

# Brainnovations

Issue 20



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# A Frame of Mind

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## Knowledge Translation – Bring Lab to Life

By: Tom Mikkelsen, President & Scientific Director

Do you recall the old adage, 'sharing is caring'? We teach our kids the value of sharing because we believe it's an important skill to develop. As we get older, the skill of sharing takes on new meanings, like cooperation or generosity, but the core concept remains unchanged; we give, and we get – it makes relationships and society work better. At OBI we encourage that our stakeholders share their research knowledge because we believe that, by sharing what we learn from research, we can empower people to better care for their brain health.

**CONTINUE READING...**





# OBI's Year in Review – 2019/20

We are thrilled to share with you some of the amazing work being done in the province, by OBI and our partners, to improve the lives of individuals living with brain disorders.

In our latest Year in Review 2019/20, we bring you stories of people, projects and partnerships that make us the organization we are today – bringing knowledge and innovation to life.

This past year alone, we have:

- Accelerated discovery – shedding light on new avenues of research for depression treatment
- Connected researchers around the world – through our neuroinformatics platform, Brain-CODE
- Built community partnerships – bringing together patients, caregivers, and healthcare providers to set research priorities in epilepsy
- Empowered individuals to better care for their brain health – by equipping them with credible, evidence-based tools and information, through our OBI Public Talks and knowledge translation efforts
- Invested in brain health – by supporting young entrepreneurs and our portfolio companies to bring neurotechnology to the individuals that need them most

And this is only just a glimpse of everything we've accomplished this year!

Check out the full [Year in Review](#) to learn more.



# OBI Public Talks 2021

## The Transformative Power of Neurotechnology

Simple voice commands to your phone can help set reminders, add items to your grocery list, shuffle your music, or turn on lights in a room – convenient, isn't it? Similarly, by tying brain research to technology, we can profoundly transform the lives of individuals with disabilities and brain disorders. With something as simple as a device to monitor and manage anxiety in children and adults with autism, for example.

Join us on January 21, 2021 to hear from industry leaders and caregivers about the prospect of neurotechnology to improve overall quality of life for the people who need it most.

Register [here](#).



## Relationship between Sleep and Brain Health

Neuroscientists are continuously making inroads to unravel the mysteries of sleep – an activity that each of us will be doing for approximately one-third of our lives. Research suggests that sleep plays many important roles – including the consolidation of memories and the housekeeping function of clearing toxins from our brain that accumulate while we are awake.

Join an expert panel of scientists and advocates on March 10, 2021 to learn more about the biological basis of sleep, its impact on brain health across the lifespan, and practical tips to improve your sleep quality.

Register [here](#).



# OBI Public Talk: Dealing with Depression – What are Your Options?

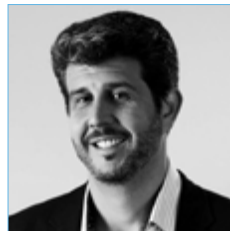
Marking [Mental Illness Awareness Week](#) (October 3–9, 2020), OBI assembled a panel of experts for a virtual public talk about managing and treating depression.

[The Hon. Michael A. Tibollo, Ontario's Associate Minister of Mental Health and Addictions](#), provided opening remarks in which he outlined the province's investments and efforts to tackle mental health challenges.

The discussion opened with Maryanne Lewis, a member of the [Community Advisory Committee](#) for [CAN-BIND, OBI's depression research program](#). She spoke to her own lived experience with depression and her personal coping strategies. [Dr. Sidney Kennedy \(St. Michael's Hospital\)](#) and [Dr. Lena Quilty \(CAMH\)](#) – both CAN-BIND scientists – outlined various treatment options, such as medication and psychotherapy, and the latest research on depression. Finally, [Dr. Daniel Blumberger \(CAMH\)](#) – another CAN-BIND scientist – discussed the specific role of brain stimulation in depression treatment.

The panel was moderated by [André Picard](#), a veteran health reporter at [The Globe and Mail](#) and a champion of mental health.

[View the full OBI Public Talk here](#), or consult the [CHOICE-D Guide to Depression Treatment](#), created in partnership with individuals with lived experience of depression. The guide is intended to empower individuals to understand their options and engage in constructive conversations with their healthcare providers.



