



MACDONALD
FRANKLIN
OSI RESEARCH
CENTRE

LAWSON HEALTH RESEARCH INSTITUTE

Annual Report 2020

Through mental health research,
we are committed to improving the
well-being of Veterans and their families.

A photograph of a three-dimensional wall-mounted sign. The sign is composed of three horizontal rows of raised, white letters. The top row reads 'MACDONALD FRANKLIN', the middle row reads 'OPERATIONAL STRESS INJURY', and the bottom row reads 'RESEARCH CENTRE'. The letters are slightly angled, giving the sign a modern, architectural feel.

A COMMITMENT TO CANADA'S HEROES

Mrs. Kyle MacDonald and Mr. John Franklin grew up in proud Canadian military families. Inspired by their fathers who bravely served our country, Kyle and John have honoured these decorated men – their heroes – by making a commitment to the ongoing care of Canada's Veterans and members of the Canadian Armed Forces.

Their gift of \$1 million will support both the unique needs of Veterans who make their home at Parkwood Institute and fund research critical to advancing treatments for men and women who have experienced operational stress injuries, such as post-traumatic stress disorder, as a result of their military service.

Kyle and John's generosity will touch the lives of those heroes who serve Canada, and their families, supporting their wellness and recovery.

*In recognition of their gift, St. Joseph's has proudly named this space the **MacDonald/Franklin Operational Stress Injury Research Centre.***



CAPTAIN SAMUEL A. MACDONALD

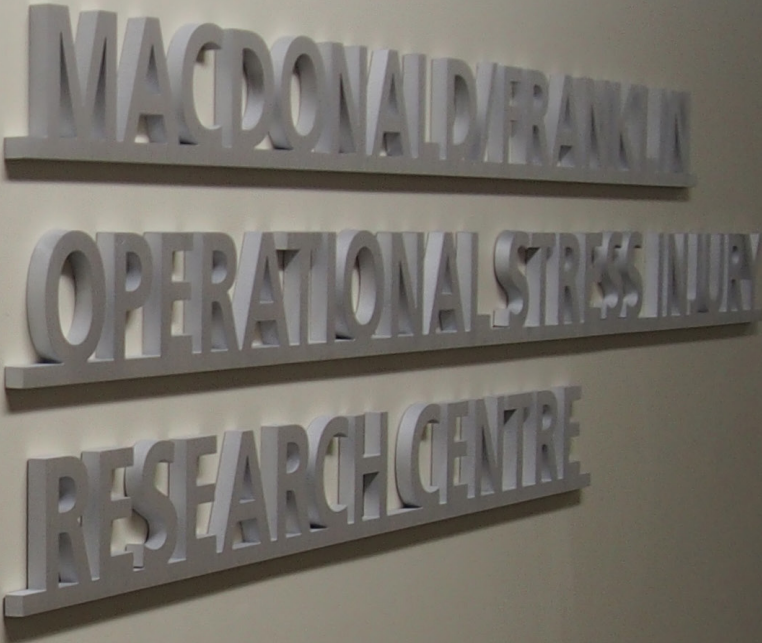
Captain Samuel A. MacDonald began his military service in London, Ontario. He was a Captain in the local Royal Canadian Regiment and served Canada in the Korean War.



COLONEL WILLIAM J. FRANKLIN

Colonel William J. Franklin's military career spanned 45 years, including service in both World War I and II. From 1945-1960 he was the Sergeant-in-Arms of the House of Commons and also served as Honorary Colonel of his Regiment.

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Welcome

The MacDonald Franklin OSI Research Centre

VISION

The MacDonald Franklin OSI Research Centre will be a national and global leader and enabler that bridges research and clinical excellence to promote recovery from OSIs in Veterans and their families.

MISSION

Our mission is to conduct innovative research in a collaborative environment and translate this knowledge to clinical practice to improve the mental health and well-being of Veterans and their families.

CORE ACTIVITIES

The Research Centre embraces its strategic priorities as foundational to advancing research and innovation capabilities within the Veteran and military mental health interdisciplinary community. To advance each of the Research Centre's strategic priorities and increase its impact, we will operate through three fundamental activities: 1) Research and Innovation Excellence, 2) Education and 3) Knowledge Sharing.

Director's Statement

It has truly been a remarkable year. The COVID-19 pandemic has forever changed our world and forced innovation in healthcare and research. At the Research Centre, we successfully migrated completely to the virtual world and continue to expand our research capacity.

We maintained our vision to be a national and international leader in research on military and Veteran mental health. Despite the pandemic, we continued our primary mission to improve the mental health and well-being of Veterans with operational stress injuries (OSIs) through clinical and neuroscience research. The pandemic is having a significant impact on our Veterans, especially those suffering from PTSD and other OSIs. The Research Centre also continued to foster and enhance collaboration among clinicians and researchers and maintain our commitment to hear from those we serve by including Veteran and Veteran family representatives on our Advisory Council.

In December, we were excited to have Dr. Anthony Nazarov assume the role of Associate Scientific Director for the Research Centre. His key responsibilities in the new role are to work with the leadership team to develop and implement strategies that increase MFOSIRC's capacity and capabilities in military and Veteran mental health research. Dr. Nazarov had effectively taken on these new responsibilities throughout 2020 in an acting capacity.

I am very proud of our research team over the past year. Early in the pandemic to better understand the impact of the pandemic on Veterans and their spouses our centre took the lead in a national longitudinal study examining both the impact on Veterans and their spouses and on healthcare workers who are key in providing support to Veterans. The MacDonald Franklin OSI Research Centre has taken the lead



in better understanding the concept of moral injury in Veterans and healthcare workers with our national and international partners.

We have continued to enhance our knowledge translation efforts by partnering with the Centre of Excellence for PTSD and publishing research in peer-reviewed journals. Despite the pandemic, our Research Centre has maintained its contribution to the Five Eyes Collaboration, an international intelligence alliance between Canada, United States, United Kingdom, Australia and New Zealand. We have made progress to establish an international data set that will include representation from the United Kingdom, Northern Ireland, Canada and Australia. We have also continued our goal in securing our long-term sustainability.

I am truly grateful for the generous support from Kyle MacDonald and John Franklin through the St. Joseph's Health Care Foundation. Their gift to the St. Joseph's Health Care Foundation is making a difference and will continue to do so for years to come.

Sincerely,

A handwritten signature in black ink, reading "J. Don Richardson, MD, FRCPC". The signature is written in a cursive style.

J Don Richardson, MD, FRCPC

Scientific Director of the MacDonald Franklin OSI Research Centre

The Research Team



J Don Richardson, MD, FRCPC
Scientific Director

Dr. Richardson is the Scientific Director of the MacDonald Franklin OSI Research Centre and Medical Director of St. Joseph's OSI Clinic. He is an Associate Professor in the Department of Psychiatry, Schulich School of Medicine and Dentistry at Western University and Assistant Clinical Professor (adjunct) in Psychiatry and Behavioural Neurosciences at McMaster University. He also holds the distinguished title of Research Fellow with the Canadian Institute for Military and Veteran Health Research (CIMVHR). Dr. Richardson is one of the foremost experts on military-related PTSD and has more than two decades of experience in the assessment and treatment of CAF members and Veterans with PTSD and other operational stress injuries. Resulting in over 50 published peer-reviewed articles and book chapters, Dr. Richardson has conducted research in multiple areas of military and Veteran and mental health, including risk factors for PTSD and suicidal ideation, health care utilization, treatment outcomes, and the impact of PTSD on quality of life.



Anthony Nazarov, PhD
Associate Scientific Director & Postdoctoral Associate

Dr. Anthony Nazarov is a clinical neuroscientist with a research focus on PTSD, moral injury, and social cognition. Dr. Nazarov has extensive expertise in conducting military and Veteran mental health research, and has received funding from Veterans Affairs Canada, Department of National Defence, and CIHR. Prior to joining the Lawson Health Research Institute, Dr. Nazarov was a Defence Scientist at Defence Research and Development Canada, Department of National Defence, investigating psychological resilience and mental health in Canadian Armed Forces personnel. Dr. Nazarov is interested in using experimental and survey methodologies to explore the interplay between psychological trauma, moral transgressions, and well-being. Specifically, he is interested in understanding how we can better identify, treat, and prevent moral injury and related operational stress injuries.



Luciana Brown, MBA
Research Coordinator & Facilitator

Luciana Brown joined the team in October 2019 as the Research Coordinator with Lawson Health Research Institute at St. Joseph's Health Care for the MacDonald Franklin OSI Research Centre and Clinic. Luciana completed her executive MBA in 2015 and holds a post-baccalaureate diploma in Management, both from Athabasca University, Faculty of Business. She completed her Bachelor of Administrative Studies degree at York University in 2003. Luciana has many years of senior administrative and project management experience in Canada and the Middle East, and has worked in varied environments including teaching and community hospitals, government organizations and research settings.



Rachel Plouffe, MSc, PhD
Postdoctoral Associate

Dr. Rachel Plouffe is currently a Postdoctoral Associate with the MacDonald Franklin OSI Research Centre and Western University. Rachel completed her Master of Science and PhD degrees at Western University in the Personality and Measurement Psychology program. Her PhD research examined the impact of personality traits and exposure to violence in childhood on partner and participant levels of physical and psychological intimate partner violence. As a Postdoctoral Associate at the MacDonald Franklin OSI Research Centre, Rachel is interested in developing valid and reliable psychometric measures to assess levels of moral injury in Veterans and military members, as well as identifying contributing factors and outcomes associated with moral injury.



