



I hope you have found some time to rest and relax this summer, despite these challenging times. We look forward to sharing research developments with you in *BrainBuzz*, an e-newsletter that keeps CAMH Research Committee members connected and informed between our meetings. If you have any questions or feedback, please reach out at any time.

Bruce Pollock
VP Research, CAMH



CAMH research leads to changes in care to mitigate the impacts of COVID-19

The most vulnerable people in our society become that much more vulnerable amidst a pandemic. CAMH researchers have assessed the associated risks for two such groups — people with schizophrenia, and those with Alzheimer's disease and related dementias — and CAMH clinicians have implemented a number of recommendations to mitigate the effects of COVID-19 on these patients.

“Too often, there are large gaps between the research literature and clinical practice. More often than not, there are long lags to implementing the findings,” says [Dr. Nicole Kozloff](#), Child and Adolescent Psychiatrist and Clinician Scientist in the [Slaight Family Centre for Youth in Transition](#) and the [Schizophrenia Division](#) at CAMH. “The pandemic has pushed us to narrow these gaps in order to save lives.”

Supporting people with schizophrenia

At CAMH, responding to the crisis has meant seamlessly transitioning most clinical services to virtual care, both within the Slight Centre — a service for young people experiencing a first episode of psychosis — and the Schizophrenia Division. Nurses, social workers, occupational therapists and other clinicians assisted patients with setting up virtual schooling, finding employment and applying for government benefits. Prescribers also worked with CAMH clinicians and community partners to facilitate medication delivery at home, rather than at the hospital.

Many of the changes were based on recommendations Dr. Kozloff and colleagues made in a recently published article in [Schizophrenia Bulletin](#). As part of their research, the investigators reviewed the early experiences of countries such as China and South Korea, and considered the myriad ways COVID-19 was affecting their patients. They also reviewed policy documents from the World Health Organization, the National Institutes of Health and elsewhere, along with scanning other peer-reviewed articles.

The authors made seven practical recommendations that could be implemented immediately, including suggesting that governments ensure there is adequate testing and resources for those with schizophrenia living in shelters and residential housing.

Caring for people with dementia and their caregivers

CAMH experts have also implemented several strategies to mitigate the effects of COVID-19 on people with Alzheimer's disease and related dementias. These strategies are consistent with recommendations resulting from an article they recently published in [The American Journal of Geriatric Psychiatry](#).

“At CAMH, we are providing virtual outpatient care to patients and families living with Alzheimer's or related dementias,” says [Dr. Tarek Rajji](#), article co-author and Chief of the [Adult Neurodevelopmental and Geriatric Psychiatry Division](#) at CAMH. “We are supporting long-term care virtually, and in person when possible. We are offering technical and mental health support to long-term care staff. And we continue to provide specialized inpatient services.”

“Through a CAMH Long-Term Care initiative, we recently sent out 21 tablets to several long-term care homes where our geriatric team are already providing virtual outreach,” adds Dr. Rajji. “We also placed an order for dementia support tools and technologies to help the long-term care staff and residents manage the

behavioural symptoms that are often observed in dementia. Finally, we are also piloting group support and coaching to front-line staff at three of the homes: groups of anywhere from five to 15 participants include a range of staff — everyone from nurses to personal support workers, and kitchen, laundry and recreation staff.”

People with Alzheimer’s disease and related dementias are at a higher risk of severe illness from COVID-19, in part because they tend to be older and have other underlying medical conditions. The pandemic is challenging scientists to consider how research can be conducted remotely and how at-home interventions can be expedited to help with care during the pandemic.



Suicide rate for people with schizophrenia spectrum disorders over 20 times higher than the general population

The suicide rate for people with schizophrenia spectrum disorders (SSD) is more than 20 times higher than the rate for the general population, according to a recent CAMH-led study — a figure the authors call “tragically high.”

Published in June 2020 in the journal *Schizophrenia Research*, the study of 20 years of population data is believed to be the largest of its kind. The researchers examined statistics on more than 75,000 patients who received a first diagnosis of SSD. On average, each patient was followed for almost 10 years.

Highlighting risk factors

The study found several key factors that were predictors of suicide, including:

- During the first five years after an individual has been diagnosed with SSD
- If there was evidence of a mood disorder or

hospitalization prior to diagnosis
• If the individual was diagnosed with SSD at a later age

“What this study teaches us is that although people with SSD are at higher risk for suicide, we can target those at the highest risk with changes in policy and treatment,” says lead author [Dr. Juveria Zaheer](#), Clinician Scientist in [CAMH's Institute for Mental Health Policy Research](#).

The overall rate of suicide for people with SSD was 1.71 per cent, or 171 per 100,000 person-years, compared to approximately 8 to 9 per 100,000 person-years in Ontario's general population.

Identifying strategies to reduce risks

“In the past, clinicians have focused on treating the psychosis itself when it first appears,” says senior author [Dr. Paul Kurdyak](#), Director of Health Outcomes and Performance Evaluation in the Institute for Mental Health Policy Research at CAMH and Clinician Scientist at ICES. “This study shows that treatment has to include suicide prevention safety planning as well from the very beginning.”