## METRICS

**4**

Panelists

**344**

Total Viewers  
– Including 53  
International Views

## OUTPUTS



Media Coverage



Public Access  
to Research  
and Information

# ONDRI's Dr. Swartz Leading Global Study to Understand Effects of COVID-19 on the Brain

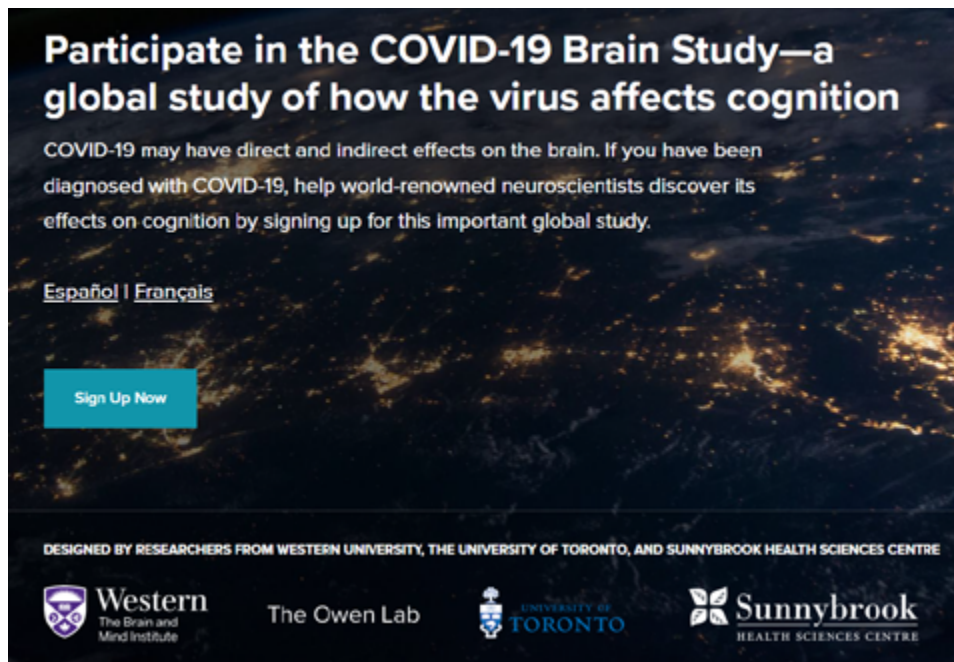
As we approach 50 million cases of COVID-19 worldwide, there is still much to learn about the virus, including its long-term impacts on brain health. [Dr. Richard H. Swartz, a clinician-scientist and ONDRI's Co-Director](#), initiated a [global study](#) in June 2020 that aims to understand the direct and indirect effects of COVID-19 on the brain.

Dr. Swartz is co-leading the study alongside world-renowned [neuroscientist Dr. Adrian Owen](#), with support from researchers at [The Brain and Mind Institute](#) at [Western University](#), the [University of Toronto](#), and [Sunnybrook Health Sciences Centre](#). The neuroscientists behind this study hope to gather enough data to answer pressing questions about the neurological impact of COVID-19 infection, given how little we currently know about the virus's effect on the brain.

Study participants are asked to take 12 brain assessments created by [Cambridge Brain Sciences](#) in three sessions over the course of a year.

Anyone 18 years or older who is currently affected by COVID-19 or has recovered from COVID-19 is encouraged to participate. The platform is available in English, French, and Spanish.

Read interviews with Dr. Swartz and Dr. Owen in the [Toronto Star](#) and [Global News](#) or, visit the site to [learn more and enroll today](#).




**Participate in the COVID-19 Brain Study—a global study of how the virus affects cognition**

COVID-19 may have direct and indirect effects on the brain. If you have been diagnosed with COVID-19, help world-renowned neuroscientists discover its effects on cognition by signing up for this important global study.


[Español](#) | [Français](#)


[Sign Up Now](#)

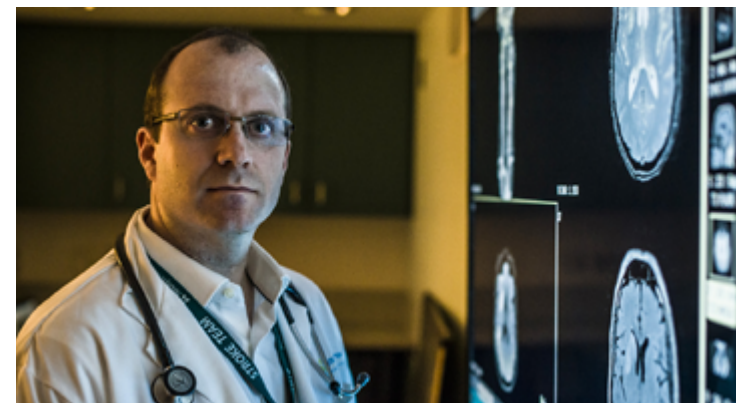
DESIGNED BY RESEARCHERS FROM WESTERN UNIVERSITY, THE UNIVERSITY OF TORONTO, AND SUNNYBROOK HEALTH SCIENCES CENTRE