Kate St. Cyr, MSc, PhD Student
Research Associate

Kate St. Cyr has been with St. Joseph's OSI Clinic team since 2009, working as a researcher and program evaluation support officer. After completing a BA in Anthropology at McMaster University and an MSc in Public and Population Health in 2008 at Simon Fraser University, she relocated from BC to London, ON, where she found work with the Middlesex London Health Unit and ultimately, the OSI clinic at the Parkwood Institute. Kate's role at the clinic has her involved in all stages of the research process, from the development of research studies to data analysis to writing and the dissemination of final products. She is also involved in a number of program evaluation and quality assurance initiatives throughout the clinic. Kate's research interests include treatment outcomes and determinants of health, particularly as they relate to military personnel and Veterans; and vicarious trauma.



Callista Forchuk, MSc
Research Assistant

Callista Forchuk has been working at the MacDonald Franklin OSI Research Centre at Parkwood Institute since 2018. She holds a BA in psychology, and a MSc in Personality and Measurement from Western University. Callista has published on the relation between PTSD and depression comorbidity with quality of life, and the relations between PTSD symptoms and sexual dysfunction. Currently, Callista is involved in research examining the longitudinal impact of the COVID-19 pandemic on Veteran and spouse well-being, and on moral distress in health care workers, as well as research examining the role of confidentiality in mental health help-seeking and disclosure of morally injurious events.

**Tri Le***Research Assistant*

Tri Le has been a volunteer at the MacDonald Franklin OSI Research Centre at the Parkwood Institute since 2019 and in 2020, he has joined the team as Research Assistant. He holds a BHSc in Health Sciences from Western University and a Post-Graduate Certificate in Gerontology from Fanshawe College. Tri has experience conducting various research projects in London, ON, for organizations such as: the McCormick Dementia Services – Day Program, Ontario Telemedicine Network, and Rise Asset Development. He is passionate about research concerning the mental health and well-being of the elderly. Currently, he is assisting the team with examining the longitudinal impact of the COVID-19 pandemic on Veteran and spouse well-being, and on moral distress in health care workers.

**Vanessa Soares, MD***Research Assistant*

Vanessa Soares joined the team in February 2020. She completed her HBSoc in Biology at the University of Toronto and her Medical Degree from the Medical University of the Americas in the Caribbean. Vanessa has spent most of her clinical experience focused on psychiatry in various hospitals in both the US and Canada. She previously worked at McMaster University through the Offord Centre as a Research Assistant in pediatric psychiatry.

**Dominic Gargala***Research Assistant & Computer Science Intern*

Dominic Gargala joined the MacDonald Franklin OSI Research Centre in August 2021 as a computer science intern. He holds a BSc from Western University in Medical Science & Biology and is currently pursuing a BSc in Computer Science. Dominic has experience working in research as a web application developer through the department of biology at Western University. He is interested in utilizing computer technologies and tools to assist in the data collection, transformation and storage of various datasets for the Research Centre.

**Jesse Bourret-Gheysen***Research Assistant & Computer Science Intern*

Jesse Bourret-Gheysen has been with Research Centre team since August 2020, working as a student researcher. After previously working in the biotechnology field, he is currently pursuing a BA in computer science at Western University. Jesse's role at the clinic has him performing data science related tasks such as cleaning data sets, performing simple analysis, and generating internal reports. Jesse's interests include the intersection of data visualization with other scientific disciplines.

Visiting Scholars and Scientists



Brent Davis, PhD Candidate

Visiting Scientist & Former MITACS Accelerate Intern

Brent Davis has been working with the MacDonald Franklin OSI team since March 2019. He holds an BSc in the Biochemistry of Immunity and Infection from Western University. He is currently pursuing a PhD in Computer Science at Western University as a member of the Insight and Phi Labs. His research interests are in applying and integrating AI / Machine Learning systems to complex problem areas in health. His role in the clinic is akin to a Data Scientist – he works to clean, transform and analyze data that is relevant to the clinic. His current work with the Research Centre focuses on using advanced technology, such as Watson, to perform analytics on data that assists the research team.



Andrew Bridgen, MD

Psychiatry Resident and Visiting Scholar

Dr. Andrew Bridgen is resident Psychiatrist with Schulich School of Medicine. He has a Health Science degree from Victoria University and completed his medical degree at University Science Arts and technology. He has interest in working with first responders, Veterans, and Canadian forces members with PTSD and other operational stress injuries. Dr. Bridgen has research interest in psychiatry specifically functional outcomes, neuroimaging, and PTSD. He continues his training with Schulich Psychiatry program in Windsor.



Bethany Easterbrook, MSc, PhD Student

Neuroscience PhD Student and Visiting Scholar

Bethany Easterbrook is entering her second year as a Ph.D. student in the Neuroscience Graduate Program at McMaster University, supervised by Dr. Margaret McKinnon. She obtained an undergraduate degree in Kinesiology from University of Toronto, and a Master's degree in Health Research Methodology from McMaster University. She has previous research experience in a variety of settings including military mental health, pediatric surgery, manual therapy, disability policy, and schizophrenia. Bethany's current research focuses on moral injury and posttraumatic stress disorder in military, Veteran, and public safety personnel populations. Specifically, she is interested in examining which military experiences and mental health outcomes independently increase the risk of developing a moral injury within the Military and Veteran Population population.

Deanna Walker, PhD Candidate*Psychology PhD Candidate and Visiting Scholar*

Deanna Walker is a fourth-year doctoral candidate in Clinical Science and Psychopathology at Western University. She completed her Master of Arts degree at Carleton University in 2017. Her research interests at the OSI Research Centre are focused on the intersection between psychological trauma and well-being, including factors impacting mental health outcomes associated with PTSD. In addition to her research interests, she has extensive experience in providing psychological services within trauma-focused populations, including working with first responders, Veterans, and trauma-related disorders.

Medical Residents

Thomas Wasiuta, MD*Psychiatry Resident and Visiting Scholar*

Tricia Mohan, MD*Psychiatry Resident and Visiting Scholar*

Graduate Students

Cassidy Trahair*MSc Student*

Program: Psychology

Project: Beliefs about confidentiality and attitudes towards disclosure of moral injuries

Undergraduate Thesis Students

Helen Schreyer*Psychology Thesis Student*

Program: Dual Degree, Ivey HBA + Honours Specialization in Psychology

Project: How moral injury mediates the relationship between military deployment experiences and depression

Brittni Jackson*Psychology Thesis Student*

Program: B.A. Honours Specialization in Psychology & minor in Criminology

Project: How organizational response to COVID-19 is related to moral distress in healthcare workers and whether moral distress is correlated to overall well-being

Volunteers and Undergraduate Trainees

Jennifer Shatsky

Tania Al-jilawi

Dakota Fisher

Jay Ding

Acknowledgments

We would like to acknowledge [Heather Tales \(Director of Veteran Care\)](#), and [Bev van der Heide \(Coordinator of London OSI Clinic\)](#), and [Omer Vandevyvere \(Coordinator of GTA OSI Satellite Clinic\)](#) for their support of research, and the ongoing commitment and contribution of OSI clinic staff collaborators:

[Lisa King](#)

[Felicia Ketcheson](#)

[Erisa Deda](#)

[Maya Roth](#)

[Craig Stewart](#)

[Michelle Marlborough](#)

[Ken Balderson](#)

[Tania Oakley](#)

[Jennifer Safadi](#)

Thank you to the many Veterans, Veteran family members, and other members of the public who have participated in our research initiatives. Your altruistic contribution is greatly appreciated.

Departures

We would like to acknowledge the contribution of the following team members and trainees who have left the Research Centre in 2020. We wish you the best in your future research and clinical endeavours.

[Renee Hunt, MA, PhD](#)

Former Postdoctoral Fellow

[Cindy Nguyen](#)

Former Health Informatics Thesis Student

[Shyann Hang](#)

Former Research Assistant

Statement of Priorities

The MacDonald Franklin OSI Research Centre was built on current ongoing partnerships, as well as the pursuit of new collaboration amongst relevant key stakeholders including the health care sector, industry, government, and academia.



The Research Centre operates through three fundamental activities:

Research and Innovation Excellence

Promoting research excellence in the area of OSIs is central to the mission of the Research Centre. The research output is reliant upon its ability to foster expertise within the field of OSIs, with an emphasis on PTSD. The Research Centre is positioned to have a pivotal role in advancing academic research and innovation to advance clinical care and client outcomes.

Education

The creation of the Research Centre will continue a tradition of excellence in educating current and future clinicians and researchers. The Research Centre will engage in education initiatives by facilitating capacity building and training opportunities across a variety of disciplines, partners and stakeholders.

Knowledge Sharing

To ensure knowledge is continuously shared both within our network and beyond, knowledge mobilization activities will be core to the Research Centre. The Research Centre will emphasize the dissemination of research findings at both the local and national network of clinics to improve patient outcomes and promote recovery.

Progress on Priorities



Research and Innovation Excellence

The Research Centre has experienced another year of research and innovation excellence during an unprecedented time that has affected the OSI Clinic activities and our research activities. In the midst of rapid changes in the delivery of services and care, recruitment remained active for our projects throughout the year which was critical for 3 of our main studies: Well-being of Veterans and Veteran families during the COVID-19 Pandemic; Moral distress and well-being of health care workers during the COVID-19 Pandemic; and Moral Injury and Confidentiality. We are pleased to have met our baseline recruitment goals for our Veteran and Health Care Worker projects. Recruitment for our Innovation for Defence Excellence and Security (IDEaS) 1b grant titled Understanding Recovery is underway. We have been approved for a contract extension enabling us to continue with this important work. To close out the year we were awarded a Task by the Canadian Institute for Military and Veteran Health Research (CIMVHR) "Innovative Delivery of the Road to Mental Readiness Program - Recommendations on how to complement current Road to Mental Readiness Program in operational contexts."