The authors suggest increasing the age limit for admission to first episode psychosis programs (most are closed to people over 30) and increasing the length of clinical follow-up care after a first episode of psychosis.

“Now that we know what is happening, we need to better understand why,” says Dr. Zaheer. “Our next step will be to study the lived experience of people with SSD who have had suicidal ideation.”

Recognizing the contributions of a CAMH trailblazer in brain stimulation

A CAMH trailblazer in brain stimulation research and treatment, [Dr. Jeff Daskalakis](#) left CAMH this summer to head the Department of Psychiatry at the University of California, San Diego (UC San Diego). Before his move, we spoke with him about highlights of his CAMH career.

Since 1998, when he joined as the first Chief Resident of the newly formed CAMH, Dr. Daskalakis has advanced as a researcher and clinician to become Co-Director of the [Temerty Centre for Therapeutic Brain Intervention](#) and Chief of the General Adult Psychiatry and Health Systems Division. His career has included numerous pioneering accomplishments, including being the first at CAMH to study novel forms

of brain stimulation and provide these treatments to patients. His groundbreaking work inspired the Temerty family, who made a generous \$7.4-million gift to open the Temerty Centre in 2012. Today, the Temerty Centre is one of the world's leading centres in brain stimulation treatment, research and training.



How did you start working in the field of brain stimulation?

When I came to CAMH, I was working with Dr. Shitij Kapur as one of my PhD supervisors. I remember at one point Dr. Kapur was carrying around these big boxes, and asking people if they were interested in brain stimulation. He said it was a new opportunity in a young field. And I thought two things: One, this would differentiate me — it would be a challenge and an opportunity, and two, if Dr. Kapur recommends it, I'll definitely get into it. So I grabbed the bull by the horns.

Left: Dr. Daskalakis in his early days of studying TMS-EEG

What are some of the most memorable moments in your brain stimulation work?

When I started in brain stimulation, Dr. Paul Fitzgerald and I were both fellows at CAMH. We started the brain stimulation lab together. In 2002, I got the first transcranial magnetic stimulation (TMS) machine, and began offering treatment.

A fateful moment was when I was visiting Dr. Fitzgerald in Australia. On the last day of my visit, there was a key choice to make — sip wine in a beautiful south Australian vineyard, or record neurophysiological signals in a lab. Needless to say, we chose neurophysiology, and that day we recorded a signal that we thought was one of the most exciting

things we had ever seen — a signal of inhibition, an important brain process for study in mental illness. Several papers have now been generated out of that first signal.

Perhaps the most memorable moment was the day I met the Temertys. This was in 2010, and Darrell Gregersen [then-President and CEO of the CAMH Foundation] said the family had expressed interest in supporting mental health, but they were not sure in which area. I met with Louise and Leah Temerty. At the end of the day, I got a voicemail message from Darrell saying, “You nailed it.” Next, I met with Jim Temerty at his office at St. Clair, with Dr. Catherine Zahn and Darrell Gregersen. That’s when they made the first gift, over \$7 million. I was ecstatic about it! I took a bunch of friends and colleagues to have dinner in Yorkville to celebrate. I’m also grateful to the Grant family and other donors who supported my work at earlier stages, which led to getting grant funding, then to the Temerty gift.



Anderson Cooper (centre) and his 60 Minutes crew came to CAMH in 2018 to meet with Temerty Centre Co-Directors Dr. Jeff Daskalakis (left) and Dr. Daniel Blumberger (right) about their work

What interested you in this new opportunity at UC San Diego?

In 2015-16, UC San Diego invited me to give a Grand Rounds presentation. I had an opportunity to meet the faculty—lots of very interesting people. The university has this incredible department in terms of vision and accomplishments. It’s one of the top psychiatric departments in the US. And, of course, it’s in this beautiful part of the world. I’m thrilled to be joining and so proud that I was selected as Chair.

Will you continue to work with CAMH?

Dr. Blumberger and I, as well as other members of the Temerty Centre, will continue to work very closely together — hopefully through ongoing and transformative multicentre trials.

CAMH firsts in Dr. Daskalakis’ career

- Published the first large-scale clinical trial of [repetitive transcranial magnetic stimulation \(rTMS\)](#) in Canada
- Was the first group in Canada to study rTMS as a treatment for schizophrenia
- Was one of the first groups in the world to use transcranial magnetic stimulation with electroencephalography (TMS-EEG) to study physiology
- Received a \$7.4-million gift from the Temerty family to open the Temerty Centre for Therapeutic Brain Intervention in 2012, one of just three or four groups in the world offering brain stimulation treatment at that time
- In 2019, received a new \$10-million gift from the Temerty family to drive the Temerty Centre's work
- Is conducting one of the first-ever clinical trials of magnetic seizure therapy (MST) in severe psychiatric disorders, supported by the US National Institute of Mental Health

Get In Touch!

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