 **Western**  
The Brain and Mind Institute

The Owen Lab

 **UNIVERSITY OF TORONTO**

 **Sunnybrook**  
HEALTH SCIENCES CENTRE



## OUTPUTS



**Advanced Knowledge**



**Data-Driven Approaches to Research**



# CAN-BIND Conducting National Survey of Remote Mental Health Care

As a result of the safety measures imposed by the COVID-19 pandemic, physical interactions have transitioned to be digital. This now includes how we interact with our healthcare providers. [CAN-BIND, OBI's depression research program](#), launched [a national survey](#) to better understand the delivery of remote mental health care services by health care professionals and the experience of individuals using these services.

Through this study, CAN-BIND researchers aim to understand the experience of this transition, from the perspective of both health care users and providers. Through understanding existing barriers of using remote care, the team hopes to identify ways that remote care delivery can be improved to benefit both healthcare users and providers.

If you are a healthcare user, 18 years of age or older and have been offered a remote (phone or video) mental health care appointment since March 1, 2020, you can participate in the brief online survey. They are also seeking participation from healthcare providers providing remote mental health care services.

Findings will be shared through [CAN-BIND's website](#) and newsletter, and with community partners. Results will also be shared with provincial government telemedicine networks (e.g., [Ontario Telemedicine Network](#)) and physician associations (e.g., [Ontario Psychiatric Association](#)) across Canada to provide insights about how to improve remote care delivery.

The study will remain open until the end of December. Visit the site to [learn more](#) about the survey and find out how you can participate.

**What are your experiences with remote mental health care during COVID-19?**

We're seeking insights from mental health care users, psychiatrists, and family physicians across Canada. Participation involves completing a 10-15 min online survey.

**Learn more about the research study & participate:**  
[www.canbind.ca/RemoteCareSurvey](http://www.canbind.ca/RemoteCareSurvey)

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ASR  
Arthur Sommer Rotenberg  
Suicide & Depression  
Studies Program

