiology and Pain Medicine Scholarship Grant

What's emotion got to do with it? Anesthesiologists emotional experiences in the management of difficult airways

University of Ottawa Medical Education Research Grant

- *Elicitation Techniques to Enrich Qualitative Interview Data: An Integrative Review*
- *The First Canadian Adult Cardiology Bootcamp: Impact on 1st year Cardiology Trainees' Knowledge, Self-Perceptions and CBD Stage*
- *The use of Virtual/Online Nominal Groups in Research: A Scoping Review*



PRESENTATIONS AT CONFERENCES & MEETINGS

AFMC Continuing Professional Development Dean's Retreat. ReThinking Program Evaluation & Outcomes in CPD*

AMEE Conference. **Lyon, France**

American Association for Anatomy Conference. **Philadelphia, Pennsylvania**

American Association of Medical Colleges' Learn Serve Lead Conference*

American Educational Research Association. **San Diego, California***

Association of Faculties of Medicine Canada National CPD Deans Retreat*

Australian - New Zealand Intensive Care Society. **Sydney, Australia***

Bridging Leaders Program, Program for Faculty Development, McMaster University. **Hamilton, Ontario***

Brigham Education Institute, Brigham and Women's Hospital, Mass General Brigham. **Boston, Massachusetts**

Canadian Association for Medical Education (CAME) Webinar*

Canadian Conference on Medical Education. **Calgary, Alberta***

Centre for Health Education Scholarship (CHES), University of British Columbia. **Vancouver, British Columbia**

Chilean Society of Emergency Medicine. National Congress. **Santiago, Chile***

Copenhagen Academy for Medical Education and Simulation (CAMES), Faculty of Social Sciences, University of Copenhagen. **Copenhagen, Denmark**

Council of Residency Directors of Emergency Medicine Academic Assembly. **San Diego, California***

Department of Innovation and Medical Education Rounds. University of Ottawa*

Department of Pediatrics, McMaster University. **Hamilton, Ontario**

Education Symposium. Canadian Geriatric Society*

Faculty of Health Sciences Women's Symposium, McMaster University. **Hamilton, Ontario***

Family Medicine Forum*

First International Congress on Health Sciences Education. National Autonomous University of Mexico. **Mexico City, Mexico***

Innovations in Medical Education. Innovations in Medical Education. **Los Angeles, California**

International Conference on Residency Education. **Montréal, Québec**

International Society for the Prevention of Child Abuse & Neglect Congress. **Québec City, Québec**

International Society of Thrombosis and Hematology. **London, United Kingdom**

Korean Society of Emergency Medicine Congress. **Seoul, South Korea***

Mälardalen University, School of Health, Care and Social Welfare. **Västerås, Sweden***

McMaster University, Division of Urology, Department of Surgery. **Hamilton, Ontario**

Meeting of the Canadian Psychiatric Association. **Toronto, Ontario**

* indicates virtual event

PRESENTATIONS AT CONFERENCES MEETINGS CONT...

North American Primary Care Research Group (NAPCRG) 50th Annual Meeting. **Phoenix, Arizona**
Northeast Group of Educational Affairs (NEGEA) Annual Virtual Conference*
Northern Ontario Research Toward Health Hub (NORTH) and Medical Education Research Lab in the North (MERLIN) Seminar Series, Northern Ontario School of Medicine*
Northwestern University. **Evanston, Illinois**
Nursing Network on Violence Against Women International Conference. **Durham, North Carolina**
Office of Education Science, Department of Surgery, McMaster University.

Hamilton, Ontario

Ontario College of Family Physicians, Board Retreat. **Toronto, Ontario**
Ontario Psychology Undergraduate Thesis Conference. **St. Catharines, Ontario**
Örebro University. **Örebro, Sweden**
Ottawa Conference. **Lyon, France**
Program Evaluation Advisory Committee, College of Family Physicians of Canada.

Mississauga, Ontario

Psychiatry Research and Scholarship Day. **Hamilton, Ontario**
Research in Medical Education. Learn, Serve, Lead: The AAMC Annual Meeting.