Education and Knowledge Sharing

Members of the Research Centre have participated in knowledge sharing through presentations and rounds listed in the following section. In 2020, the Research Centre began a Journal Club for staff and students, as well as coordinated workshops on research methodology. From our internal training, the plan is to develop a knowledge database accessible to staff and students.

List of Events for Education and Knowledge Sharing

2020

May 11	Mental Health and Well-being While Facing COVID-19 Webinar	London, ON (virtual)
October 14-16	APA: Military Psychology Summit During COVID-19	Washington, DC (virtual)
October 29	CIMVHR Virtual Symposium Series - Moral Injury	Kingston, ON (virtual)
November 4-14	International Society for Traumatic Stress Studies - 36th Meeting	Virtual
November 5	London Joint Mental Health Research & Innovation Day	London, ON (virtual)
November 24	Five Eyes Mental Health Research Innovation Collaborative Meeting	Virtual
November 26	Parkwood Institute Research - Open House	London, ON (virtual)
	Department of Psychiatry Grand Rounds, Western University	London, ON (virtual)
December 15	Parkwood Institute Research: Research Imaginarium Series	London, ON (virtual)

Research Consortium Meetings

November 10, 2020 London, ON (virtual)

Media Appearances

- London Free Press
- CTV London
- CBC London, CBC Thunder Bay, CBC (Print)
- AM980 Global News
- Global News TV
- HuffPost Canada

Successful Transition to Remote Working

In response to the COVID-19 pandemic, we have successfully transitioned to working remotely. We have embraced and leveraged various digital platforms and tools to support our team during this time. With such an agile team and a smooth transition, we have maintained our productivity and received positive feedback from our staff and students. We look forward to continuing to enhance our virtual work processes and support our staff working remotely in the future.

Sample feedback from our staff:

"Working remotely has allowed for me to form strong working relationships with my colleagues using virtual platforms"

"The change to working remotely made me realize the importance of being able to adapt to quickly changing circumstances I had no control over, but was able to own the moment by making mental and physical adjustments to remain productive and to carry on"

"Working remotely has allowed our team to leverage collaborative online tools and platforms to optimize our communication and teamwork."

Media Resources

A media marketing plan was created for the Research Centre. This plan delved into brand identification, identifying target groups, and developing an action plan. To prepare the Research Centre for a strong social media presence, Twitter, Facebook and Instagram accounts were created and have proved to be strong tools for promoting the Research Centre and were especially helpful with recruitment for research studies. We took our marketing strategy one step further and connected with the Business Marketing program at Fanshawe College to engage in a working relationship that will provide marketing students with real-life experience by delivering on stated expectations.

Trainee Development

We continued to provide research opportunities to graduate students and medical residents. Partnering with the Department of Psychology and Department of Psychiatry provided access to top students who joined us for their fall term. Two computer science students joined us for work terms through the Canada Summer Jobs Program and BioTalent Canada.

PhD Students	Kate St. Cyr	University of Toronto
	Bethany Easterbrook	McMaster University
Masters Students	Cassidy Trahair	Western University
Undergraduate Students	Jennifer Shatsky	Western University
	Tania Al-Jilawi	Western University
	Helen Schreyer	Western University
	Brittini Jackson	Western University
	Dominic Gargala	Western University
	Jesse Bourret-Gheysen	Western University
Medical Residents	Andrew Brigden	Western University
	Tricia Mohan	Western University

Strategic Partnerships

Building new strategic partnerships, while maintaining robust connections with our existing partners has been a high priority for the Research Centre in 2020. Our partnerships both new and old, position us to be at the ‘right tables’ when critical discussions are taking place that will affect the work we do.

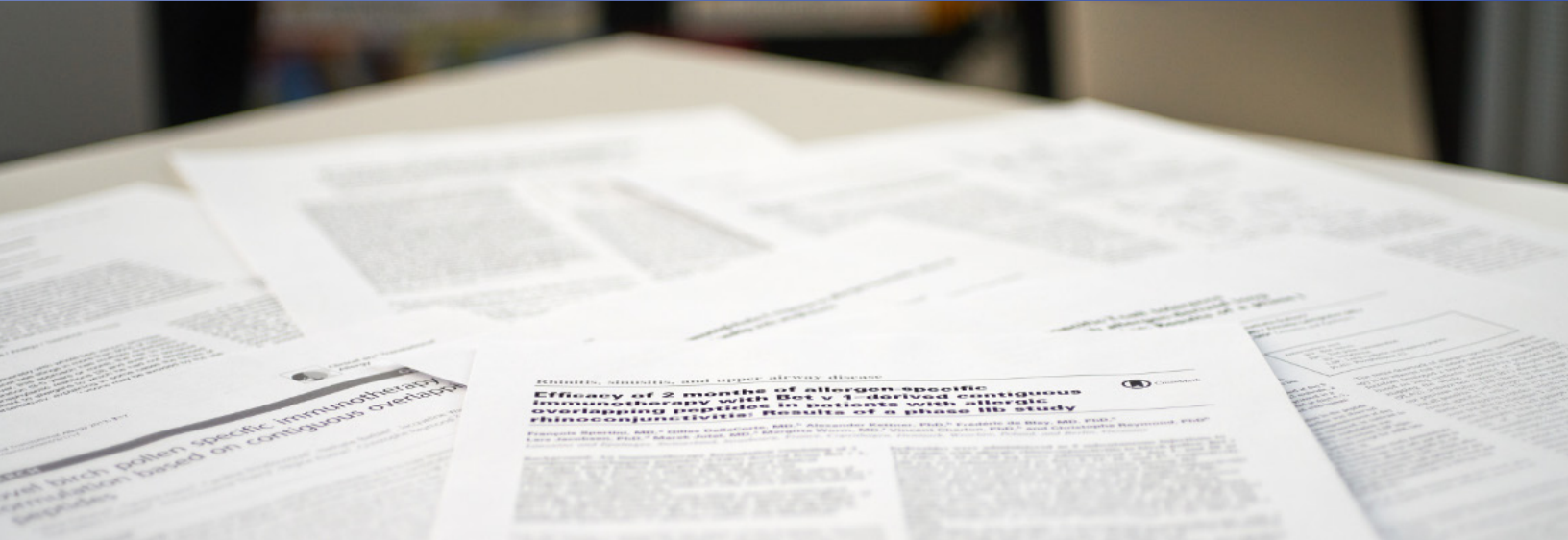
New partners and collaborators for 2020:

- Centre of Excellence on PTSD and Related Mental Health Conditions
- Centre of Excellence for Chronic Pain
- Bellwood Health Services
- CAMH
- Dallaire Institute
- Heroes in Mind, Advocacy and Research Consortium (HiMARC)

Existing partners and collaborators:

- | | |
|---|---|
| <ul style="list-style-type: none"> • OSI Clinic • Veterans Affairs Canada • Department of National Defence • Defence Research & Development Canada • Canadian Institute for Military and Veteran Health Research (CIMVHR) • McMaster University • Queen's University • Homewood Health • Ryerson University • University of Toronto | <ul style="list-style-type: none"> • Boston University • Phoenix Centre, Australian Centre for Posttraumatic Mental Health • Operational Stress Injury Social Support (OSISS) Program • Statistics Canada • IBM Canada • Queen's University Belfast • Combat Stress UK |
|---|---|

Research Excellence. Project Highlights





Veteran Pandemic Study

The COVID-19 pandemic has resulted in widespread changes to family, social, and work domains, as well as the receipt of health care services (e.g., migration to virtual care). These disruptions may be particularly distressing for Veterans and their spouses, who are more likely to have pre-existing mental health conditions or heightened distress than the general Canadian population. This study aims to longitudinally assess the impact of the pandemic on Canadian Veterans' and spouses of Canadian Veterans' well-being, perceptions of social support and loneliness, and to explore perceptions of and satisfaction with changes in health care treatments. Participants complete an online survey every three months for a total of 18 months pertaining to their mental health and well-being, social support, lifestyle changes and concerns relating to the pandemic, and experiences and satisfaction with health care treatments during the pandemic.

More than 1000 Veterans and 250 spouses of Veterans have completed the baseline survey, which is now complete. Data collection is now underway for the 3-month and 6-month timepoints, and data collection will continue until all participants have received their final 18-month follow-up survey. Baseline data is being analyzed to explore cross-sectional predictors of psychological well-being and perceptions of social support, and to explore perceptions of and satisfaction with health care changes.

Preliminary findings were presented at the Joint Mental Health Research and Innovation day. Manuscripts will be prepared to understand (1) the cross-sectional predictors of psychological distress, loneliness, and perceptions of social support and family functioning, and (2) the experiences, perceptions, and satisfaction with changes to health care during the pandemic. As longitudinal data becomes available, more nuanced and comprehensive predictions can be made regarding the relations between pandemic stressors and well-being over time.