Canada flag

**OUTPUTS**

**Advanced Knowledge**

**Patient-Informed Research Activities**

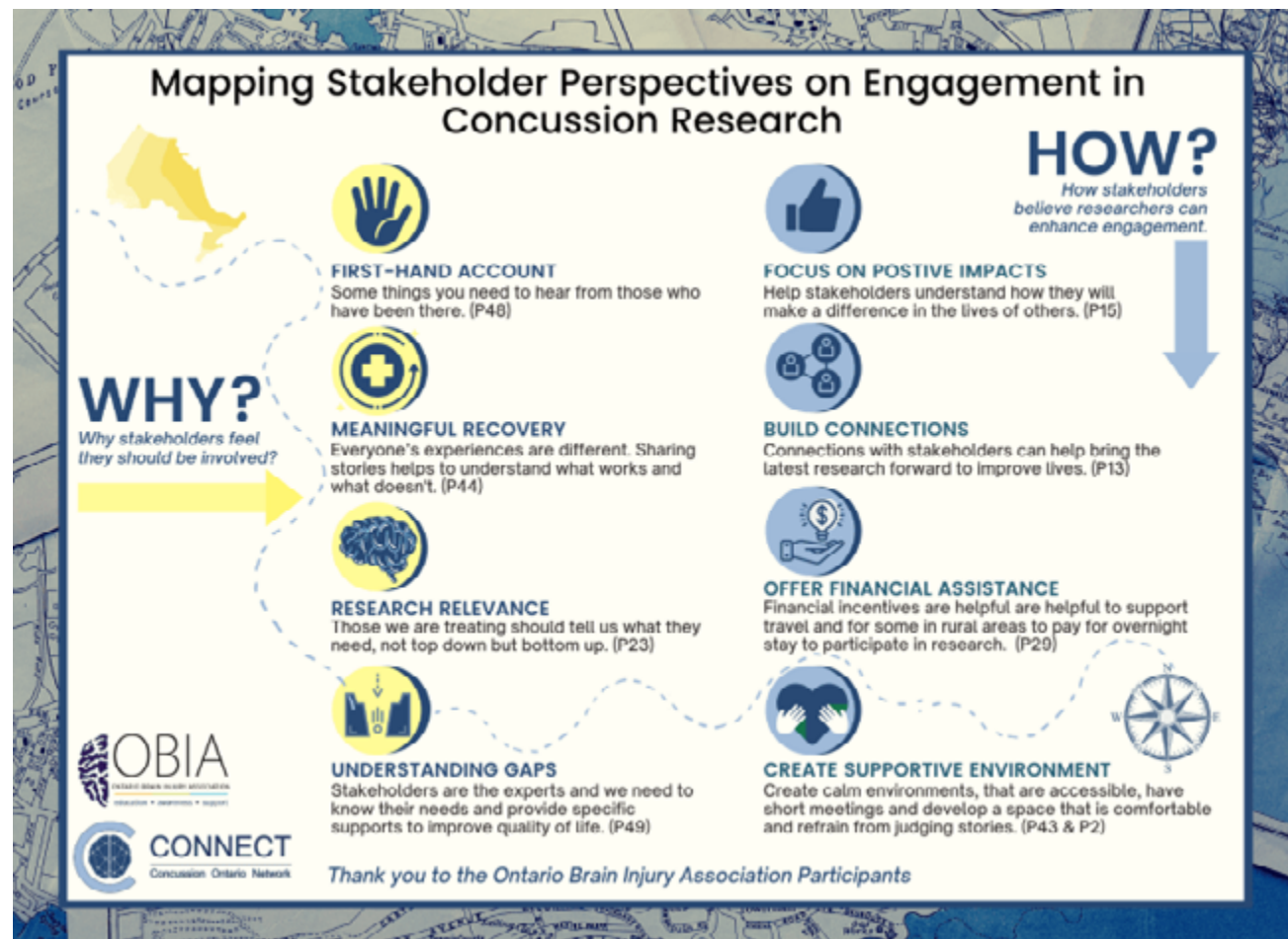
# Mapping Stakeholder Perspectives in Concussion Research

Involving relevant stakeholders within the research process can greatly improve the overall quality and impact of healthcare research. This is one of the founding principles of OBI's approach to research and innovation, and is strongly embedded within each of our Integrated Discovery Programs.

In line with this ethos, [CONNECT \(OBI's concussion research program\)](#) has gathered the perspectives of adults with lived experience of concussions, in partnership with their Community Stakeholder Committee and the [Ontario Brain Injury Association \(OBIA\)](#).

The study aimed to identify the potential benefits, challenges and motivating factors that compel individuals to engage in research and to find ways to improve participant engagement.

The results reveal that community engagement can help researchers learn about first-hand accounts as well as gaps in care. By creating a supportive environment, researchers can enhance engagement that ultimately benefits both researchers and community partners. Check out the [infographic](#) for a detailed summary.



