

September 2021

I hope you have found some time to rest and relax this summer, as we reconvene to tackle our most exciting research work ahead with the greatest patient impact. We look forward to sharing research developments with you in *BrainBuzz*, a monthly e-newsletter that keeps the CAMH Research Committee members connected and informed between our meetings. If you have any questions or feedback, please reach out at any time.

Aristotle Voineskos
VP Research, CAMH



New study supports medical safety of electroconvulsive therapy (ECT)

Electroconvulsive therapy (ECT) is a medically safe mental health intervention, according to a new study led by CAMH researcher Dr. Tyler Kaster as part of his doctoral studies at ICES and the University of Toronto. The study was published today in the journal *The Lancet Psychiatry*, and is among the largest and most comprehensive to compare the safety of ECT with standard treatment amongst individuals with depression.

Multiple studies over a period of decades have confirmed the effectiveness of ECT as a mental health intervention for people with treatment-resistant depression. Up to 80 per cent of people with severe depression who receive ECT achieve remission. However, despite this success rate, only one per cent of people with severe depression ever receive ECT, likely due to concerns about side effects of ECT such as cognitive and medical complications.

This study, entitled [Risk of serious medical events in patients with depression treated with](#)

electroconvulsive therapy: a propensity score-matched, retrospective cohort study, looked at the psychiatric records of over 10,000 patients in Ontario whose depression was serious enough to require at least three days of hospitalization, and compared the risk of medical hospitalisation or death within 30 days for patients who had ECT compared to patients who did not. It concludes that, “among individuals hospitalized with depression, there is not a clinically significant increased risk for serious medical events with exposure to ECT while the risk of suicide appears to be significantly reduced. The benefits of ECT on depression outcomes may outweigh its risks in this population.”

“ECT is the single most effective treatment we have in psychiatry for depression,” said lead author CAMH Psychiatrist Dr. Tyler Kaster, who treats ECT patients at the **CAMH Temerty Centre for Therapeutic Brain Stimulation**. “But prejudice and discrimination around the treatment is enormous in terms of preventing people from accessing it.”

ECT is not associated with an increased risk of serious medical events or suicide in patients with depression 

Electroconvulsive therapy is an underused intervention, likely as a result of stigma and concerns about side effects.

Researchers identified adults admitted to Ontario psychiatric hospitals for three or more days with severe depression between 2006 and 2017. They compared the risk of a serious medical event or suicide among 5,008 patients who received ECT with 5,008 patients who received standard care.



- The average number of ECT procedures in the exposed group was 8.
- The risk of a serious medical event, such as hospitalization or death within 30 days, among ECT-exposed and unexposed patients was very low and not different between the two groups.
- The risk of suicide within 30 days was significantly reduced in the ECT-exposed group.

Kaster et al. *Lancet Psychiatry*. 2021.

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In Canada, over 1 in 9 adults (3.2 million Canadians or 11.3 per cent) will experience a major depression in their lifetime, at which time they will most likely be prescribed antidepressants and/or psychotherapy. However, about a third of these individuals will fail to respond to these first-line treatments, and then will be diagnosed with treatment-resistant depression. There are a number of interventions for this condition including medication combinations, new drugs like ketamine and a neurostimulation treatment called repetitive transcranial magnetic stimulation (rTMS). However, when these treatments don't lead to improvement or when a depression becomes very severe leading to hospitalization, ECT is often considered as the next step, as it is highly effective at rapidly reducing symptoms of depression and suicidal thinking. [Learn more about ECT.](#)

Dr. Simone Vigod, study corresponding author, senior adjunct scientist at ICES and Chief of Psychiatry at Women's College Hospital, said the study illustrates the importance of emphasizing the safety and efficacy of ECT as an effective mental health intervention for people for whom nothing else has worked. “At

Women's College Hospital, we believe that supporting people living with mental health conditions has never been more important," added Dr. Vigod. "Doing so requires providing patients with a full spectrum of evidence-based treatments founded on rigorous research evidence. This investigation adds to the existing body of research on the safety and efficacy of ECT, which can serve as a valuable option for those with severe depression."