Confidentiality related to Moral Injury

Moral injury is characterized by the psychological distress developed after performing, witnessing or failing to prevent acts that conflict with deeply held moral standards. Due to the perceived ethical ambiguities of some events that may induce moral injuries, it is possible that military personnel with moral injuries may be more likely to withhold details of their trauma or avoid seeking help due to worries about confidentiality. To date, this is the only study that has sought to explore Veterans' and military members' beliefs about confidentiality in mental health care and whether those beliefs serve as barriers to help-seeking and disclosure. In addition, this is the first empirical study to evaluate whether morally distressing events and subsequent moral injury may be more challenging to disclose than other types of stressful events.

Data collection is complete for the first phase of this study, for which over 300 individuals with Canadian Armed Forces (CAF) experience completed an online survey on confidentiality, mental health help-seeking, and disclosure. Preliminary findings from this study were presented at the Joint Mental Health Research and Innovation day, and a manuscript is currently in preparation. In the second phase of this study, CAF members and Veterans will be interviewed to further explore beliefs about confidentiality, their influence on help-seeking and disclosure, and how these beliefs may differentially impact help-seeking and disclosure related to moral injury.

Moral Distress and Well-Being of Health Care Workers During the COVID-19 Pandemic

The COVID-19 pandemic is imparting unprecedented circumstances onto health care workers (HCWs) that may lead to significant psychological and moral distress. The surge of patients requiring intensive care, the high infection transmittance, and the lack of effective medical resources are compounded with exposure to difficult moral-ethical dilemmas (e.g., attending to patients without sufficient protective equipment). This study uses a prospective, longitudinal panel design to examine the moral distress and well-being of HCWs during the pandemic. Participants will complete online surveys administered every three months for a total of 18 months including questions pertaining to their role in health care, workplace pandemic responses, encounters with moral-ethical dilemmas at work, psychological distress, and experiences with providing care. Baseline data collection is complete, and over 1300 HCWs across Canada have provided valid responses. Longitudinal data collection is ongoing, with participants now completing follow-up surveys for month 3 and month 6. Quantitative analyses are in progress for baseline data to explore common moral dilemmas and their associated distress levels, as well as the predictors and psychological consequences related to moral distress. Simultaneously, qualitative data obtained through open-ended questions pertaining to the types of moral dilemmas experienced at work are being coded for emerging themes. Once coding is complete, these themes will be considered alongside other dilemmas reported through quantitative surveys to comprehensively represent the moral dilemmas experienced among Canadian HCWs.



Epidemiological Analysis of the Mental Health and Well-being of Canadian Armed Forces and Veterans

The Canadian Armed Forces Members and Veterans Mental Health Follow-up Survey (CAFVMHS) is a nationwide initiative conducted by Statistics Canada to follow-up with respondents of the 2002 Canadian Community Health Survey: Canadian Forces Supplement on Mental Health. The purpose of the CAFVMHS is to examine the longitudinal mental health outcomes of Canadian Armed Forces members, some of which have since released. This is the first longitudinal survey of military and Veteran mental health in the world that uses gold standard epidemiological survey methodology. In collaboration with other researchers across Canada, we are leading analyses in two major research domains (see below).

Sleep and Suicide

The role of sleep disturbances on suicidal behaviours and mental illnesses is being investigated in a large nationally representative sample of CAF members and Veterans. We will be accessing this data to determine whether sleep disturbances impact the probability of suicidal behaviours, and whether this impact varies according to individual differences. We will also be investigating whether reported sleep disturbances on the 2002 survey may be a risk factor for experiencing mental illness in the future. Findings will inform us of the role that sleep disturbances may have on suicidal behaviours and mental illness. The results of this study can be used to understand the implications of sleep problems, and to determine which individuals may be most severely impacted by sleep problems. Our protocol has received approval from Statistics Canada and we have conducted onboarding of our staff and collaborators. We will be conducting analysis in 2021 to explore sleep and suicide/mental illness and reporting on the results. Data for this study is only accessible in-person through specific data centres. Due to the pandemic-related closures of these centres, much of the analyses have been delayed.

Moral Injury

Many military personnel are exposed to events where they or others transgress deeply held moral beliefs. The consequences of such experiences may include moral injury, a specific type of psychological injury encompassing shame, feelings of worthlessness, and potentially, a loss of meaning and altered self-concept. The 2018 CAFVMHS survey is the first national survey to include a well-validated measure of moral injury, and thus represents an ideal opportunity to explore its predictors, prevalence, and associated outcomes. Specifically, our team will be assessing the prevalence and severity of moral injury in active and released CAF personnel, the sociodemographic and military-related predictors of moral injury, and the impact of moral injury on adverse mental health outcomes and treatment-seeking. Results of this research will contribute to our understanding of the impact that moral injury has on mental health outcomes, and may guide the development of optimal treatment interventions for CAF personnel with moral injury. Our protocol has received approval from Statistics Canada and we have conducted onboarding of our staff and collaborators. Initial results have been analysed and submitted for peer-reviewed publication.



Understanding Recovery from PTSD

The Research Centre has forged an ongoing commitment to understand the subjective experiences of recovery, and to understand factors that are associated with recovery.

Understanding recovery from the Veteran and Support Person's Perspective: An examination of functional and health-related quality of life in military-related PTSD in recovery

The process of recovery from PTSD is generally captured by clinicians through scores on quantitative surveys or standardized clinical interviews. Although this approach is a useful metric for quickly categorizing patients as “recovered” or “not recovered”, the ways in which patients’ lives have changed throughout and following treatment are not captured, nor are there objective biological measures associated with PTSD recovery. In this two-part project, rich qualitative data, clinical assessments, and biomarker analysis will be combined to create a comprehensive and nuanced snapshot of the different stages of illness/recovery from military-related PTSD.

In the first part of this project, separate semi-structured interviews were completed with CAF serving personnel and Veterans and with their significant others to explore the experience of military-related PTSD. This qualitative data was combined with quantitative survey data on psychological and relationship variables, and has now been written up in

a manuscript which will soon be submitted for publication. In the second part of this project, semi-structured interviews will be conducted with CAF serving personnel and Veterans at various stages in the treatment process, as well as their nominated support person to develop a rich, granular, understanding of what recovery and treatment means to Veterans and their support teams. Additionally, fMRI, and pharmacogenomic analysis will be included to determine the feasibility of classifying PTSD in recovery based on objective biological assessments.

Funding has been awarded by the Innovation for Defence Excellence and Security (IDEaS) program through the Department of National Defence. The first part of the project is complete, and interviews for the second part of this project are underway, as well as biomarker data collection. Ethics approval has been awarded, and results from the second part of the project will be written up for publication following data collection.

Loneliness and Moral Injury

We are exploring the mechanisms through which moral injury may contribute to adverse mental health outcomes, such as suicidal ideation. Moral injury may lead to loneliness through the known social withdrawal effects that can occur, particularly when individuals experience significant shame. We predict that moral injury will increase the odds of adverse outcomes due to elevated feelings of loneliness. Results from this study will represent the first examination of loneliness in Canadian Veterans, will illuminate potential pathways through which suicide prevention efforts may be directed, and will allow us to understand why and when moral injury may be particularly deleterious. Data has been collected and analysis is underway.

Confidentiality related to Moral Injury

This is the first study in the world to explore Veterans' and military members' beliefs about confidentiality in mental health care and whether those beliefs act as a barrier to seeking treatment for moral injury. Moral injury describes psychological distress following events where a person performs, witnesses or fails to prevent acts that conflict with deeply held moral standards. Evidence suggests that moral injuries are on the rise among deployed members of the CAF, and that those exposed to such events are at a higher risk of developing mental health conditions. Through the study, which will also be open to participants receiving care at St. Joseph's Health Care London OSI Clinic, we aim to understand barriers that might prevent military personnel from disclosing details of moral injury.

Recent research conducted by our group has discovered that moral injury may influence help-seeking patterns in deployed CAF members. We still do not know why this is the case or whether this is also seen in individuals who release from the military. A commonly reported barrier for mental health help-seeking in a military setting is a perceived lack of confidentiality. Due to the perceived ethical ambiguities of some events that may induce moral injuries, it is possible that military personnel with moral injuries may be more likely to withhold details of their trauma or avoid seeking help due to worries about confidentiality. If Veterans do not feel comfortable disclosing certain details because of perceived mistrust related to privacy, we need to know why that is and what we can do to address this issue.

Improving the Road to Mental Readiness Program

Understanding the effectiveness of both preventative and interventional programs for maintaining the psychological well-being of military personnel and Veterans is a priority for the CAF. Leveraging our research expertise in military/Veteran mental health, resilience/readiness, and quantitative and qualitative analyses, we will execute a systematic process to synthesize existing data and provide actionable recommendations to Defence Research & Development Canada (DRDC) for determining whether emerging technologies can enhance the uptake and enactment of mental resilience skills present in the R2MR curriculum.

Collaborations

International Dataset Initiative

The objective of the current study is to examine mental health data from armed forces members and Veterans from Australia, Canada, England, Northern Ireland, and Wales. We plan to utilize this combined dataset to investigate with greater power: i) whether certain PTSD symptom clusters have a greater impact on well-being, ii) to determine how common disorders cluster together in a treatment-seeking military sample, iii) to determine whether certain traumatic experiences are more related to adverse mental health conditions, and iv) explore gender differences in the aforementioned research priorities. Additionally, where possible, we plan to examine similarities and differences that exist across the different armed forces' datasets. Full ethics approval has been issued and we are awaiting completion of Data Sharing Agreements with all participating sites. We will then create a database framework in REDCap and have data from all sites uploaded to this instance.

