

FOCUS ON Mental Health RESEARCH

CAMH's Research Already Helping Patients Today



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At CAMH, we're enormously proud of our Campbell Family Mental Health Research Institute, Canada's largest group of researchers dedicated solely to mental health.

As we celebrate its first anniversary, we have good reason to be proud. With its focus on understanding the brain – from the genetic and molecular levels to the circuits and systems that shape our moods and behaviour – the institute is mov-

ing mental health research into the forefront of global science. Where will the next breakthroughs come in unraveling the complexities of the brain? How quickly can we translate those discoveries into better treatments? Can we prevent mental illness before it starts? These are the urgent questions that preoccupy us at CAMH.

We know that the earlier we can intervene, the better the outcome – and research is taking us there.

But what does research really do for those living with mental illness today? Isn't a research institute just white lab coats, glass beakers and distant dreams of treatments that might someday exist? What we need is real care today, some might suggest, not a focus on 50 years down the road.

In fact, actual care is embedded into so much of our work at the Campbell Institute. It is an essential part of what we do. As Canada's leading hospital for mental health, CAMH knows this approach is the best way to ensure patients benefit from research, and that research benefits from patients.

The Temerty Centre for Therapeutic Brain Intervention – a thriving clinical research lab under the umbrella of the Campbell Institute – is pioneering the use of several non-invasive brain stimulation techniques to treat a range of mental illnesses. Our experts are the first in Canada to test magnetic seizure therapy, which uses magnetic pulses to stimulate targeted areas of the brain. As well,

the Temerty Centre is perfecting the use of repetitive transcranial magnetic stimulation (rTMS), providing better outcomes and fewer side-effects than traditional brain stimulation methods. This technique shows promise in up to 50 per cent of patients, particularly those with treatment-resistant illnesses.

The technique is already revolutionizing care for many patients – patients like Jane. As part of our ongoing research, Jane underwent rTMS treatments for the depression she's lived with for more than 20 years. The treatment helped her replace feelings of shame and loneliness with an overwhelming sense of hope. Jane is a real patient with a real story of a life transformed today – a story only written because of the Campbell Institute.

Finding the right medication for the right patient is a common challenge when treating mental illness. At the Tanenbaum Centre for Pharmacogenetics, scientists are actively working to lessen the chances that treatment won't work or that unpleasant side-effects will lead to a patient quitting his or her psychiatric medications. Dr. James Kennedy is using genetic testing to identify the optimal medications

for a particular patient without the frustrating trial and error. The test looks at a person's specific genetic profile for breaking down particular medications and indicates – in a simple red-yellow-green-light format – which ones are most suitable.

This is a mental health game-changer. So, when will this research begin reaching actual patients? It already is. Almost 400 CAMH patients have taken the test. Early results suggest patients are reporting better outcomes from their medications with fewer side-effects.

This project was initiated by seed funding by visionary business leader Lawrence Tanenbaum, which then led to substantial funding from Ontario's Ministry of Research and Innovation.

Recently, the study was expanded into the broader community; the test is now being offered to patients at the Thornhill Medical Centre, the Village Family Health team, and other centres. Through these partnerships, Dr. Kennedy and his team will see how this system works when used by frontline family physicians, the ones who prescribe 80 per cent of psychiatric medications. In all, nearly 1,000 patients have taken the test.

Reaching patients is always our goal – and we continue to build upon our past successes. For example, CAMH's Dr. Jeff Meyer's advanced brain imaging research provides a clearer understanding of brain chemistry in major depression, which is needed to create more targeted and effective treatments. Dr. Meyer is now focused on developing a preventive approach to postpartum depression and other serious major depressive disorders, with few if any side-effects. His team is examining whether a dietary supplement can provide the nutrients removed by high levels of an enzyme that breaks down important brain chemicals like serotonin, norepinephrine and dopamine.

The Campbell Family Mental Health Research Institute is truly advancing research into uncharted territories, but it is also building on a track record that is well-established at CAMH.

Yes, there are white lab coats and beakers to be found within this Institute, as well as treatments in very early stages of development. But there are also real patients receiving real care, and that is something to be truly proud of.

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