Dr. Kaster believes that the persistent fear associated with ECT is a reflection of the overall level of prejudice and discrimination that continues to persist in regards to mental illness itself.

CAMH continues to be Canada's leader in neurostimulation treatment delivery, and treats approximately 250 patients per year with ECT. CAMH's Temerty Centre for Therapeutic Brain Intervention is one of the world's leading centres in brain stimulation treatment, research and training. Through clinical research projects, the Temerty Centre is driving treatment advances using repetitive transcranial magnetic stimulation (rTMS), magnetic seizure therapy (MST), and ECT.



**Meet Dr. Daisy Singla,
first-ever *womenmind* Scientist**

Dr. Daisy Radha Singla is an Independent Scientist jointly appointed to the [Institute for Mental Health](#)

[Policy Research](#) and the Centre for Complex Interventions. Daisy just started at CAMH as the first-ever [womenmind](#) scientist recruited to advance research in women's mental health.

"I am interested in scaling up evidence-based psychotherapy for common challenges faced by women such as depression and anxiety. As clinician scientists, we know that psychotherapy is among the most effective interventions in medicine but most people cannot access them because of cost, transportation and a broken healthcare system. As public health servants, I believe it is our responsibility to improve access to these effective treatments, particularly for vulnerable populations, such as perinatal women.

I received my PhD in clinical psychology at McGill University. Prior to 2020, I spent most of the previous decade in low- and middle-income countries exploring innovative solutions to increase access to evidence-based psychotherapies. The lessons I gained in the Global South included a person-centered perspective that involved collaborating with a wide range of stakeholders, providing interventions where and when it works for patients, and training non-specialist providers (i.e., community health workers, teachers, nurses and midwives) to deliver care. Through my ongoing [PCORI-funded SUMMIT trial](#), we now have the exciting opportunity to explore innovative models to improve access to psychotherapy for pregnant and postpartum women across Toronto, Chicago and Chapel Hill.

I am excited to bring this work to CAMH and be a part of *womenmind*, to both contribute to innovation in women's mental health care and advance women's skills and leadership opportunities in the sciences.

In addition to *womenmind*, I would say 3 things drew me to CAMH:

- The emphasis and importance of research;
- The diversity among investigators and leadership (including a women Physician-in-Chief and CEO); and
- The potential for my research to go beyond the science and provide practical, real-world results. I believe *womenmind* and CAMH are uniquely positioned to challenge the common stereotypes of ageism, racism and sexism that young women investigators of colour experience."

Did you know...

"I was born and raised in Penticton, British Columbia—a small and pristine town which is renowned for its beaches, mountains and farmlands. I have always

loved sports and sport analogies make perfect sense to me!”

About *womenmind*:

womenmind is a community of philanthropists and thought leaders driving change in women’s mental health research and closing the gender gap in the sciences. In addition to recruiting experts in women’s mental health, initiatives of *womenmind* include post-doctoral fellow and seed grant opportunities, developing a women’s mentorship program, and building capacity in Sex and Gender Based Analyses Plus (SGBA+). Stay tuned for upcoming *womenmind* sponsored panel discussions this fall!



CAMH releases updated national clinical guidelines for treatment of opioid use disorder

As more evidence emerges that opioid overdose deaths have increased dramatically since the onset of COVID-19, the Centre for Addiction and Mental Health (CAMH), in collaboration with subject matter experts and medical regulatory authorities across Canada, have now released updated national clinical guidelines for the treatment of opioid use disorder. [Opioid Agonist Therapy: A Synthesis of Canadian Guidelines for Treating Opioid Use Disorder](#), harmonizes existing provincial and national guidelines, evidence-based practices, and expert opinions into one document aimed at providing consistent and high-quality care to people with opioid use disorder.

First-line treatment for those with opioid use disorder is opioid agonist therapy (OAT). This includes providing a medication that keeps the person out of withdrawal, reduces their cravings and prevents overdose deaths should they relapse. These medications are the most effective treatment option for opioid use disorder, and are scientifically proven to save lives, even when people use fentanyl. When combined with counselling and addressing the social causes and consequences of addiction, the person can make a full recovery and get back to living their lives. OAT is a long-term treatment

and it can take some people a few tries before they get better completely.