Using machine learning of MEG to examine brain function in PTSD

Currently, no objective biological means of diagnosing PTSD exists, and diagnosis instead relies on lengthy clinical interviews that can act as barriers to timely prognosis and intervention. Moreover, there is significant heterogeneity in the presentation of PTSD, making diagnosis and treatment planning more complex and onerous. The ability to identify a brain-based biomarker is a critical step toward establishing precision treatments. This study aimed to identify a PTSD biomarker that will provide game-changing personalization in therapeutics. This project involves the continuation of a highly successful collaboration (over 15 publications) be-

tween the Hospital for Sick Children with the CAF, Defence Research Development Canada (DRDC) and the Canadian Institute of Military and Veteran Health Research (CIMVHR) that identified novel brain signatures in a group of PTSD-sufferers. This fundamentally advanced our neurobiological understanding of PTSD, with neural signatures capturing characteristic alterations to brain function and communication – dubbed ‘connectonomics’ – and providing empirical support for the ‘neurocircuitry’ model of the disorder. We will translate these empirical findings to a fully-realized and useful clinical tool by investigating the utility of brain ‘maps’ in classifying individual cases, predicting outcome at follow-up and test their clinical validity in diagnosis. Specifically, our objectives were to leverage our longitudinal magnetoencephalography (MEG) and clinical data, acquired 2-3 years apart (Phase I in 2013, and Phase II in 2016), to determine (1) the efficacy of these biomarkers in PTSD diagnosis; and (2) their effectiveness in symptom resolution prediction. This was achieved through the utilization of cutting-edge multivariate statistics and machine learning. Data collection for this project has been completed and a manuscript is be-

ing prepared for publication. An updated protocol is in the process of being drafted for the newly funded component. Additionally, a manuscript focused on the use of Machine Learning to predict PTSD diagnosis is currently under review.

Endocannabinoid metabolism in individuals with PTSD, examining [C-11]CURB

The question this project will address is what is/are the neurochemical basis of aberrant neural signalling in amygdala-related circuits in humans with PTSD and is the endocannabinoid system, anandamine involved? The primary objective of this study is to use PET imaging of the novel ligand [C-11]CURB to provide the first direct measurement of FAAH in PTSD. Specifically, we are interested in comparing FAAH levels in individuals with PTSD compared to healthy matched controls to investigate whether FAAH levels contribute to the development and maintenance of PTSD. We are currently referring only.



Service and Research Improvement Projects

Electronic Data Capture Transformation

In 2019 we began exploring REDCap for data capture for our research studies. We are now exclusively using and promoting this platform for clinical research. Its functionality and utility have been instrumental in helping us set up complex research study surveys complete with complicated logic, mail mergers and email reminders. We are strong supporters of the efforts from the corporate side in enabling clinician researchers to use REDCap for clinical purposes.

Leveraging Social Media for Participant Recruitment

The migration to virtual meetings and medical visits expanded the ways in which we engaged with clients. Participant interviews moved to virtual spaces. The Research Centre set up social media platforms to connect with its patient base and collaborators. The Twitter, Facebook and LinkedIn accounts were instrumental in helping us reach our recruitment goals for our longitudinal studies. A significant number of participants from those studies indicated that they want to be contacted for future studies. We look forward to the outcome of the liaison with the Business Marketing group at the local college to streamline our marketing strategy for improved participant recruitment in the future.



Completed Projects

Quality of Life

Analyses were conducted to determine how quality of life is affected in CAF Veterans with co-occurring depression and PTSD. Clinical data was obtained from CAF Veterans seeking treatment at St. Joseph's Health Care OSI Clinic. It was found that although both PTSD and depression were associated with reduced quality of life, PTSD became less influential in individuals who also experienced severe depression symptoms. Findings revealed that depression symptoms strongly reduce quality of life in areas related to physical and psychological functioning. Further, findings suggested that treating depression symptoms among those with co-occurring PTSD and depression may have the most substantial impact on quality of life. We have prepared a manuscript describing our findings, which has now been published in the European Journal of Psychotraumatology.

Path to Sustainability. Overview of Research Grants



Research Grants

Understanding Recovery

Understanding recovery: An examination of functional and health-related quality of life in military-related PTSD in recovery. Funding Source: Department of National Defence, IDEaS Program. Principal Investigator. **\$701,335**. *Reported in 2019, received in 2020.

Confidentiality of Moral Injury

Beliefs about Confidentiality and Attitudes toward Disclosure of Moral Injuries. Funding Source: Veterans Affairs Canada. Principal Investigator. **\$59,104**. *Reported in 2019, received in 2020.

Improving Resilience Programs

Delivery of the Road to Mental Readiness Program - Recommendations on how to complement current Road to Mental Readiness Program in operational

contexts. Funding source: Canadian Institutes for Military and Veteran Health Research (CIMVHR) Task 52. Principal Investigator. **\$102,260**.

Cognitive Training for PTSD

A randomized control trial of a novel approach to cognitive training in public safety personnel with post traumatic stress injuries. Source: CIHR. Co-Investigator. **\$990,000**.

Magnetoencephalography and PTSD

Utilizing magnetoencephalography (MEG) data to examining connectivity profile in PTSD. Funding Source: Department of National Defence, IDEaS Program. Co-Investigator. **\$850,000**. *Reported in 2019, received in 2020.



Loneliness

The impact of loneliness and moral injury on suicide in treatment-seeking Veterans. Funding Source: Western University. Principal Investigator. **\$5,000.**

Artificial Intelligence and Clinical Data

Can natural language processing and artificial intelligence algorithms be used to identify and extract features associated with suicide attempts, moral injury, and patterns of comorbidity from unstructured clinical and self-report data? Funding Source: CIMVHR Advanced Analytics Initiative. Principal Investigator. **\$200,000.**

Magnetoencephalography Pilot Study

Application of non-invasive magnetoencephalography for objective assessment of Posttraumatic Stress Disorder: A pilot study. Funding Source: Department of National Defence, IDEaS Program. Co-Investigator. **\$70,000.**

Magnetoencephalography Follow-on Study

Utilizing magnetoencephalography to examine brain function in posttraumatic stress disorder. Funding Source: CIMVHR. Co-investigator. **\$131,900.**

Virtual Reality

Virtual Reality Wellbeing and Mastery for Canadian Veterans and their families. Funding Source: Veterans Affairs Canada: Veteran and Family Well-Being Fund. Co-Investigator. **\$63,000.**

Sexual Misconduct in the Military

Impact of Military Sexual Trauma with Canadian female-identifying military members and Veterans. Funding Source: CIMVHR True Patriot Love Research Initiative. Co-Investigator. **\$100,000.**

Meta-Analysis of Treatments

Management of posttraumatic stress disorder: a multiple treatment comparison meta-analysis of randomized controlled trials., Funding Source: Workers Compensation Board of Manitoba. Co-Investigator. **\$158,243.**

Machine Learning

Enhancing the Management of Military PTSD using Machine Learning, Funding Source: The Interdisciplinary Research Fund. Co-Investigator. **\$25,000.**

Cannabinoid Metabolism

Endocannabinoid metabolism in PTSD neuroimaging, Funding Source: Canadian Institutes of Health Research. Co-Investigator. **\$1,230,000.**

Neuroimaging of PTSD

Neural, cognitive and biological correlates of the dissociative subtype of PTSD among military members, Funding Source: Canadian Institutes of Health Research. Co-Investigator. **\$608,000.**

Ongoing Grants (Continued)

Epidemiology of PTSD

Defining the longitudinal course, outcomes, and treatment needs of vulnerable Canadians with posttraumatic stress disorder. Creation of a longitudinal dataset with Statistics Canada. Funding Source: Canadian Institutes of Health Research. Co-Investigator. **\$1,888,760.**

Reconsolidation Therapy

Comparing Standard Vs. Enhanced Reconsolidation Therapy for the Treatment of Psychological Trauma: A randomized controlled trial. Funding Source: Canadian Institutes of Health Research. Co-Investigator. **\$702,272.**

Yoga for PTSD

The SKIP study: Sudarshan Kriya Yoga In Post traumatic stress injury, an RCT for Public Safety Personnel. Funding Source: Canadian Institutes of Health Research. Co-investigator. **\$133,000.** (On hold)

Grant Submissions Awaiting Decision

Cannabis and Well-being

Cannabis use among Canadian Armed Forces Veterans impact on the health and well-being of Veterans and Veteran families. Funding Source: Canadian Institute of Health Research/Veterans Affairs Canada Joint Initiative. Principal Investigator. **\$68,900.**

International Dataset

Veteran mental health across international boundaries. Funding Source: Veterans Affairs Canada. Principal Investigator. **\$52,925.**

Mitigating Moral Injuries

Development of an implementation program to minimize exposure to and mitigate the impact of moral injury among personal support workers in long-term care. Funding Source: Canadian Institutes of Health Research. Co-Investigator. **\$305,000.**

Personality and Resilience

The roles of personality and resiliency in Veteran mental health. Funding Source: Veterans Affairs Canada. Principal Investigator. **\$42,250.**

Completed

Brain Imaging and Precision Medicine

Leveraging longitudinal functional brain imaging data for precision medicine in PTSD. Funding Source: IBM / Canadian Institute for Military and Veteran Health. Co-investigator. **\$200,000.**

Diagnostic Brain Imaging

Imaging the invisible: Teasing apart trauma using advanced neural imaging and artificial intelligence to differentially diagnose mental health challenges. Funding Source: IBM/CIMVHR. Co-investigator. **\$99,151.**

Understanding Recovery

Understanding predictors: recovery of military-related PTSD from both an individual and family perspective using qualitative and quantitative analysis. Funding Source: Department of National Defence, IDEaS Program. Principal Investigator. **\$47,260.**

Moving Forward.