METRICS

102  
Views

OUTPUTS



Advanced  
Knowledge



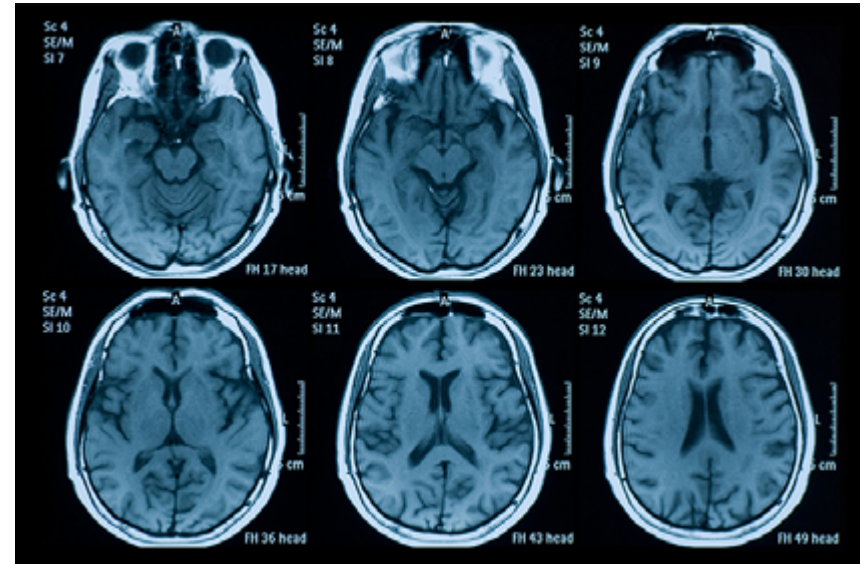
Patient-Informed  
Research Activities



# Free ECHO Programs Available for Healthcare Providers Across Ontario

[ECHO Ontario](#) is a virtual network led by expert interdisciplinary teams across Ontario, designed especially for healthcare providers. ECHO's guided practice model aims to increase workforce capacity to provide specialty care based on best practices and reduce health disparities in the community. There are currently more than 25 [ECHO programs](#) in Ontario.

Several ECHOs in Ontario focus on brain health, including the [ECHO Ontario Autism](#) program, [ECHO Epilepsy](#) (whose curriculum is informed by [EpLink's Clinical Guidelines for the Management of Epilepsy](#)), and the [ECHO Concussion](#) program, which trains primary care providers in diagnosing and managing individuals with concussion. Clinicians from OBI's network are involved in many of these ECHO programs to ensure that the valuable evidence coming out of our research programs is being shared amongst healthcare providers across the province.



Healthcare providers may register for these [CME-accredited](#) ECHO programs at no cost, as the program is fully funded by the [Ministry of Health](#). Upcoming sessions starting in 2021 are now open for registration – visit [Project ECHO Ontario](#) for the latest details on [current programs](#).

## OUTPUTS



**Advanced  
Knowledge**



**Guidelines  
and Toolkits**



**Evidence-Informed  
Community-Based Interventions**

# Stories from our Roots: A Youth-Led, Mental Wellness Program for First Nations in Ontario Considered a Success

In September, the [Chiefs of Ontario](#) and OBI completed the final evaluation of the Stories from our Roots life promotion program designed for First Nations youth in Ontario. The program was developed in partnership with the [Chiefs of Ontario](#), the [Ontario First Nations Young People's Council](#), the [University of Western Ontario](#), and the [OBI](#).



[Stories from our Roots](#) is a mental wellness program that aims to reduce risk factors associated with youth suicide within First Nations communities in Ontario, by building leadership skills, resiliency, and strength in First Nations youth. The program incorporated digital storytelling through photography – known as Photovoice – and safeTALK © suicide awareness training to support and empower youth.

The evaluation focused on the youth involved in the Stories from our Roots project – including participants' own reflections of the program's impact and photos from the workshop speaking to the meaningful connections and new beginnings the program has offered them.

*"[This goes] beyond the 125 that were trained here," says one of the youth participants, "...we will create a whole new world and a place of belonging for youth who have found their place – a place to belong."*

According to the youth participants,

1. The program was extremely successful in creating a safe environment and atmosphere at the workshops
2. Photovoice was cited as a highlight of the workshops and the safeTALK® training was reported to be extraordinarily successful at reaching all the youth
3. This initiative has helped pull youth out of isolation
4. The participants are sharing their learnings to positively impact more young people within their respective communities

Learn more about the Stories from our Roots program on [OBI's blog](#), and in an [article by The Globe and Mail](#).

METRICS	<b>8</b> Workshops Held Across Ontario	<b>125</b> Youth Participants from <b>67</b> First Nations Communities	<b>6+</b> Youth Have Become Photovoice Trainers	<b>1</b> Youth Started a Photography Business

OUTPUTS	 Evidence-Informed Community-Based Interventions	 Improved Access to Care	 Partnerships	 Public Access to Research and Information

# OBI ONtrepreneurs' Alumni – Where Are They Now?

## 1. Atomwise Raises \$123 Million in Funding

Dr. Abraham Heifets, CEO & Co-Founder of [Atomwise Inc.](#) – and a 2013 [OBI ONtrepreneur](#) – secured an extraordinary \$123 million in new funding this quarter. With this funding, Atomwise will be “scaling the technology and scaling the team and scaling what we’ve been doing with it,” says Heifets in a [TechCrunch announcement](#). According to the article, this is on top of the contracts worth \$5.5 billion that Atomwise has already signed with corporate partners that include [Eli Lilly & Co.](#) and [Bayer](#).

