

## London, Ontario Centre helps commercialize mobile health solutions

BY DR. ANNE SNOWDON

Imagine the impact of an electronic cognitive screening tool that allows patients to be tested on a tablet device to see if they require care for Alzheimer's disease or other forms of dementia.

Picture health-service delivery if planners could, with a few simple clicks, determine who was coming back to the emergency room after being treated for chronic conditions. And finally, imagine giving at-risk populations access to STD testing and results via their mobile phones.

How would innovations such as these change our healthcare system? These are just some of the health innovation projects currently underway at the International Centre for Health Innovation at the Richard Ivey School of Business at Western University.

The Centre, dedicated to advancing the adoption of healthcare innovations, undertakes "Demonstration Projects" to pilot innovations in real-world settings and determines their potential for commercialization or adoption within health systems. The Centre's researchers work with clinicians, students, health administrators and industry partners to translate these health innovations from the "bench to the bedside," or, from theory to practice. Following are some examples of innovative technologies currently in development at the Centre:

**eMoCA (electronic Montreal Cognitive Assessment):** Cognitive status is emerging as a fundamental health issue for aging populations. It is estimated that 50 percent of the population over the age of 65 com-

plain of cognitive deficits, while wait times for consultations with memory clinics, geriatricians and neuropsychologists range from six to 12 months.

Cognitive screening offers the potential to detect very early changes in cognition, which may be sensitive to preventive treatment, yet screening is seldom the standard of care. The Centre has developed and is validating an electronic version of the Montreal Cognitive Assessment (eMoCA), a cognitive screening test designed to assist health professionals in detecting early changes in cognitive function.

While the paper MoCA is usually administered by a clinician over a 30-minute period, the simple format of the eMoCA enables administration of the test by other health personnel more efficiently, potentially increasing clinician productivity. The platform also allows patients and families to test their cognition independently.

**Digital data navigation tool:** How many COPD patients reside in my region? What are the rates of diabetes among men between 50 and 75? An abundance of healthcare data exists within Canadian health systems; however, current methods available for extracting meaningful information from these databases require considerable knowledge of database query language.

As a result, health professionals and teams are prevented from benefiting from potentially invaluable knowledge. The Centre is working with a team of researchers at

the University of Windsor to improve the accessibility of clinical information.

An online tool has been developed to allow requests for specific information from these databases using simple state-

ments such as, "Find out how many people were treated for asthma attacks in hospitals in the South West LHIN."

This new method of obtaining data from the large medical data sets will allow health teams to easily access information that was otherwise unavailable, and provide insight into how patients are using the healthcare system. This information can be also used to identify and address the needs of a given population and ultimately provide better care.

**mihealth:** In January 2012, mihealth ([www.mihealth.com](http://www.mihealth.com)) joined forces with a local Kingston NHS provider, 'Your Healthcare', to deliver a pilot of a smartphone app that delivers chlamydia screening to young people in London, UK.

For the first time, 15-24 year-olds were

able to facilitate the entire process of a chlamydia testing through the use of a simple app downloaded to their smartphone.

The project targets young people through a social network site. This has delivered significant increases in screening volumes and has motivated patients who are traditionally resistant to accessing treatment and notoriously hard to reach for testing. Formal evaluation of the pilot is underway and preliminary figures suggest that the app will deliver a 30-40 percent increase in year-on-year chlamydia screening volumes. A pilot of the mihealth app is planned in London, Ontario in the spring of 2013.

All of these projects and many more are in various stages of development and testing with the Ivey International Centre for Health Innovation. To find out more about the Centre and our work, visit [www.ivey.ca/healthinnovation](http://www.ivey.ca/healthinnovation).

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## Synergize improves workflow, speeds care

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weeks for paper-based reports to reach clinics, now as soon as a report is generated in the hospital, it is electronically transmitted to the MD's office and is directly integrated to the patient's file in the physician's electronic medical record (EMR).

The CDR is intended to provide coverage for patients across both South East and Champlain LHINs. So far, the family physicians in Brockville who are linked-in are receiving reports from Brockville General Hospital and The Ottawa Hospital. The intention is to have all the hospitals within the Champlain LHIN online by the end of October. "The biggest challenges are not technical," says Taylor. "It's getting the legal agreements on information sharing in place."

The system has brought Brockville General closer to a paper-free ideal, but it's not entirely paperless yet, says Taylor. "There are still physician groups across the whole of the two LHINs that are not yet connected electronically. But in the next few months we hope to be fully paperless. We project savings in administration and paper at \$75,000 per year at Brockville General."

"As evidenced by the solutions successfully deployed and working at Sick Kids Hospital, St. Joseph's Health Centre in Toronto and our cross LHIN integrated solution in Eastern Ontario, Synergize is versatile, scalable and cost effectively able to integrate with existing clinical systems and consolidate patient information across the continuum of care," says Colin Ruskin, vice-president of Microdea. "This makes Synergize a key component of any in-hospital or cross-hospital electronic patient records strategy."



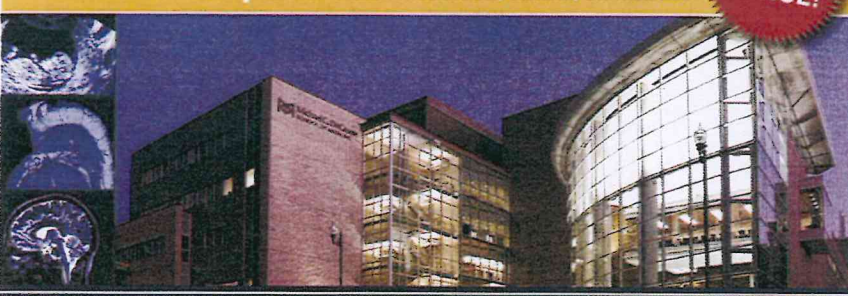
Clinicians and laypersons can use eMoCA to detect changes in cognition.

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