



Help us
get a
head
start
on recovery



TRANSFORMING CONCUSSION CARE IN ONTARIO AND BEYOND

The Hull-Ellis Concussion and Research Clinic's vision is to be a world leader in concussion care and research. Launched in 2015, The Hull-Ellis Concussion and Research Clinic is one-of-a-kind in offering a specialized rapid access concussion clinic in a clinical and research setting located in a teaching hospital.

MOVING THE PENDULUM – 5 YEAR STRATEGIC PRIORITIES

Now entering its 5th year of operation, and building on proven successes with the fast-track model, The Hull-Ellis Clinic aims to advance its efforts in five key areas:

1. Expanding the footprint of Clinical Care

Since The Clinic's inception, over 883 patients have been treated comprising more than 6,700 patient visits. Eighty percent of the patients treated have been found to become symptom free within the first eight weeks. Our initial findings have demonstrated the success of this treatment model and encouraged efforts to expand our model to other centres. In response to the COVID-19 pandemic, the rapid increased utilization of virtual platforms in healthcare has provided an optimal and receptive environment to test our ability to deliver treatment remotely.

2. Advancing research to better personalize concussion diagnosis and treatment

Integrating clinical care and research pillars, we have been able to offer shortened wait times to our hospital partners and are uniquely able to monitor and study patients at the acute stage. The Clinic's unique model, and its high referral rates, has also made it an important resource for researchers at major academic centres across the country.

To develop a targeted approach to treatment, our research is focusing on:

- Characterizing concussions in the general population
- Understanding individual differences in symptoms and trajectory of recovery
- Replicating our rapid access model of concussion care
- Evaluating the role of innovative assessments and intervention techniques

The Hull-Ellis Concussion and Research Clinic has broadcast its findings to help change the way concussions are viewed through:

- 8 published research manuscripts in leading neuro medicine journals
- 10 podium presentations at international conferences
- 17 conference abstracts presented at the International Brain Injury Association's World Congress
- 2 educational seminars to emergency physicians and frontline clinicians

Current research collaborations in the areas of:

- The efficacy of exercise as an intervention, using the Buffalo Treadmill Protocol in early concussion in the general adult population
- Development of a predictive risk score for persisting post-concussion symptoms in adults (Toronto Rehab – UHN)
- Sensory Integration Study to investigate how adults combine cognitive tasks with vision and balance senses in order to perform movements and skilled actions (Dr. Jennifer Campos, Toronto Rehab – UHN)
- Oculomotor Study to investigate visual changes following concussion (Dr. Carmela Tartaglia, Toronto Western – UHN)
- Functional neuroimaging such as MRI and Magnetoencephalography to map blood flow and brain activity in patients following concussion (Dr. Richard Wennberg et al., Toronto Western – UHN)
- Psychological profiling and the differences in approach to coping as a basis for targeted psychological intervention (Dr. Noah Silverberg, University of British Columbia)

An exciting new discovery has recently been made in The Hull-Ellis team's Cognitive and Cerebrovascular Reactivity (CVR) Study. This study compared the reaction of blood flow to the brain, in response to stress of breathing carbon dioxide, between control and concussed patient groups. While further study is needed, this is a key finding that could lead to better treatments for concussions.

3. Informing Best Practice Guidelines for concussion diagnosis and treatment

The Hull-Ellis Clinic's reputation as a subject matter expert in concussion has led to many institutions seeking its advice:

- Feedback and presentations to referring Emergency Departments
- Informing the development of the Mild Traumatic Brain Injury Rapid Access Consultation Program at WSIB
- Collaboration with the Ontario Neurotrauma Foundation (ONF) to implement their guidelines for persisting fatigue following concussion care and to develop a standardized training toolkit that we can share with other clinics in Ontario

4. Advancing System-Wide research impact

Through its leadership involvement with the Concussion Ontario Network's Neuroinformatics to Enhance Clinical-care and Translation (CONNECT) Project, Toronto Rehab is helping to ensure the integration and dissemination of our findings across academic centres of excellence in Ontario and guiding the translation of knowledge into practice.

5. Training Ontario's Primary Care Providers through Project ECHO® - Concussion

This network access through Project ECHO-Concussion helps facilitate The Hull-Ellis Concussion and Research Clinic team's vital role in disseminating early findings of successful treatments to achieve quick application in the community.

THANK YOU!

Philanthropy empowers Toronto Rehab to enhance care and turn the research of our clinicians and scientists into home, community and hospital-based advancement and innovations. With our donors as partners, Toronto Rehab is on a trajectory to significantly improve concussion recovery – and the lives of those impacted. We thank you for the opportunity to present our vision. Together, we will Make Incredible Happen!

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