Atomwise – whose slogan is “Better medicines faster” – created [AtomNet](#), a powerful artificial intelligence-based technology that promises to accelerate drug discovery for a wide array of conditions and molecular targets. Since its inception in 2012, Atomwise has worked with 750 academic research collaborations to address over 600 disease targets. They currently have 285 active drug discovery partnerships with some of the best universities and institutions around the world.

We look forward to what the talented team will achieve with this new funding! Find out more about OBI's roster of portfolio companies [here](#).



### OUTPUTS



Money  
Leveraged



New or Improved Diagnostics,  
Interventions, and Treatments



Follow-On  
Investments

## 2. More Children Gaining Access to OBI Portfolio Company's Mobility Device

A Florida state insurance program's decision to purchase [Trexo Robotics'](#) gait trainers for all qualified children represents a big milestone for the company – this is the first time their neurotechnology has been completely covered by insurance.

Trexo's story began in 2011 when Manmeet Maggu – founder and CEO of Trexo Robotics – was inspired to find better solutions for his nephew, who was diagnosed with cerebral palsy. With the help of his friend Rahul, Manmeet designed robotic “legs” that enable children with limited mobility to walk and remain upright for longer periods of time. OBI has supported Trexo with funding and support through OBI's [ONtrepreneurs Program](#) in 2017 and the [Neurotech Early Research and Development \(NERD\) Program](#) in 2018.

The [Florida Birth-Related Neurological Injury Compensation Association](#) (NICA) has provided three children with Trexo gait trainers, which would normally cost \$29,000 USD and now, eight more children are going through the approval process, according to the recent [announcement](#). This sets an important healthcare precedent that will hopefully improve the accessibility of similar technologies for those individuals and families who need them most.

Learn about Trexo's tremendous impact on [our blog](#) and meet Jacob, a young boy with cerebral palsy, whose life was transformed by the device.

### METRICS

**3** Devices  
Fully Insured

**8**  
Awaiting  
Delivery



### OUTPUTS



New or Improved Diagnostics,  
Interventions, and Treatments



Improved Access  
to Treatment



# OBI ONtrepreneurs' Alumni – Where Are They Now?

## 3. Welbi, an OBI Portfolio Company, Partners with Revera to Personalize Recreation Programs for Seniors

Welbi, an OBI portfolio company, has been selected by Revera, one of Canada's largest senior living companies, to personalize recreation programs for retirement living residents across the country.



Inspired by her grandfather's experience with social isolation while living in a retirement home, Elizabeth Audette-Bourdeau developed a solution to help other seniors overcome this challenge.

Welbi's artificial intelligence serves as a personal assistant. It can automate administrative tasks, provide alerts, and make personalized recommendations to staff, so they can focus on building a sense of community, nurture meaningful relationships with residents and improve overall quality of life.

Winner of the OBI ONtrepreneurs program in 2018, Welbi was developed in close collaboration with healthcare researchers and experts with a vision to transform the way that retirees are cared for.

Read the official announcement [here](#).



### OUTPUTS



**Follow-On Investments**



**Industry Partnerships**



**New or Improved Diagnostics, Interventions, and Treatments**



**Money Leveraged**

# POND Study Sheds New Light on the Genetics of Autism Spectrum Disorder



Researchers from the [POND Network – OBI's neurodevelopmental disorders research program](#) – found a new puzzle piece in the genetics of autism spectrum disorder (ASD).

This paper was co-authored by researchers from institutions across Canada, including Dr. Evdokia Anagnostou, Co-Director of the POND Network, and Dr. Stephen Scherer, a member of POND's Executive Committee, and Director of [The Centre for Applied Genomics](#) at [SickKids](#).

Using a new computational approach, the team analyzed whole genomes from approximately 10,000 families with children diagnosed with ASD. They found that sections of DNA that are doubled or tripled – areas known as tandem repeat expansions – are significantly more common in the genomes of individuals with ASD, compared to those without.

This is an important new clue that researchers hope will inform earlier diagnosis and treatment of ASD. "This is the most exciting advance we've had in 15 years," said Dr. Scherer, in a [CTV News article profiling the discovery](#). "This is a major scientific advance in the understanding of autism, and it will change lives."

Find the paper [here](#), and learn more about the POND Network's research [here](#) – including [their recent partnership with SickKids](#) to study the effects of COVID-19 on child mental health, led by Dr. Evdokia Anagnostou.