Nashville, Tennessee

Research in Progress Rounds, St. Joseph's Healthcare Hamilton. **Hamilton, Ontario**
ReThink International Conference. McMaster University. **Hamilton, Ontario***
Society for Academic Emergency Medicine New England Regional Meeting. **Stanford, California**

Society for Academic Emergency Medicine. **New Orleans, Louisiana**
Society for Academic Emergency Medicine. National Education Fellow Meeting*
Society for Teaching and Learning in Higher Education (STLHE) Annual Conference.

Ottawa, Ontario

Society of Directors of Research in Medical Education. **Burlington, Vermont**
Society of Rural Physicians of Canada Annual Rural & Remote Medicine Course. **Ottawa, Ontario**
SoTL Conference, École hôtelière de Lausanne*
Student Partnership Symposium, McMaster University. **Hamilton, Ontario**
Surgery Education Research Group, Massachusetts General Hospital, Mass General Brigham. **Boston, Massachusetts**

Massachusetts

Thai Medical Education Conference, Job Roles of the 2030 Medical Educators: Imagineering the Education Futurists.

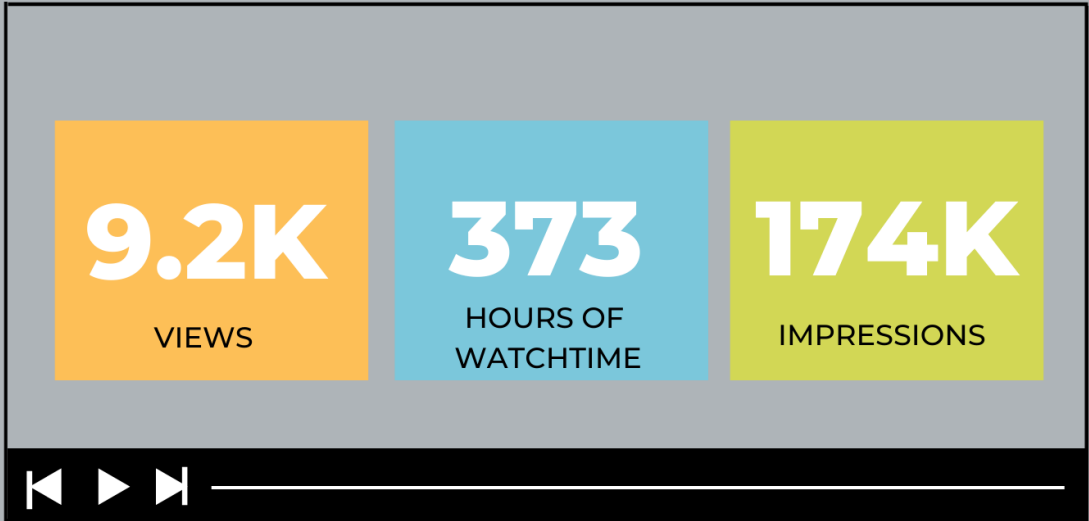
Phuket, Thailand*

The Society of Rural Physicians of Canada. **Ottawa, Ontario**
UniLearn MedEd*
University of Calgary, Health & Medical Education Scholarship Symposium. **Calgary, Alberta***
University of Ottawa, Meridith Marks Research Day. **Ottawa, Ontario***
University of Saskatchewan AFC Clinician Educator Program Rounds*
Wilson Centre Research Rounds, University of Toronto and University Health Network. **Toronto, Ontario**





MERIT SOCIAL MEDIA BY THE NUMBERS



McMaster Education Research Innovation & Theory | Annual Report 2022



McMaster Education...