“COVID has drastically changed the situation on the ground across Canada in regards to the opioid crisis and these need to be living guidelines that can be updated as circumstances change and new evidence evolves,” said Dr. Peter Selby, Clinician Scientist, Addictions Division, and CAMH lead for this initiative. “For example, we wanted to change some of the old rules that were making it hard to provide person-centred care and help people stay in treatment. That is key because the longer people are in treatment the better they recover and the less likely they are to die from an opioid overdose.”

The new guidelines are updated with the most up-to-date information and clinically-proven strategies to help patients overcome opioid addiction. These include updated medication delivery options, such as offering injectables, and expanding the list of medications for those who don't respond to traditional treatments. The guidelines also feature less regulatory restriction and new strategies to combat stigma to make treatment adherence easier.

“OAT, like any other substance use treatment, needs to meet every patient's individualized needs and goals,” added Dr. Narges Beyraghi, CAMH Addictions Psychiatrist. “The recovery journey is different for every individual and they may connect to different components of care during this process. This updated guideline has tried to be inclusive to a patient's gender, age and other physical and mental health problems that could be a barrier to access to care or equitable care.”

A [CAMH study released in April](#) found that a large number of people who were regular opioid users when the pandemic began reported heightened fears of dying from an overdose, in large part because of disruptions in the supply of street drugs that made drugs more expensive, harder to get and of unknown origin or potency. Lockdown measures across the country also increased the risk that people would use alone without anyone to help them in the event of an overdose. This risk was compounded by reduced access to harm reduction services like safe injection centres. All of these factors led experts to fear that the COVID pandemic would make the opioid crisis more deadly, and new [numbers recently released by Ontario Public Health](#) confirmed those fears, with a 60 per cent increase in opioid deaths reported.

Dr. Marina Reinecke, Medical Consultant, Prescribing Practices Program, The College of Physicians & Surgeons of Manitoba, said: “Opioid use disorder affects a large and diverse group of Canadians. In

Manitoba, our patients live in urban, rural and remote locations and have diverse care needs. These needs often collide with inequitable access to health care services. This compounds the tragedy associated with this very treatable disease. These guidelines provide evidence-based guidance and practical information for frontline clinicians in every care setting, empowering them to bring hope and health to Canadians where they live.”

“However, guidelines alone don’t change practice,” added Dr. Beyraghi. “What does change practice is a combination of policy changes to address structural and societal stigma and education. We have several courses at CAMH that help providers acquire and improve their skills in treating people with opioid use disorder in a humane and respectful manner. We also have great resources for people who use opioids and their loved ones to make a science-based informed choice about treatment.”

Visit the [CAMH website](#) to learn more about the updated opioid use disorder guidelines, as well as additional resources regarding OAT.



Buzz-worthy news

- World Suicide Prevention Day - read how CAMH's mental health research is saving lives today, and the powerful stories of people with mental illness who have been helped through ground-breaking research.
<https://t.co/vlbm0cjQ9N?amp=1>
- CAMH has six grants that have been approved for funding as part of CIHR's Project Grant Spring 2021, for a total of \$4,444,653!
<https://twitter.com/CAMHResearch/status/1419765459843436556>
- Congratulations to Dr. Rachel Tyndale, who was named the ISSX North American Scientific Achievement Award Winner for her contributions to our understanding of the role of drug metabolizing enzymes in the brain.
<https://twitter.com/CAMHResearch/status/1435285141513965571>
- Wonderful international collaborative effort in Neurolmage journal to further improve how we analyze brain imaging data. Thanks to Kurt Schilling

(Vanderbilt University) for leading the effort, and to CAMH trainees & scientists for their collaboration as one of the sites!

<https://twitter.com/AVoineskos/status/1432793953229754374>

- Congratulations to Dr. Robert Mann on being awarded this year's Canadian Association of Road Safety Professionals Lifetime Achievement Award for research on factors that affect harms associated with drug and alcohol use.

<https://twitter.com/SamanthaWells02/status/1433469516034584577>

Get In Touch!

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