## METRICS

**11,000**  
Views

## OUTPUTS



**Advanced  
Knowledge**



**Data-Driven  
Approaches to  
Research**

# EpLink Launches an Updated Version of the Epilepsy Guidelines

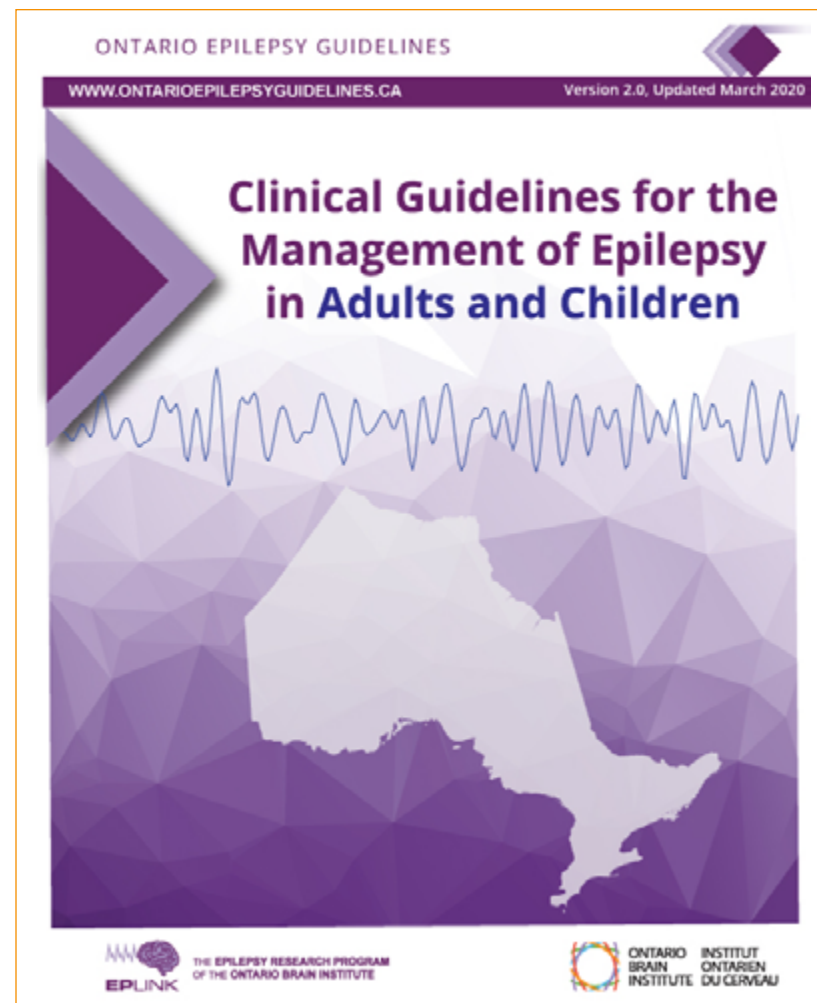
Epilepsy currently affects around 95,000 Ontarians. While medication can effectively control seizures in some individuals, an estimated 30 percent of people are living with drug-resistant epilepsy. Despite its effectiveness, surgical treatment remains underutilized in Ontario. This is due, in part, to a lack of awareness of surgical treatment options and stigma against surgery. In some cases, there is also underdiagnosis of epilepsy and a lack of awareness for appropriate treatment and referrals by physicians.

[EpLink, OBI's epilepsy research program](#), launched an updated version of the [Clinical Guidelines for the Management of Epilepsy in Adults and Children](#). These guidelines are designed to help healthcare providers with the diagnosis and treatment of individuals with epilepsy from the moment of their first seizure.

In this new version, you will find updated information about epilepsy diagnosis, drug treatments, and considerations for women with epilepsy. It also includes new recommendations for Sudden Unexpected Death in Epilepsy (SUDEP), depression, stigma, and psychogenic non-epileptic seizures.

[EpLink's Clinical Guidelines](#) – created in collaboration with [Critical Care Services Ontario \(CCSO\)](#) – are a prime example of how OBI is helping to bridge the gap between “what we know” and “what we do.” By providing healthcare and patient communities with evidence-based resources on care options, we can prompt stakeholders to engage in important conversations and make informed decisions about their care.

