



Ontario Centres of
Excellence

Where Next Happens

Backgrounder – Advancing Health Projects

Innovative Mobile Technology Cardiac Arrhythmia Diagnostic Service

This proposal is a collaborative investment to improve cardiac diagnostics and stroke prevention in Ontario. It addresses the diagnosis of one of the most common and treatable risk factors for stroke – atrial fibrillation – a dangerous and difficult to diagnose irregular heart rhythm that can lead to blood clots in the heart that can travel to the brain causing debilitating strokes. In partnership with six hospitals and Medtronic Canada Ltd., this project aims to accelerate the uptake of an innovative new heart monitoring technology that is being pioneered in Ontario by m-Health Solutions. The ultimate goal is to prevent recurrent strokes by implementing a cost-effective and sustainable provincial strategy that will improve the identification, and consequently the treatment, of more patients with atrial fibrillation.

Project Partners: West GTA Stroke Region – Trillium Health, Hamilton Health Sciences, Stroke Mackenzie Health Hospital, William Osler Hospital, Sunnybrook Hospital, The Scarborough Hospital, Thunder Bay Regional Health Sciences Centre, m-Health Solutions, Medtronic Canada Ltd.

An internet of things approach to mobile, smart and secure clinical alerting and messaging

This smart mobile clinical messaging and alerting system uses intelligent rules to automate hospital alerting and alarms to help improve mobile clinical messaging and alerting platforms. This project combines Mackenzie Health's clinical expertise in patient care with ThoughtWire's Ambient platform and expertise in device integration and "smart" systems, Cisco Canada's expertise in wired and wireless network infrastructure and secure unified communications, and Blackberry's expertise in mobile devices and secure mobile device management, to create an Ontario-grown integrated, mobile, "smart" and secure clinical messaging and alerting solution.

Project Partners: Mackenzie Health, Cisco Systems Canada, Blackberry Technical Solutions, ThoughtWire

Improvements in fiber tract imaging for planning and navigation of neurosurgical procedures

Improving treatment of drug-resistant epilepsy is the aim of this collaboration between Western University and Synaptive Medical, a Toronto-based company that is developing next generation image-guided technologies that supports minimally invasive surgeries. Synaptive's systems are specifically designed to enable the surgeon to better plan and perform neurosurgical interventions with enhanced precision and safety. Diffusion Tensor Imaging (DTI) is an MRI imaging technique that uses the diffusion principles of water in the cerebral white matter tracts in order to create a 3D representation of fiber tracts. This project aims to demonstrate the role of DTI in presurgical planning and surgical navigation to minimize damage to important white matter structures and improve neurosurgical outcomes.

Project Partners: London Health Sciences Centre, Synaptive Medical Inc.

Oculys BRUNO-PIAH Solutions

Oculys Solutions, Waterloo's St. Mary's General Hospital and Grand River Hospital are working together to deliver cost-effective and real results that positively impact the patient experience while reducing hospital operating costs. The hospitals are installing the Oculys Solutions in two specialized nursing units. Both solutions are displayed on either a large interactive or a small bed-side screen. By visually communicating relevant information, nursing staff and patients/family receive current care needs. The nursing unit solution, currently named BRUNO, allows various members of a patient care team, including physicians and community care case managers, to access and update current information about a patient and eliminate frustrating and costly delays. The bedside solution, named PIAH, provides patients and families with relevant information and eliminates the need to seek out staff about specific care instructions including dietary restrictions, mobility precautions, safety risks, attending physician, diagnostic test scheduling, and the expected date of discharge.

Project Partners: St. Mary's General Hospital, Grand River Hospital, Oculys Health Informatics Inc.

mHealth platform (TickiT®) for improved patient engagement

TickiT is a patient-friendly software solution that has been designed to generate data that is of higher quality and a greater reflection of the individual's perceptions of their care and/or their overall health. TickiT's interactive interface and unique design are easy to use for patients at any literacy level, and with English as a second language (ESL). In collaboration with SickKids, the TickiT platform will be used in four clinical areas: Cardiology, Emergency Department, Plastic Surgery, and Adolescent Medicine, where the platform will host a series of screening and intake assessment tools. In addition, the platform will also be used to demonstrate its ability to better capture the patient experience in selected clinical program groups within SickKids hospital. This could have a significant impact on

helping healthcare organizations and leaders better understand the patients they serve, including acting more quickly on areas of improvement through the platform's ability to provide real-time feedback to those involved in the patient's care journey.

Project Partners: The Hospital for Sick Children, Shift Health Paradigms