Roadmap for the Future

Improving awareness among Veteran community and public

A marketing plan was developed to guide our marketing strategy with the aim of promoting our research activities. The Lawson Health Research Institute Media and Communications Department's policies and procedures provided overarching guidance. To date we have successfully launched active social media platforms - a Facebook page, Twitter account and LinkedIn business account. A website was also launched under the Lawson Health Research banner (<https://www.lawsonresearch.ca/osi>). We have partnered with the Business Marketing program at a local college and anticipate promising outcomes from the team of students that will work with us to augment our efforts.

Collaborations with OSI Clinics and Clinicians

We have identified the need to connect with physicians interested in clinical research and continue to build the relationship with existing clinical researchers. Our *Research Digest* was launched in September 2020 with an initial circulation of 150 subscribers. It is a monthly email digest of research curated articles, activities and current information related to Veteran and military well-being.

Increasing research capacity

The Research Centre saw significant growth in staffing for 2020. Our staff has grown to 10 research staff, 6 visiting scientists and scholars, and a number of graduate, undergraduate students, and volunteers. We saw the departure of a postdoctoral associate and research assistant working on a specific project. The additional staff directly impacted our productivity despite the effects of the pandemic, which had all staff set up to work remotely. Going forward, we will expand the staff roster with at least one postdoctoral associate, a research assistant, additional computer science students and volunteer medical students working on projects for the Research Centre. The addition of two computer science students in 2020 added a dimension of efficiency and enabled us to effectively track recruitment efforts through social media for our projects and most importantly, improve data integrity and research replicability.

Focus on output and knowledge translation

The Research Centre made history by holding online research consortium and advisory council meetings for the first time. There was a strong representation of members and participants at each meeting. Remote access offered the opportunity to participate for those who may not have been able to do so for in-person meetings. We continued to build partnerships and have made a connection of significance with the Centre of Excellence for PTSD that facilitates knowledge translation and mobilization activities stemming from the longitudinal research studies on the effect of the COVID pandemic on Veterans. Our output for publications remained on track. Work with international collaborators continued in 2020, and this also offers opportunities for results to be disseminated through publications and conference presentations. The additional staff and results from research projects promise an active year for scientific output in 2021.

Publications, Presentations, and Dissemination

Peer-Reviewed Journal Articles

Richardson, J. D., Ketcheson, F., King, L., Forchuk, C., Hunt, R., St. Cyr, K., Nazarov, A., Shnaider, P., McIntyre-Smith, A., Elhai, J.D. (2020). **Sexual Dysfunction in Treatment-Seeking Canadian Armed Forces Members and Veterans.** *Military Medicine*, 185, 68-74.

Nazarov, A., Fikretoglu, D., Liu, A., Richardson, J.D., Thompson, M. (2020). **Help-seeking for mental health issues in deployed Canadian Armed Forces personnel at risk for moral injury.** *European Journal of Psychotraumatology*, 11, 1729032.

Forchuk, C., Nazarov, A., Hunt, R., Davis, B., St. Cyr, K., & Richardson, J. D. (2020). **The influence of depression-PTSD comorbidity on health-related quality of life in treatment-seeking veterans.** *European Journal of Psychotraumatology*, 10.1080/20008198.2020.1748460

Richardson, J.D. (2020). **The diary of an Operational Stress Injury Clinic psychiatrist during the COVID-19 pandemic.** *Journal of Military, Veteran, and Family Health*. 10.3138

Zhang, J., Richardson, J.D., Dunkley, B.T. (2020). **Classifying post-traumatic stress disorder using the magnetoencephalographic connectome and machine learning.** *Scientific Reports*, 10.1038/s41598-020-62713-5

D'Agata, M., Granek, J., Holden, R., Nazarov, A. (2020). **The Relation between Self-Concealment and Self-Reported Mental Health Symptoms in a Sample of Canadian Armed Forces Personnel.** *Military Psychology*. 10.1080/21635781.2020.1838365

Abstracts

Dickey, C., Richardson, JD. **Mental Health and Well-being While Facing COVID-19** (May 2020). Hosted by Talent, Learning and Engagement, Western Human Resources (virtual).

Richardson, JD., Teasell, R., Sharma, V. **Covid-19/ OCD/ Perinatal Psychiatric Disorders** (October 2020). Hosted by MHPA (virtual).

Nazarov, A. **Well-being of Veterans during the COVID-19 Pandemic: a Canadian Perspective.** (October 2020). Panel presentation at the Military Psychology Summit During COVID-19. Event hosted by APA Division 19: Society for Military Psychology (virtual).

Nazarov, A. **Moral Injury - an Overview.** (October 2020). Invited presentation at the CIMVHR 2020 Symposium Series. Event hosted by CIMVHR (virtual).

Richardson, JD., Forchuk, C., Plouffe, R., Le, T., Soares, V., Nazarov, A. **Well-Being of Veterans during the COVID-19 Pandemic.** (November 2020). Podium presentation at the 2020 London Joint Mental Health Research Day, London, ON (virtual).

Nazarov, A., Forchuk, C., Plouffe, R., Le, T., Soares, V., Richardson, JD. **Moral Distress and Well-Being in Health Care Workers during the COVID-19 Pandemic.** (November 2020). Podium presentation at the 2020 London Joint Mental Health Research Day, London, ON (virtual).

Forchuk, C. Nazarov, A., Plouffe, R., Trahair, C., Richardson, JD. **Beliefs about confidentiality and attitudes toward disclosure of moral injuries.** (November 2020). Poster presented at the 2020 London Joint Mental Health Research Day, London, ON (virtual).

Richardson, JD. **Well-being of Veterans and Veteran families during the COVID-19 Pandemic** (November 2020). Infographic presentation at the Five Eyes Mental Health Research Innovation Collaborative Virtual Meeting.

Vasudev, K., Alolayan, M., Ionson, E., Watt, C., Speechley, M., Richardson, D., Forchuk, C., Lanius, R., Vasudev, A. **Alternative Treatments for Post-Traumatic Stress Disorder – A Preliminary Analysis of An Ongoing Randomised Controlled Trial.** (November 2020) Poster presentation at the International Society for Traumatic Stress Studies (virtual).

Nazarov, A. **Unpacking moral injury: current understanding, gaps, and future directions** (December 2020). Invited presentation at the PIR-Mental Health: Research Imaginarium Series.

Celebrating Success. Awards



2020

Kate St. Cyr was awarded the Wounded Warriors Doctoral Scholarship in Military and Veteran Health Research. The area of study for this research is sex-specific differences in mental health services utilization amongst Canadian Armed Forces Veterans.

Dr. Anthony Nazarov was awarded The Robert S. & Mary Gay, Donald, James and Helen (Taylor) Gay Endowed Research Fellowship in Veteran's Care. This fellowship will support Dr. Nazarov's research on Veterans' attitudes towards disclosure of moral injury.

Dr. Anthony Nazarov was appointed as the Co-Chair of the Centre of Excellence for PTSD Moral Injury Community of Practice.

Board of Advisors

Current Members



Ken Balderson, MD, CM, FRCPC

*Psychiatrist, St. Joseph's OSI Clinic, Greater Toronto Site
Adjunct Professor, Department of Psychiatry, Western University*

Dr. Ken Balderson is a psychiatrist working full-time at the GTA Site of St. Joseph's OSI Clinic, where he has worked since January 2018. Previously he worked at St. Michael's Hospital with an acute care focus, and was part of the leadership team in the Department of Psychiatry. He also has extensive experience in psychiatric outreach. His research involvement has included a role as co-investigator of studies exploring the risk of suicide after hospital discharge and looking at the impact of SARS on health care personnel.



Marco Di Cola

Director, Harbour Grace Holdings Inc

With a passion for business, politics and history Marco is graduate of the University of Western Ontario and holds an Honours B.A. As someone who thrives on challenges, Marco has welcomed several career changes over the past 25 years that have pushed him outside of his comfort zone and challenged him to reinvent himself. Marco began his career in the banking sector and held multiple Sales and Service roles for Canada Trust and later TD Canada Trust (TSX:TD), where he was recognized with Top Performance awards. While working with TD Canada Trust, he coached and mentored dozens of professionals who have gone on to lead outstanding careers and have reached executive level positions. Marco's outstanding track record in banking opened the door in the mid-2000's to an exciting career in the technology industry. He enthusiastically accepted the challenge of working for Phoenix-Interactive Design Inc., a progressive software company in London, Ontario who was making a big push on a global scale in self-service software solutions for the banking industry. A few years after accepting a role as Sales & Account Manager for some of the world's leading banks, he was promoted to Vice President, Global Software Business Development. At Phoenix, who was later acquired by Diebold Nixdorf (NYSE: DBD), Marco was responsible for acquiring some of their largest bank clients and was recognized with Outstanding Achievement Awards. A few years after his mentor Kyle MacDonald sold Phoenix to Diebold Nixdorf, he accepted his greatest and most fulfilling challenge yet in her newest endeavour, Harbour Grace Holdings Inc. As Director of Programs & Partnerships, Marco works with the executive management team and has multiple responsibilities including IT services, charter yacht sales management, and pursuing the philanthropic goals of the corporation's owners which includes building partnerships with leading charitable organizations such as the David Foster Foundation, the St. Joseph's Foundation and academic institutions such as IVEY Business School.