[Find the updated guidelines here.](#)



## METRICS

**97 Downloads**

## OUTPUTS



Advanced  
Knowledge



Guidelines  
and Toolkits



Partnerships



Public Access  
to Research and  
Information



# Video Series by CP-NET Addresses Stigma

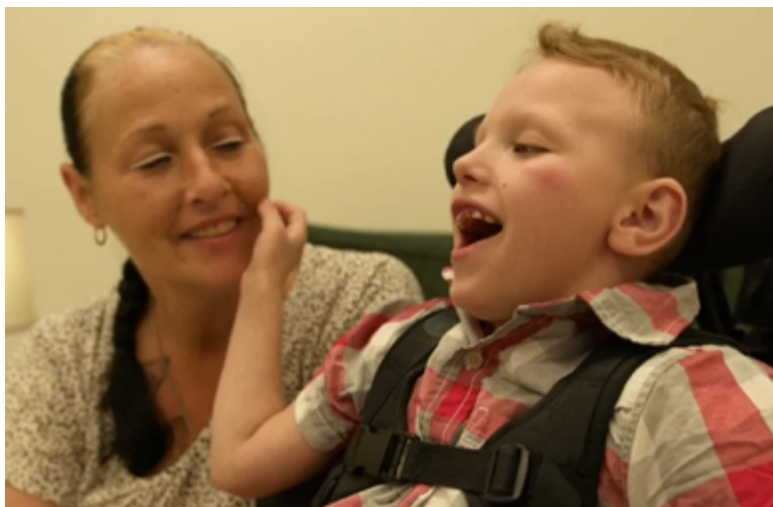
CP-NET, OBI's [cerebral palsy research program](#), created a short but impactful video series with support from [CanChild](#), illuminating the experiences of nonverbal people and their families.

In [Part 1: Meet Our Heroes](#), we meet Hunter and Mussa, two boys who are nonverbal. Hunter "is the strongest human being I've ever met in my life," says his mother, Yvonne. Mussa "can communicate very well with others, especially through his smile," says his aunt Fatmah. Click [here](#) to view the video and to learn more about Hunter and Mussa.

In [Part 2: Handling Stares and Stigma](#), we learn about the social stigma that nonverbal people face daily. Marshall – a

young man who uses an adaptive communication device, reflected on an uncomfortable interaction he experienced while trying to make conversation with a woman and her husband. "The better scenario would be if she had communicated with me instead of speaking to her husband like I wasn't even there", explained Marshall. Click [here](#) to view the video and learn ways that you can change your own behaviour to help reduce the stigma nonverbal people face.

View the complete series – including [Part 3: A Future Filled with Opportunities](#) – and find more videos to learn about developmental conditions [here](#).



## METRICS

**538**  
Views

## OUTPUTS



**Advanced  
Knowledge**



**Public Access  
to Research and  
Information**

# In the News

- [AGE-WELL 2020 National Impact Challenge Announces Winners – featuring Garth Smith, OBI's VP Business Development & Partnerships as Panelist](#)
- [CAN-BIND's Dr. Sid Kennedy Participates in Virtual Canadian Medication Competition, Angel's Den 2020](#)
- [Digital Health Start-Up Mobio Interactive Secures \\$1.8M in Seed Funding](#)
- [OBI Partner, Mint Memory Clinic, to Expand Across Canada in New Collaboration with Canadian Frailty Network](#)
- [OBI Portfolio Company Awake Labs Selected by Ontario Bioscience Innovation Organization to Drive Innovation into the Health System](#)
- [OBI Portfolio Company Braze Mobility Selected as Part of the Techstars Future of Longevity Accelerator Class of 2020](#)
- [POND Network's Co-Director Dr. Evdokia Anagnostou Featured on CBC's Here and Now Radio Program](#)
- [POND Network's Dr. Jennifer Crosbie Discusses Impacts of COVID-19 on Families and Children with Global News](#)
- [POND Network's Perspectives of Mental Health Project Awarded Child Bright's Knowledge Translation Innovation Incubator Grant](#)
- [POND Patient Advisory Committee Member Connie Putterman Receives Autism Ontario's Gerry Bloomfield Volunteer Award](#)



*The Ontario Brain Institute is a not-for-profit organization that accelerates discovery and innovation, benefiting both patients and the economy. Our collaborative 'team science' approach promotes brain research, commercialization and care by connecting researchers, clinicians, industry, patients, and their advocates to improve the lives of those living with brain disorders. Welcome to Brain Central. Visit [www.braininstitute.ca](http://www.braininstitute.ca) for more information. Follow us on Twitter (@OntarioBrain). Funding provided, in part by, the Government of Ontario.*