MOST POPULAR



Dr. Eric Warm



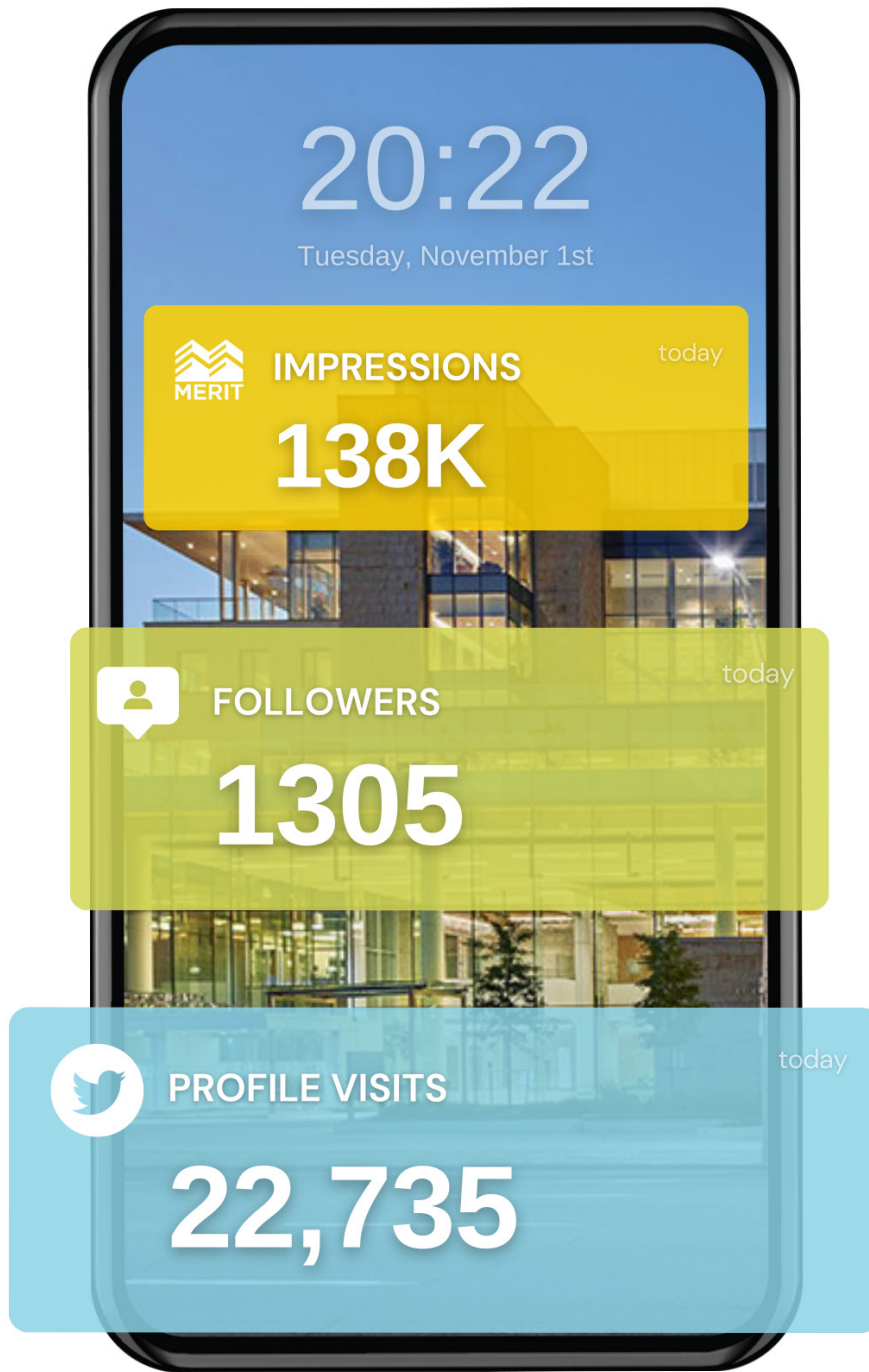
Dr. Elif Bilgic



Dr. Brian Hodges

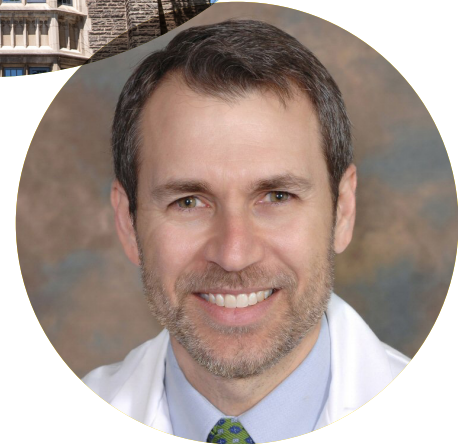


Dr. Rakesh Patel



TOP TWEET OF 2022

MERIT @MERIT_McMaster
Congratulations to Dr. Catherine Munn (@residentaffair1) on winning the Sibley Award!! #meded



MERIT ROUNDS

The Rounds profile emerging topics of interest and controversy in health professions education. Using a facilitated, interactive format, local and international presenters share ideas for discussion and debate.

