

## 2022 Discovery Fund Collaborative Team Competition

### Team:

Nadia Minian: PI Peter Selby: PI Rosa Dragonetti, CO-I Scott Veldhuizen, CO-I Laurie Zawertailo, CO-I Juveria Zaheer, Co-I Braden O'Neill, Co-I Shannon Lange, CO-I Nicole Thomson, CO-I Allison Crawford, CO-I Sidney Kennedy, CO-I

**Title:** Implementing protocols for suicide prevention in primary care

**Abstract:** Background: Suicide is a public health issue. Nearly 95% of people see their family doctor in the year prior to attempting or completing suicide. Primary care reform has led to the development of team based care where other health care providers can see patients for conditions where suicidal ideation may be detected. No standardized approach has been adopted for team based interventions where patients may be seeing other health care providers such as nurses or social workers. Objectives: The goal of this study is to understand barriers to implementing evidence-based suicide prevention protocols and develop and test implementation strategies to facilitate evidence-based suicide screening, assessment, and intervention in team based primary care clinics in Ontario. Methods: We will identify the key barriers and facilitators to implementing suicide prevention protocols by interviewing health care providers in team based primary care clinics in Ontario. The interview guide will use constructs identified by the Consolidated Framework for Implementation Research. Once we identify the barriers, we will use a new implementation tool, the Consolidated Framework for Implementation Research– Expert Recommendations for Implementing Change matching tool to identify appropriate implementation strategies that address the identified barriers. Finally, we will conduct structured quality improvement process involving multiple Plan-Do-Study-Act to test and refine the menu of proposed implementation strategies. Primary outcomes include clinician-reported feasibility and acceptability of these strategies. Impact The results of this study will identify barriers and feasible solutions to implementing suicide screening, assessment, and intervention practices in team based primary care clinics. We will pragmatically test strategies that will inform a larger confirmatory trial to prevent suicide

**Team:** Principle Investigator: Dr. Daniel J. Mueller, MD PhD Co-Principal Investigator: Dr. Shraddha Pai, PhD Co-Investigators: Dr. Stefan Kloiber, MD Dr. Sean Hill, PhD Dr. Joanna Yu, PhD Dr. James Kennedy, MD Dr. Daniel Felsky, PhD Dr. Samar Elsheikh, PhD Victoria Marshe, HBSc

**Title:** Pharmacogenetics-Based Predictive Modelling for Personalized Treatment of Depression

**Abstract:** CAMH has been at the forefront of pharmacogenetic implementation in psychiatry providing PGx testing to more than 11,000 patients over the past nine years. Based on our PGx testing at CAMH, 23% of referred patients have been identified as being “extreme” (i.e. poor or ultra-rapid) metabolizers for the core drug-metabolizing enzyme CYP2D6, putting patients at higher risk for non-response to many antidepressant medications. Given that in the general population less than 10% are found to be ‘extreme’ metabolizers, our observation suggests that treatment failure resulted from misaligning antidepressant medications with the individual genetic profiles of patients. We will work collaboratively with the CAMH Major Depressive Disorder Integrated Care Pathway (MDD-ICP), a measurement-based care pathway, aimed at optimizing treatment quality by decreasing sub-standard variations in clinical practice. We will recruit and genotype 120 participants for predictive modelling for treatment outcomes. We will

compare the predictive capacity of clinical models versus those which also integrate pharmacogenetic information to ultimately develop a predictive risk scoring tool with clinical relevance. Given CAMH's already-existing infrastructure, the burden of mental illness, and the relatively high incidence of non-response in antidepressant treatment, the proposed project will move us closer towards treatment optimization and consequently towards reducing the disability associated with prolonged treatment. The proposed work is a critical first step in understanding the predictive capacity of PGx information as part of a well-designed clinical care pathway and will provide us with pilot data for a large-scale integration of PGx testing into psychiatric practice in Canada.

**Team:** Principal Investigator – Dr. Ahmen Hassan Co-Investigators Dr. Arfeen Malick Dr. Nazila Isgandarova Dr. Marwa Azab Ms. Heba Mr. Allie Ali

**Title:** C-MAP, a virtual program enhancing addiction treatment for Canadian Muslims

**Abstract:** Canadian Muslims are greatly underserved and marginalized in receiving equitable mental health services. In Muslim Communities, addictions' stigma is further compounded because substance use is culturally and religiously taboo. Our research team has previously developed and evaluated an interactive faith-based addictions psychoeducational program. The program successfully reduced stigma by demonstrating improvement in areas of knowledge, attitudes, and help-seeking among Muslims in Canada. However, COVID-19 pandemic halted this in person program. To provide an innovative solution to this complex challenge and address other systemic, accessibility and cultural barriers reported in our findings, we are proposing to deliver this virtual pilot Canadian Muslim Addictions Program (C-MAP).

C-MAP is an unprecedented Canada-wide project that aims to provide technology-based accessible psychoeducation, self-help interventions, health service navigator for patients as well as culture/spiritual sensitivity training to health care providers. The first phase of this large project will include the development of the content of program by a unique collaboration to integrate holistic interventions from different disciplines including psychiatry, psychology, social work, neuroscience, naturopathic and family medicine, and Islamic scholarly studies. Our team is utilizing an evidence-based approach and adapting it to a standardized biopsychosocial-spiritual model.

C-MAP is a culturally adapted innovative virtual program that will be the first of its kind to enhance and integrate inter-disciplinary treatment for addiction in Canadian Muslim communities. This program has critical public health implications by enhancing early treatment access of addiction and thus preventing major disabilities and economic burden that has been exacerbated by COVID-19.