LCol (Retd) Stéphane Grenier

Mental Health Innovator

When it comes to mental health, Stéphane Grenier walks the talk. He was recently appointed to the Order of Canada and awarded an honorary Doctor of Laws degree by the University of Guelph and Humber College for his contributions to the field of workplace mental health. Stéphane's riveting keynotes are not only thought-provoking, but also lead to tangible action and sustainable change for those leaders who are prepared to rethink how they support their people. His autobiography, *After the War: Surviving PTSD and Changing Mental Health Culture*, tells his story from the day he landed in the midst of the Rwandan genocide, through his journey of changing mental health culture in the Canadian military, developing national Guidelines for Peer Support with the Mental Health Commission of Canada, all the way to creating Mental Health Innovations (MHI); a consultancy that leads innovative and sustainable change in organizations to enhance the mental health of their people. Today, he and his business partners develop non-clinical mental health interventions as a compliment to traditional clinical care for private and public sector organizations, as well as for provincial health care systems. Stéphane's vision is a world where people no longer face barriers to good mental health.



LCol (Retd) Alexandra Heber, MD, FRCPC, CCPE

Chief Psychiatrist, Veterans Affairs Canada

She has over 30 years' experience in Mental Health, first as a nurse, then as a psychiatrist. After a decade in Toronto coordinating the Women's Program in the Clinic for HIV-Related Concerns at Mount Sinai Hospital, and working on an Assertive Community Treatment Team, Dr. Heber started working as a civilian psychiatrist for the Canadian Forces in 2003, then enrolled in the military in 2006. She deployed to Afghanistan as the Psychiatrist in Charge of the Canadian Forces Mental Health Services for Task Force Afghanistan in 2009. After retiring from the military, she accepted the position of inaugural Chief of Psychiatry for Veterans Affairs Canada, where she became the VAC lead author on the 2017 CAF-VAC Joint Suicide Prevention Strategy. She has published and presented nationally and internationally on PTSD in the military and veteran population, and has designed two online courses on PTSD for health care professionals. Her current research interests include: suicide prevention, the military-civilian transition experience, effects of cannabis on mental health, outcome measurement in mental health treatment, and the effects of military sexual trauma.



Col Rakesh Jetly, MD

Chief Psychiatrist, Canadian Armed Forces

Dr. Rakesh Jetly is the chief psychiatrist for the Canadian Armed Forces. He occupies various roles such as mental health advisor to the surgeon general and academic appointments at Dalhousie University (Halifax) and Ottawa. In addition, he has been selected the inaugural chair in military mental health at the IMHR (Institute for Mental Health Research). He began his military career as a general duty medical officer and flight surgeon and deployed to the middle east and Rwanda. After his post graduate training at the University of Toronto in psychiatry he deployed twice to Kandahar, Afghanistan. Col Jetly has an interest in operational mental health with a focus on PTSD and has worked within Canada and with allies (NATO) to advance the field. Occupational and workplace mental health are also specific areas of interest. Research and academic interests are varied and include suicide prevention, nabilone as a treatment for PTSD-related nightmares, neurofeedback and pharmacogenomics. Current international collaborations include a lecture series on Morality and Mental Health as well as chairing Research Task Groups (RTG) Leveraging Technology in Mental Health and Personalized Medicine. An imminent study is one looking at the safety and efficacy of Cannabis in the treatment of PTSD.



Maj Gen (Retd) Glynne Hines

Former Director of Consultation, Command and Control, NATO, Brussels

OSI Special Section of the Royal Canadian Legion

Veteran co-chairman of the Minister of Veterans Affairs Mental Health Advisory Group

Glynne Hines enjoyed a 41-year career in the Canadian Armed Forces. He initially joined the Army Reserve in 1970 as a gunner in Brantford Ontario. Upon transfer to the regular forces, he underwent training as naval officer, serving onboard destroyers, supply ships and submarines. In 1982, he transferred to the air force as a communications engineer, ultimately serving in Kingston Ontario, Anchorage Alaska, Winnipeg Manitoba, Baden Germany, Goose Bay Labrador, and of course, Ottawa. He deployed in the first Gulf War as communications commander, Canadian Air Task Group Middle East and to Sarajevo as Chief, Combined and Joint Communications for the NATO Stabilization Force. Prior to his retirement, his final posting was as the Director of Consultation, Command and Control at NATO Headquarters in Brussels. He remained in Brussels as the civilian director of NATO's battlefield intelligence sharing enterprise until 2014. Upon return to Canada, he joined other, like-minded Veterans, to try to help fellow-Veterans of his era and younger, and their families, particularly those suffering from mental health issues. He is a member of the founding executive of the Operational Stress Injuries Special Section of the Royal Canadian Legion and since 2016 has served as the Veteran co-chairman of the Minister of Veterans Affairs Mental Health Advisory Group.



Lisa King, MSc

Program Evaluation and Research Officer, St. Joseph's OSI Clinic, Parkwood Institute

Lisa King has worked as a Researcher/Program Evaluation and Support Officer (PESO) at St. Joseph's Operational Stress Injury Clinic since 2014. She holds a B.A. in Psychology and a M.Sc. in Neuroscience from the University of Western Ontario. Her published research primarily examines how factors such as gender, sleep disturbance, social support, deployment experiences, and comorbidity relate to PTSD, depression, and anxiety among military personnel and Veterans. She's currently interested in better understanding the breadth of trauma experienced by non-deployed Veterans, and the effectiveness of novel group therapies for treating military-related mental health conditions.



Laryssa Lamrock

Family Peer Support Coordinator, Operational Stress Injury Social Support (OSISS) Program

Laryssa Lamrock is the Strategic Advisor, Families, for the Centre of Excellence on PTSD and also has extensive experience in the field of family peer support with Operational Stress Injuries (OSIs) such as anxiety, PTSD and depression. She has had numerous speaking engagements involving mental health awareness specific to OSIs, peer support and her lived personal experiences. A few of the most noteworthy have been the National Conference on PTSD, an appearance before the House of Commons Standing Committee on Veterans Affairs and the Healing the Family Forum at the Canadian Embassy in Washington D.C. She has also participated on a number of Committees including the National DND-VAC-RCMP Mental Health Advisory Committee and the National Operational Stress Injury Family Ad Hoc working group. Laryssa strongly believes in the importance of education and support for families of military members, Veterans and first responders living with OSI. Along with her professional experiences, Laryssa is truly a military family member as she is the daughter, spouse and mother of formerly or currently serving Canadian Armed Forces members. Her personal experiences in supporting a loved one with OSI and her own journey with depression drives her passion for representing and advocating for families of those with OSI in hopes of helping make their journey a little easier.



Ruth Lanius, MD, PhD

Professor, Western University

Harris-Woodman Chair in Mind-Body Medicine, Western University

Ruth Lanius, MD, PhD, Professor of Psychiatry is the director of the posttraumatic stress disorder (PTSD) research unit at the University of Western Ontario. She established the Traumatic Stress Service and the Traumatic Stress Service Workplace Program, services that specialized in the treatment and research of Posttraumatic Stress Disorder (PTSD) and related comorbid disorders. She currently holds the Harris-Woodman Chair in Mind-Body Medicine at the Schulich School of Medicine & Dentistry at the University of Western Ontario. Her research interests focus on studying the neurobiology of PTSD and treatment outcome research examining various pharmacological and psychotherapeutic methods. She has authored more than 150 published papers and chapters in the field of traumatic stress and is currently funded by several federal funding agencies. She regularly lectures on the topic of PTSD nationally and internationally. She has recently published a book 'Healing the traumatized self: consciousness, neuroscience, treatment' with Paul Frewen.



Polliann Maher

Family Peer Support Coordinator, Operational Stress Injury Social Support (OSISS) Program

Polliann Maher is a Family Peer Support Coordinator with OSISS. She started volunteering with the program in 2009 and was employed with the program since 2011. Polliann took part in the Vocational Rehabilitation program through Veterans Affairs Canada in 2009 and went back to school to successfully complete her Community Service worker diploma. She has been part of the development and facilitation of the Psycho-education workshops for Family members in collaboration with the OSI Clinic at Parkwood Hospital. The research from these workshops was presented in a poster presentation at CIMVHR in 2018 in collaboration with the staff from the OSI clinic. Polliann is passionate about promoting Mental Well-being within the Military and Veteran community and was part of the Military Family Resource Centre Board of Directors for 6 years. Polliann is the spouse of a retired Veteran that was has been diagnosed with PTSD since 1999, mother to two adult sons and brings several years of lived experience as a caregiver, spouse, mother and peer support coordinator.



Michelle Marlborough, MD, FRCPC

Psychiatrist, St. Joseph's OSI Clinic, Parkwood Institute

Assistant Professor, Department of Psychiatry, Western University

Dr. Michelle Marlborough is a practicing psychiatrist at the Operational Stress Injury Clinic at St. Joseph's Health Care London, and is an Assistant Professor in the Department of Psychiatry at Western University. She received her medical degree from McMaster University in 2011 and completed psychiatry residency training at the University of Toronto. Her clinical interests include the treatment of trauma and trauma-focused psychotherapies.


Margaret McKinnon, PhD, CPsych

*Associate Chair of Research, Psychiatry and Behavioural Neurosciences, McMaster University
Associate Professor, McMaster University
Senior Scientist, Homewood Research Institute*

Dr. Margaret McKinnon is a clinician-scientist who serves as the Homewood Chair in Mental Health and Trauma in the Department of Psychiatry and Behavioural Neurosciences at McMaster University. Work in Dr. McKinnon's laboratory focuses on identifying the neural and behavioural correlates of PTSD and trauma-related illnesses and on translating this knowledge to the development and testing of novel treatment interventions aimed at reducing the cognitive and affective sequelae of these conditions. Dr. McKinnon has a special interest in military, Veteran and first responder populations, and has worked with these groups clinically and in her research program.