2022 Rounds Event Listing

Dr. Eric Warm, University of Cincinnati

Tell me I'm Great: How Poor Assessment Practices Make us Unsafe

Dr. Brian Hodges, University of Toronto

Compassion, Care and Learning in our Hyper-Technological Age
(John C. Sibley Award Ceremony & Lecture)

Dr. Elif Bilgic, McMaster University

Procedural Skills Training and Assessment

Dr. Andrea Gingerich, University of Northern British Columbia

Failure to fail phenomenon: What are we thinking?
(Norman Education Research Day)

Dr. Rakesh Patel, University of Nottingham

If it's not written down, it didn't happen ... or did it?

**Dr. Lawrence Grierson, McMaster University;
Dr. Mahan Kulasegaram, University of Toronto**

Building capacity for big data in medical education research: Consensus on risks, benefits, values, and best practices

Dr. Ilana Bayer, Dr. Amanda Bell, Dr. Ruth Chen, McMaster University

Virtual Teaching in Health Professions Education

Rounds presentations can be found on the MERIT YouTube Channel here:

<https://bit.ly/3ltgrFx>



MERIT THINKTANK

MERIT *thinkTank* is an education research consultation service. Education scholars working on a project or research design can request a consult. MERIT Scientists and Scholars attend, bringing diverse perspectives that include: cognitive psychology, social sciences, kinesiology, qualitative and quantitative methodologies, psychometrics, and more.

Each consultation includes a presentation by the principle investigator, followed by a facilitated discussion between the MERIT team and the PI.

2022 *thinkTank* Sessions

Dr. Wendy Ye, Dr. Candice Griffin, Irina Sverdlichenko & Dr. Daniel Brandt Vegas

The Immediate and Delayed Impacts of Patient Death during Residency

Dr. Catherine Tong & Dr. Sandra Monteiro

Creating Brave Spaces: Evaluating a Simulation-based Faculty Development Curriculum on Equity, Diversity and Inclusivity



LUNCH & A LAB MEETING

Introduced in 2020, MERIT is offering an opportunity to network, discover and discuss topics in health professions education. The featured guest will give an in-depth look into a topic in HPE and a presentation of their current work. This will also give individuals the chance to get their questions addressed related to their work and expertise.

2022 Lunch & a Lab Meeting Sessions

Dr. Sheri Hosseini

Developing an Evaluation Framework for a National Palliative Care Education Program

Dr. Meredith Vanstone

What shapes our professional lives? Policies and Power in Medical Education

Dr. Sandra Monteiro

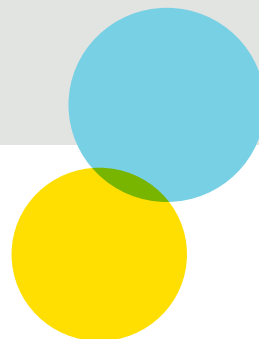
High stakes assessment, authenticity and the internet

Dr. Ilana Bayer & Daisy Chen

Technology and ed-tech support with the Learning Technologies Lab (LTL)

"MERIT provides the Department of Medicine with both expert consultation on educational matters and with our only real access to pedagogical innovation. Having MERIT at McMaster both contributes strongly to the academic mission and expands our ability to do research into areas that we would otherwise be unable to reach."

**Dr. Mark Crowther, Chair
Department of Medicine**



Number of Attendees:
135



NORMAN EDUCATION RESEARCH DAY

Norman Education Research Day (NERD) is dedicated to celebrating the rich history and future of Health Professions Education research and scholarship across the Faculty of Health Sciences and McMaster University and is named after one of McMaster's longstanding faculty, **Dr. Geoff Norman**. Dr. Norman is a Professor Emeritus, a Scientist at MERIT, and a member of the Department of Health Research Methods, Evidence, and Impact.

