



NEWSLETTER

In this first edition

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Project Objectives

The Biomedical Research and Informatics Living Laboratory for Innovative Advances of New Technologies in Community Mobility Rehabilitation (BRILLIANT) is a program that seeks to provide evidenced-based research to improve rehabilitation for individuals with Acquired Brain Injury (traumatic brain injury, cerebral palsy-fetal/perinatal brain injury, and stroke). The vision of the BRILLIANT Rehab program is to optimize mobility of persons with ABI across the lifespan. It aims to develop and deploy a comprehensive clinical and community based mobility monitoring system to evaluate the factors that result in poor mobility, and develop personalized mobility interventions that are optimized for specific patient subgroups. These innovations will be used by front-line clinicians to deliver cost-effective care; the right intervention to the right person at the right time, accounting for long-term functional potential and meaningful participation in the community.

Team and Partners

The BRILLIANT-Rehab research team comprises of users from [McGill University](#) and [Université de Montréal](#), of whom many are researchers from the Centre for Interdisciplinary Research in Rehabilitation, one of the largest rehabilitation research centres in Canada. This team has international standing in rehabilitation research through linkages and partnerships to national and international organisations.

Our partners make it possible to pursue this groundbreaking project through their generous contributions of leadership, guidance, time, goods and funds.

To view the BRILLIANT team and partners see our website brilliant-cfi.ca

A tangible impact that BRILLIANT has on patients, caregivers or clinicians

Neal is a 45 year old male who sustained a traumatic brain injury...

...resulting from a car accident. The accident resulted in reduced balance & motor skills, muscle weakness and mobility limitations. He is currently receiving outpatient rehabilitation. His objective is to improve his mobility so that he can return to work and participate in his leisure activities which include skating and biking. To help Neal communicate his treatment priorities and inform his healthcare team about those areas most impacted by his accident, Neal will be able to log in to the BRILLIANT online portal and complete self-administered questionnaires from the comfort of his own home. This portal will ensure that his healthcare professionals receive the results of the questionnaires in real-time.

This portal will allow health professionals to receive the results of the questionnaires in real time.

Moreover, wristwatch sensors will track his movements in the community and provide feedback about his activity level (steps, time active, etc). The sensors will also detect shifts in his movement that may indicate he is at a risk of falling. He will receive feedback from the portal encouraging him to move more or warn him of possible risk of falling based on the information collected from the sensors, combined with information in the questionnaires he completed. His care team will be able to view this information and plan treatment interventions with Neal.



Newsflash

Timeline of events

JUNE, 2019

BRILLIANT Researchers' workshop

OCTOBER, 2019

New BRILLIANT Logo, Website & Infographics created

Executive Committee and Information Technology & Management Committee Members established

NOVEMBER, 2019

Vendors present their platform for the Clinical Information & Participant Research System

DECEMBER, 2019

Renovations begin for the BRILLIANT Health Informatics lab

Project Progress



1 Governance & Committees

- The Executive Committee and the Information Technology & Management (ITM) Committee members have been confirmed, including the representatives for each CIUSSS.
- The members of the Information Technology & Management Committee were involved in the vendor's presentation on November 22, 2019.
- The Steering Committee's first meeting was December 11, 2019.
- The Research Committee has ongoing monthly meetings.
- Next steps: Determine the members of the Scientific Advisory Committee, Clinician Advisory Committees & Health Services Users.

2 Equipment

- The wearable motion capture solution, wireless electromyography system, portable eyetracker were purchased for the Jewish Rehabilitation Hospital (JRH) & Institut de réadaptation Gingras-Lindsay-de-Montréal (IRGLM); The parts for the wheelchair simulator at IRGLM were ordered.
- Next steps: Obtain quotes for the remaining equipment to be purchased.

3 Call for Tender

- On November 22, 2019, 4 vendors presented their platform for the Clinical Information & Participant Research System to the ITM committee; The feedback obtained from the participating members of the committee was synthesized & issued to them.
- Next Steps: Work with McGill Central IT to determine the technical specifications for the Tender documents.

4 BRILLIANT Project Dissemination

- A new updated BRILLIANT Logo has been created!; the French and English wording to accompany the BRILLIANT acronym in the logo is available in 3 versions: 1) full wording 2) no wording & 3) 3-Key words (Mobility, Technology & Rehabilitation).
- A truly brilliant Infographic has been created by Dennis Radman, PhD candidate in Dr. Ahmed's lab; It is available in both English & French and has been adapted to distribute as a bookmark.
- Website: Dennis Radman has created a website for BRILLIANT brilliant-cfi.ca
- Next steps: Develop the content for the BRILLIANT website so that it can be available to the public; explore the use of an electronic format for future BRILLIANT newsletters.

5 BRILLIANT Health Informatics Lab

- The renovations in room 2-335 began in December 2019 at the Centre de réadaptation Constance Lethbridge (CRCL) for the BRILLIANT lab; the renovations are expected to be completed soon.
- Next Steps: Finalize the order of the furniture for the lab.

Project Progress



6 Research linked to BRILLIANT

Examples of projects under the BRILLIANT umbrella

Developing an Ontology-Based Classification for Mobility among Individuals with Acquired Brain Injury

- The focus groups with clinicians at the CRCL, JRH, & IRGLM were held in November 2019.
- The focus group with patients at the CRCL was held in December 2019.
- Research day at CRCL December 11, 2019: Rehab, Alhasani, PhD candidate, presented preliminary results from her umbrella review on mobility measures & her focus groups.
- Next Steps: Develop survey based on focus group results; Results will be shared with the members of the research committee to provide a portrait of the context at each site & inform future directions for BRILLIANT research.

Implementing best practices for mobility training for persons with acquired brain injury throughout the continuum of care – Pôle universitaire en réadaptation (PUR)

- Ethics approval nearly complete: revisions need to be finalized for consent forms.
- Initial meetings were held at each site (CRCL, Institut Nazareth et Louis-Braille, & CVA teams at IRGLM, JRH).
- The first best practice identified is the implementation of the Mayo-Portland Adaptability Inventory (MPAI) using the INESSS toolkit.
- Next Steps: the four sites will be working together to adapt the implementation of MPAI at their respective site.

Organizational and technological innovations for the deployment of patient-centred best practices: Early Supported Discharge (ESD) Project for Stroke– CIUSSS du Centre-Ouest-de-l'Île-de-Montréal, FSISSE-MEDTEQ

- Needs of the CPA team and multidisciplinary forms used in practice were gathered.
- The technological platform was demonstrated by Akinox in November 2019.
- Submission to ethics review was completed in November 2019.
- Next Steps: Triage & prioritize the functionalities of the Akinox platform; Teams at CIUSSS du Centre-Ouest-de-l'Île-de-Montréal and CIUSSS du Centre-Sud-de-l'Île-de-Montréal will exchange information to determine the best approach for implementation.

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