Candice M. Monson, PhD

*Professor, Ryerson University
Director of Clinical Training at Ryerson University*

Candice M. Monson, Ph.D., is a Professor of Psychology at Ryerson University in Toronto, ON. Dr. Monson is one of the foremost experts on traumatic stress and the use of individual and conjoint therapies to treat PTSD. She has published extensively on the development, evaluation, and dissemination of PTSD treatments more generally. She has been funded by the U.S. Department of Veterans' Affairs, U.S. National Institute of Mental Health, U.S. Centers for Disease Control and Prevention, U.S. Department of Defense, and the Canadian Institutes of Health for her research on interpersonal factors in traumatization and individual- and conjoint-based interventions for PTSD. Recognizing her distinguished contributions as a clinical psychologist and educator, she is a Fellow of both the American and Canadian Psychological Associations, a Beck Institute Scholar, received the Canadian Psychological Association Trauma Psychologist of the Year Award in 2013, was named the Outstanding Mentor by the International Society of Traumatic Stress Studies in 2014, and was inducted into the Royal Society of Canada in 2016. She has co-authored 7 books, including *Cognitive Processing Therapy: A Comprehensive Manual* and *Cognitive-Behavioral Conjoint Therapy for PTSD*, and has published over 150 publications. Dr. Monson is well-known for her efforts in training clinicians in evidence-based assessments and interventions for PTSD.


LCdr (Retd) Ken Osborne

*Director, Licensing and Accreditation, Law Society of Ontario
Commissioner, Ontario Soldier's Aid Commission*

Kenneth Osborne served in the Canadian Forces for 24 years. Enrolling initially as a Training Development Officer, he was selected for the Military Legal Training Program in 1999. Attending Queen's University, Faculty of Law, Mr. Osborne articulated with the firms Cassels, Brock and Blackwell and Greenspan, White in Toronto. He was called to the Bar in Ontario in 2004. As a lawyer with the Office of the Judge Advocate General, his key posts included roles with NATO, the Canadian Forces Legal Advisor, the Strategic Joint Staff, and as a Deputy Judge Advocate at various bases across Canada. He is a Veteran of peacekeeping operations in Bosnia-Herzegovina and combat operations in Afghanistan. Deploying to Afghanistan on two occasions, he served as the lawyer to Canada's Special Operations Task Force, and subsequently deployed as a legal mentor in a rule of law capacity with the US Forces. For service as a legal mentor in Afghanistan, and notably in regard to his dedication in supporting rule of law capacity initiatives at the Dawood National Military Hospital in Kabul in 2010, he was awarded the United States Meritorious Service Medal. Released from the Canadian Forces in 2016, he is employed with the Law Society of Ontario as the Director, Licensing and Accreditation, responsible for the licensing and accreditation activities that support the legal professions in Ontario. In 2017, Mr. Osborne was appointed by the Lieutenant Governor of Ontario as a Commissioner in the province's Soldiers' Aid Commission. Mr. Osborne resides in Niagara Falls, Ontario with his spouse Alison.



David Pedlar, PhD

Scientific Director, Canadian Institute for Military and Veteran Health Research (CIMVHR)

Dr. David Pedlar is the scientific director of the Canadian Institute of Military and Veteran Health Research and professor in the School of Rehabilitation Therapy at Queens University. He has dedicated his career to advancing the care and well being of Canadian Armed Forces (CAF) Veterans. After working as a clinician, he spent fifteen years as the national director of research for Veterans Affairs Canada. He has held the positions of adjunct professor at the Faculty of Nursing at the University of Prince Edward Island and the Faculty of Medicine at Dalhousie University. In 2015, he received his second Fulbright Scholar Award as the visiting research chair in military social work at the University of Southern California where he continues as an international affiliated faculty at the Center for Innovation and Research on Veterans & Military Families. For his work in military and Veteran health, Dr. Pedlar has received a number of honours and awards. His research interests include improving military to civilian transition and enhancing Veteran well-being in the life after military service.



Shawn Rhind, PhD

*Defence Scientist, Defence Research and Development Canada (DRDC)
Associate Professor, University of Toronto*

Dr. Shawn Rhind earned his doctorate in Immunobiology from the University of Toronto. He completed a NSERC Postdoctoral Fellowship with the Defence & Civil Institute of Environmental Medicine (DCIEM) and US Army Research Institute of Environmental Medicine (USARIEM), examining bio-molecular interactions between neuro-endocrine-immune systems under severe physiological stress and environmental extremes and their impact on health and performance. Today, Dr. Rhind is a senior Defense Scientist in the military Operational Health Group at DRDC Toronto and an Associate Professor at the University of Toronto, where he leads an integrative – molecular to systemic – translational research team. His research spans basic laboratory science to human clinical trials, and is currently focused on elucidating the biological basis and therapeutic interventions for combat-related psychological and physical trauma, including PTSD and battlefield care after traumatic shock and brain injury.



Maya Roth, CPsych

*Psychologist, St. Joseph's OSI Clinic, Greater Toronto Site
Associate Member of the Yeates School of Graduate Studies, Ryerson University
Associate Scientist, Lawson Health Research Institute*

Dr. Maya Roth is a Clinical Psychologist at the St. Joseph's Operational Stress Injury Clinic – Greater Toronto Site. She is also an Associate Member of the Yeates School of Graduate Studies at Ryerson University, and an Associate Scientist with the Lawson Health Research Institute. Dr. Roth is a passionate advocate for evidence-based treatment of military-related Posttraumatic Stress Disorder and Operational Stress Injuries. She has presented and published in this area, and has also provided evidence-based treatment for PTSD workshops to clinicians.



Patrick Smith, PhD

CEO, Centre of Excellence on Post-Traumatic Stress Disorder and Related Mental Health Conditions

Dr. Patrick Smith began his tenure as CMHA's National CEO in April 2016. With a PhD in Clinical Psychology, he came to CMHA from Renascent – one of Canada's leading providers of abstinence-based, residential addictions treatment – where he was also CEO. Dr. Patrick Smith is the CEO for the Centre of Excellence on Post-Traumatic Stress Disorder and Related Mental Health Conditions in Ottawa, Canada. As its first CEO, Dr. Smith provides strategic leadership in the establishment and growth of the Centre of Excellence. Prior to joining the Centre of Excellence, Dr. Patrick Smith was the National CEO of the Canadian Mental Health Association (CMHA). With a PhD in Clinical Psychology, he came to CMHA from Renascent – one of Canada's leading providers of abstinence-based, residential addictions treatment – where he was also CEO. Prior to this, he was the Vice President, Research, Networks and Academic Development at the BC Mental Health and Addictions Services of the Provincial Health Services Authority in British Columbia from 2005 to 2010, and was founding Head of UBC's Addiction Psychiatry Program. From 1997 to 2005, Patrick was the Vice President of Clinical Programs at the Centre for Addiction and Mental Health (CAMH), and was Head of the Addiction Psychiatry Division at the University of Toronto. He received his PhD in 1991 from the University of Nebraska and did his internship and NIDA (National Institute on Drug Abuse) postdoctoral fellowship at the Yale University School of Medicine from 1990-1992. He was also a Fulbright Scholar at the University of Canterbury in Christchurch, New Zealand. In addition to his clinical and research background, Patrick's primary focus for much of his work has been mental health and addictions recovery and health systems planning and development. As a founding member of the Canadian Executive Council on Addictions, Patrick represented Canada as a delegate to the United Nations Committee on Narcotic Drugs (UN-CND) in both 2004 and 2009 and co-chaired the development of Canada's National Addictions Treatment Strategy.



Sgt (Retd) Edith St-Jean, CD

Coordinator, Operational Stress Injury Social Support (OSISS) Program

Sergeant St-Jean enrolled in the Canadian Armed Forces on 4 Dec 1983 as a mobile support Operator and posted to North Bay, Ontario. She later released in September 1991 while in Cold Lake, Alberta. In 1996 she joined the Air Reserve in Comox, BC as a clerk and later transferred to 746 Communication Squadron in Calgary, AB. In 2000, she transferred back to the Regular Forces as a Medical Technician and was posted to 1 Field ambulance Edmonton, AB. In 2003, she specialized in Preventive Medicine where she served in Borden, ON and Winnipeg, MB. Edith was deployed to Afghanistan in 2008 and 2013. After more than 27 years of service to the Canadian Armed Forces and Royal Canadian Medical Service, Edith retired on 15 January 2017. Edith started as a recreational golfer then applied herself more seriously to the sport and has won several Military Golf Regionals. She also participated at the National level. She is now back to a recreational golfer while trying to maintain a healthy lifestyle. Edith now works for the Department of National Defence as the Operational Stress Injury Social Support coordinator by connecting people with an OSI to effective resources, help to set goals by providing leadership, firsthand experience and practical knowledge of what life is like with an OSI. Edith lives in St. Thomas, Ontario with her new puppy Merlin.

Former Members

Christine Basnett, MSW, RSW

Clinical Social Worker, St. Joseph's OSI Clinic, Parkwood Institute

Jason Carr, PhD

Psychologist, St. Joseph's OSI Clinic, Parkwood Institute

Advisory Council Meetings

April 13, 2020 London, ON (virtual)

November 3, 2020 London, ON (virtual)



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