Information about the day can be found at the NERD website:
<https://www.normanresearchday.ca/>

Keynote Speaker

Dr. Andrea Gingerich

Dr. Andrea Gingerich is an assistant professor in the Division of Medical Sciences at the University of Northern British Columbia in Prince George. She teaches within the University of British Columbia's Northern Medical Program and is a scholar with the Centre for Health Education Scholarship. She is a health professions education researcher who studies how preceptors think while assessing, supervising, and maintaining boundaries with others. Born and raised in Huron County, where the livestock outnumber the people, Andrea draws on eclectic learnings to share candid perspectives on contentious issues in medical education.

Failure to fail phenomenon: What are we thinking?

Closing Panel

Dr. Anita Acai (McMaster University), Dr. Andrea Gingerich (University of Northern British Columbia), Dr. Walter Tavares (University of Toronto)

Keynote presentation and closing panel can be found here: <https://bit.ly/3vI48KF>

PSI VISITING SCHOLARS EVENT

The Power of Community: Building inclusive networks of research and support

What do inclusive research communities look like? How are they sustained (grow) while professional, personal, and system factors shift over time? What about early researchers? Most importantly, who is not sitting at your table and how can we break down barriers to get them there?

This one-day conference will explore the power of teams and the effects it can have on the success of early, mid, and senior education scholars. The event will share best evidence and practice via presentations, interviews, small groups and panels. The conference is part of the Visiting Scholars program sponsored by Physicians' Services Incorporated.



Dr. Karen Hauer
University of California
San Francisco



Dr. Jane Philpott
Queen's University



Dr. Cathy Risdon
McMaster University

Presentations and panel can be found here: <https://bit.ly/38Lujbj>

Winning Research Proposals on Inclusive Research & Academic Networks

Dr. Jasdeep Dhir

School of Rehabilitation Science

Project Proposal: The Search for Justice: Developing a Collaborative Understanding of Health Justice in Physiotherapy

The objectives of this project is to establish an inclusive research and academic network in which the individuals work collaboratively to reach consensus on an operational definition of health justice that can guide entry-level physiotherapy programs in program development and evolution.

Dr. Matthew Sibbald

Department of Medicine

Project Proposal: COVID Disruption of Medical Socialization: A Threat to Professional Identity Formation in Undergraduate Medical Students

This study aims to understand how COVID-19 and the lack of socialization has impacted the professional identity formation of medical students in Canada. With cancellations of many learning experiences, changes in the admissions process, movement to online learning, and many curricular changes, students are facing unique circumstances and it is important to assess the impact of this.

HEALTH PROFESSIONS EDUCATION RESEARCH (HPER) COURSE

This open-access course introduces key ideas and processes in education scholarship. As academic health professionals, we are committed to advancing our field. If you are new to the health professions or new to education scholarship, this course provides a systematic, structured approach for you to consider before turning your big idea into scholarship.

The course is work at your own pace with a variety of publications, videos and podcast episodes.



Visit the HPER website here: <https://www.macpfd.ca/hper-curriculum>

UNDERGRADUATE MEDICAL EDUCATION RESEARCH ELECTIVE

Health professions education (HPE) research attempts to understand how health professionals learn and practice. This 5-week elective (typically held in the Winter term) introduced Faculty of Health Sciences students to education scholarship within the context of HPE. Students are exposed to a variety of HPE-related literature with the aim of broadening their knowledge of the domains of HPE (e.g., simulation, assessment, clinical teaching, etc.), and expanding their exposure to research design.

Each week, students came prepared to engage in discussion and inquiry on a specific HPE-related topic, facilitated by a MERIT scientist with expertise in that area of study.

Speakers

Dr. Teresa Chan
Dr. Renate Kahlke
Dr. Geoff Norman
Dr. Jonathan Sherbino
Dr. Matthew Sibbald

Course Coordinator

Mark Lee



Exploring Education
Scholarship in
Health Professions
Education
Jan 13 - Feb 10
2022

MERIT MAPS

MERIT Maps helps find McMaster faculty members publishing in the health professions education literature. MERIT Maps is a program that visualizes author networks based on their publications. This app uses PubMed Central's databases to search McMaster University Faculty of Health Sciences affiliated researchers.

MERIT Maps can be accessed at: <https://meritmaps.ca/>

The screenshot shows the MERIT Maps website interface. At the top, there is a navigation menu with links: Home, UGME, PGME, Assessment, Teaching, Simulation, CBME, Leadership, Program Evaluation, Admissions, e-learning, Feedback, About, Disclaimer. The MERIT logo is prominently displayed, with the tagline 'MCMaster Education Research, Innovation & Theory'. Below the logo, a search bar contains the text 'Competency-Based Medical Education' and a 'Build' button. A network graph of authors is shown, with Jonathan Sherbino at the center. Other authors include Ranil R. Sonnadara, Michelle Zeller, Anita Acai, Bandar Baw, Christine Falton, Donald Arnold, Victoria E. McKinnon, Matthew Leonard, Nolette Cacciatore, Alireza Mansouri, Andrew K. Hall, Elaine van Melle, Alexander Chole, S. Lucket-Gatopoulos, Sandra Monteiro, Teresa Chan, and Beth Murray Davis. A sidebar on the left shows 'MERIT Maps' with 'Study: 37' and 'Authors: 46'. A pop-up box for Jonathan Sherbino is visible on the right, with the text 'Visit McMaster Experts page to see author details.' and a 'Show Author Details' button.

THE LIBRARY ESSENTIAL PAPERS AND RESOURCES FOR HEALTH PROFESSIONAL EDUCATION

This open-access reading list is designed for clinicians, students and scholars who are interested to learn about the world of health professions education. The website has been curated into various topics related to HPE, including simulation, program evaluation, education leadership and more. All publications have been given a seal of approval from content experts in the field. Publications can be up-voted right on the website by visitors who think the article deserves a read.

The Library can be accessed at: <https://hpeworld.com/>



QUALITATIVE GRANT WRITING WORKSHOP

Introduced in Winter 2022, MERIT offers a series of four free workshops designed to support McMaster FHS faculty in developing a qualitative HPE study for any grant competition.

Through a combination of short presentations and peer and instructor feedback, participants learn about and develop qualitative research questions to answer an educational problem in your practice.

To participate, participants must be interested in qualitative research, and may be interested in submitting to any grant competition (e.g. Royal College Grants such as MERG and CanMEDS, FHS education grant, or CAME grants).

Workshop #1: Developing Qualitative Research Questions

Workshop #2: Selecting & Justifying a Qualitative Methodology

Workshop #3: Aligning Qualitative Methods / Techniques with Methodology

Workshop #4: Develop a Qualitative Research Proposal

Coordinator

Dr. Renate Kahlke

Offerings

January 13 - February 24, 2022
(every second Thursday)

October 6, 13, 20 & 27, 2022

SIBLEY AWARD

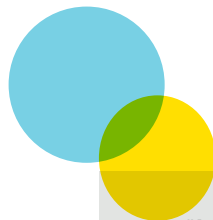
The John C. Sibley Award for Excellence in Education for Part-Time Faculty is presented annually to a part-time faculty member who has made outstanding contributions to the education of health professionals. It is named for a former associate dean of the Faculty of Health Sciences who was known for his interdisciplinary approach to community health. This award is presented at the Sibley Lecture/MERIT Rounds.

2022 Sibley Award Recipient

Dr. Catherine Munn, MSc, MD, FRCPC

Associate Clinical Professor, Psychiatry & Behavioural Neurosciences

Catharine Munn is a psychiatrist, educator, and researcher who completed her undergraduate at University of Toronto, followed by her MD, residency in Psychiatry, and Master's in Health Research Methodology at McMaster. Catharine has focused her clinical and research career on post-secondary students and campus mental health care, prevention and promotion, for many years working clinically within McMaster's Student Wellness Centre and currently at the University of Guelph. Catharine is Assistant Dean of Resident Affairs in Postgraduate Medical Education in the DeGroot School of Medicine and serves as Special Advisor on Mental Health to the Provost and Vice-President (Academic) at McMaster.



"MERIT is instrumental for the School of Rehabilitation Science. MERIT provides excellent resources, support and most of all, community of practice, for our numerous faculty members that are engaged in rehabilitations education scholarship. We are also so grateful for the funding opportunities through MERIT!"

Dr. Dina Brooks, Vice-Dean, FHS and Executive Director, School of Rehabilitation Science

SIBLEY LECTURE

The Sibley Lecture is a special MERIT Rounds, and a component of the John C. Sibley Award for Excellence in Education for Part-Time Faculty.

2022 Sibley Lecture Speaker

Dr. Brian Hodges

Dr. Brian Hodges is Executive-Vice President Education and Chief Medical Officer at University Health Network, and Professor in the Temerty Faculty of Medicine at the University of Toronto. Brian is a practicing psychiatrist and teacher. His research and writing focus on assessment, competence, compassion and the future of the health professions. Brian earned an undergraduate degree in Psychology, followed by an MD at Queen's University. He then pursued a residency in psychiatry and a fellowship in medical education at the University of Toronto. He earned a Master and then a PhD in Education at the Ontario Institute for Studies in Education in Toronto. He also earned a Diploma in Health Economics and Social Sciences from the University of Paris.



Compassion, Care and Learning in our Hyper-Technological Age

The early 21st century was already characterized by questions about the evolution of what it means to be a health professional. And then the COVID-19 pandemic unfurled, forcing rapid adoption of technologies such as virtual care and learning platforms as well as a much bigger role for artificial intelligence and machine learning. While the accelerated adoption of technology has had many benefits, high levels of provider burnout and questions about learner readiness for practice are appearing concurrent with ever greater demands for equitable, safe and compassionate care. This presentation argues that, while healthcare and healthcare education will continue to be underpinned by exceptional cognitive skills and technical prowess, the confluence of challenges requires a renewed commitment to healthcare's compassionate purpose in this hyper-technological age.

Full presentation can be found here: <http://bit.ly/3gwu4om>

HEALTH PROFESSIONS EDUCATOR AWARD

The award is designed to encourage and reward the continued excellence of health professions education and scholarship within McMaster University. Nominees will be senior faculty and leaders in their respective educational schools that have made substantial contributions to education in the Faculty of Health Sciences including teaching, mentorship, educational scholarship, or research, throughout their careers. Supported by MSc Health Science Education Masters program and MERIT.

2022 Health Professions Educator Award Recipient

Dr. Elizabeth Shaw

Professor, Department of Family Medicine

Dr. Elizabeth Shaw is Professor of Family Medicine, current Associate Chair of Education, and past Postgraduate Program Director (2003-2009).

Clinically, she does general family medicine with a homeless and inner-city population through the Shelter Health Network at the YWCA Hamilton. Dr. Shaw also has a certificate of added competence in addiction medicine and provides care for patients with substance use disorders. She also provides prenatal and addiction care to women struggling with substances through the Maternity Centre of Hamilton.

Dr. Shaw was on the CFPC working group that developed the “Triple- C” competency based curriculum and she chaired the revisions to CanMEDS -FM in 2017. She is a past member of the Canadian Task Force for Preventive Health Care.

Dr. Shaw is also the Director of Module Development for the Foundation for Medical Practice Education and assists with the editing and production of 14 educational modules annually for residents and practicing family physicians across the country to use in small group learning sessions.

Dr. Shaw is the 2020 recipient of the College of Family Physicians of Canada Ian McWhinney Medical Education Award and a 2019 recipient of the Canadian Association of Medical Education Certificate of Merit.



EDUCATION SCHOLARSHIP FUND

The Faculty of Health Science Education Scholarship Fund is to encourage and provide support for the development and/or evaluation of novel and innovative approaches to health sciences education in the Faculty of Health Sciences. Supported by Education Services.

2022 Education Scholarship Fund Recipients

Dr. Patricia Farrugia

Assistant Professor, Department of Surgery

Project Proposal: Innovative undergraduate electives curriculum in Indigenous Health Needs Assessment



The Michael G. DeGroot School of Medicine, Indigenous Health Curriculum Committee (IHCC), McMaster University, will conduct a need assessment to develop an innovative undergraduate electives curriculum in Indigenous Health that will prepare Indigenous and Non-Indigenous Medical Students in the delivery and awareness of traditional Indigenous Health Care practices to Indigenous populations in the community setting.

Dr. Matthew Sibbald

Associate Professor, Department of Medicine

Project Proposal: Developing an identity as a health professional in the era of #selfobsessed and #allaboutme: insights from social and transformational learning



The objective of this study is to identify factors that facilitate and impair transformations around professionalism lapses in health professions training programs. Using the lenses of social and transformative learning theories the research team will aim to unpack structures and processes to inform programs on how best to support professional identity formation.



MERIT FACULTY FELLOWSHIP

The MERIT Faculty Fellowship provides mentorship and supervision in health professions education research. The goal of the program is to increase the number of education scholars within the Faculty of Health Sciences. The fellow will complete a scholarly education project, either a research project or evaluation of an innovation. The fellow will design a personalized curriculum to help them acquire the necessary skills to complete their project and acquire the foundational abilities of an education scholar.

2022 Faculty Fellow

Dr. X. Catherine Tong

Associate Clinical Professor, Department of Family Medicine

Project Proposal: Creating Brave Spaces: Evaluating a Simulation-based Faculty and Staff Development Curriculum on Equity, Diversity and Inclusivity



The Royal College of Physicians and Surgeons of Canada (RCPSC) mandated a phased transition to a CBME curriculum known as Competence by Design (CBD), beginning in 2017. The Psychiatry Residency Training Program at McMaster University underwent a pilot phase of this transition in 2019 and has now fully rolled out the curriculum for all new residents entering the program. While the program has engaged in local quality improvement efforts to understand experiences more generally around curriculum deployment, there has not yet been a formal and scholarly evaluation of the transition experience of residents, faculty, and program leaders. The present study will explore the following research question(s): 1) What have been the experiences of residents, faculty, and program leaders in psychiatry in transitioning to a new CBD curriculum? 2) What are some of the strengths and challenges being faced by the program in implementing different elements of CBD into practice?

Dr. Tong's project is also the winning proposal for the 2022 MERIT Scholar Pilot Research Grant.

MERIT - HSED FELLOWSHIP

The fellowship seeks to: 1) promote health sciences education research; 2) facilitate MERIT scientists' supervision of MSc Health Science Education (HSED) thesis students; and 3) integrate HSED students into the MERIT community.



The fellowship provides a two-year financial stipend to one full-time thesis-stream HSED student. For the duration of the fellowship, the MERIT-HSED fellow will be considered a MERIT Scholar, with commensurate benefits and responsibilities.

2022-2023 Fellows

Farah Hasan

Supervisor: Dr. Ranil Sonnadara, PhD (Associate Professor, Surgery)

Farah Hasan completed her BSc in Biology and Psychology, Neuroscience and Behaviour, and is currently pursuing her MSc in Health Science Education at McMaster University. She currently holds an HSED/MERIT Graduate Fellowship and is the HSED student representative for her cohort.

For her graduate thesis, she is conducting research on the efficacy of a clinical virtual reality module for anatomy education under the supervision of Dr. Ranil Sonnadara and in collaboration with Dr. Bruce Wainman. In the community, Farah is a speaker with Project Sleep's Rising Voices program, where she works to improve public understanding of sleep disorders, and shares insights from her own experience as a patient and advocate.



"In just one semester, I've been exposed to countless new ideas and theories that have me questioning everything I thought I knew about teaching and learning. I'm told that the existential crisis I had when we discussed criticisms of PBL in class means that I'm right on track for a grad student in education research! It's an honour to be the first fellow and I'm excited to tackle challenging questions with the support of this incredible community."

Alison Scholes

Supervisor: Dr. Merediith Vanstone, PhD (Associate Professor, Family Medicine)

Alison graduated from Queen's University in June where she majored in Life Sciences. During her undergraduate studies, Alison's work as a research assistant at Brantford General Hospital and involvement with the 3 Wishes Program sparked her interest in end-of-life care and ethical dilemmas. Having received the MERIT-HSED fellowship award, Alison will be pursuing a Masters Degree in Health Science Education at McMaster University beginning this fall. The focus of Alison's thesis will be triage decisions during COVID-19 and the issue of moral distress.



"During my first few months as a MERIT scholar, I have enjoyed meeting numerous faculty members and participating in various MERIT events. I look forward to further developing connections within MERIT's academic community and gaining valuable insights as I pursue my master's degree."

PAPERS & PUBLICATIONS

* Names of MERIT membership bolded

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