

Telehealth in Canada: The technology is at the precipice of a revolution

BY ANDREA BATTCOCK
AND KAREN WAITE

For several decades, telehealth has been an important factor in improving access to healthcare services for Canadians. The challenge of delivering healthcare to patients living in remote and rural areas of the country was the initial driving force for technical modalities such as videoconferencing to support care delivery.

With the advent of mobile technology, the opportunity to fully leverage telehealth is significant, with still pictures, voice, and video available to anyone anywhere with a more modest technology investment. But have healthcare providers and consumers alike yet realized the full benefits that this emerging technology can bring?

Today many telehealth programs in Canada operate with a hybrid model that includes some central organization and support with a substantial amount of telehealth application development and delivery occurring within organizations delivering healthcare services.

For example, in Newfoundland and Labrador, the telehealth program is anchored at the Newfoundland and Labrador Centre for Health Information, supporting fifty-four telehealth sites. A provincial team assists the Regional Health Authorities (RHA) by encouraging healthcare programs and clinicians to utilize telehealth to

provide better care for their patients.

At the RHA level, regional telehealth coordinators and technical staff work to provide the necessary tools, guidance and support to enhance telehealth activity at the regional and community level. Physicians are encouraged to use telehealth in their clinic environment, at times directly from the desktop, to enable them to see patients in a number of communities while accessing the EHR for diagnostic imaging results.

Telehealth in Canada has also progressed in terms of reach and type of applications implemented over the past ten years. While every province and territory has moved forward during this time, the Ontario Telemedicine Network (OTN) is notable in its significant growth and the leadership it has demonstrated in the industry. It has expanded from 212 sites in 2005/06 to more than 1200 sites at the end of 2010/11. Further, OTN-supported clinical, educational and administrative events have grown from 23,024 to 158,772. OTN is poised to roll out personal computer videoconferencing (PCVC) to extend the reach even further to clinicians in their office settings.

One barrier to the broad scale adoption of emerging technology into the practice setting is a readily accessible and widely available electronic health record. Again, while advances are occurring, the integration of telemedicine and electronic health records has not yet been realized.

What then is needed to ensure that



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technology is fully leveraged in the healthcare delivery system or to prevent the need for access to the healthcare system in the first place?

Perhaps the view should be: who are the consumers of health and wellness information, how can we best reach them and how does an integrated solution come together to meet the needs? How can a host

of different technologies support a set of consumers with similar needs?

Healthcare system leaders need to take a step back to determine how to respond to the advancements of technology and how, from a consumer-centric approach, technology can be leveraged to empower the consumer. Given the aging population and the increase in chronic disease, the healthcare system has to be revamped, perhaps even broken and rebuilt so that the consumer has the information and tools and support they need. Thomas Jefferson was quoted as saying that, "Every generation needs a revolution." Perhaps, because of the impetus to use innovative technology, we are on the cusp of a revolution in healthcare delivery.

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ClinicalConnect \$5 million upgrade

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mation; now, we're getting a lot. I like it, and my patients like it."

Dr. Teal brought to the meeting one of her patients, Susan Barnard, who recently had a colonoscopy and biopsy. Using ClinicalConnect, Dr. Teal was quickly able to obtain the results.

"Two days later, Dr. Teal called me and said everything was clear. I didn't have to wait long and I didn't have to worry," said Barnard.

Not only can Dr. Teal obtain test results and reports about her patients from hospitals more quickly, she can also see what kind of home care services they are obtaining from the Community Care Access Centres.

"I can look at their files with the CCACs, and if they're not getting the services they need, I can order them," she said, emphasizing that this has been a very useful feature of ClinicalConnect. At the same time, about 50 visiting nurses are using the system, a number that will soon increase.

Dr. Mohamed Alarakhia, a family physician at the Kitchener Centre for Family Medicine, spoke via video from Kitchener, and commented that he, too, has found ClinicalConnect to be invaluable.

"Many patients who leave hospital are given prescriptions, but when they come to see me, all they can remember is that it's a little white pill," he said. He noted there are over 2,000 pills that are little and white, which leaves the doctor in the dark about what the patient is taking.

However, using ClinicalConnect, "I can access the patient's record right away."

He discussed the experience of one patient who had been seeing a rheumatologist and was prescribed several medications. The patient had stopped taking all of these meds, and could no longer remember what they were.

"I was able to go into the electronic records to see what they were," said Dr. Alarakhia. "Two of them were important, and we were able to re-start him, minimizing the interruption."

Just a year ago, before he had started using ClinicalConnect, he would have had to phone the rheumatologist's office about what had been prescribed and then wait for a return phone call. The patient would have been required to come back to the family doctor's office to obtain a new prescription.

Using ClinicalConnect, the information was obtained in seconds. "I for one never want to go back," said Dr. Alarakhia.

A consumer focus enhances the telehealth experience

BY KEVIN J. BOYLE

There's little doubt that the real promise of telehealth will be realized when solutions designed for non-technical users simplify and improve the whole clinical experience.

Widespread adoption will occur when focus shifts from the mechanical aspects of the application to the user experience. The key is to make the telehealth experience as close to a live clinical visit as possible – but with more accessibility and flexibility.

Telemedicine has been described as "the great equalizer" because it removes many of the geographic and socio-economic barriers to quality care. Twenty years ago, if you wanted to see the best neurologist in Toronto, it helped to live in the metro area. Now, via telemedicine, you can be seen by that specialist even if you live in North Battleford, Saskatchewan.

The farmland surrounding North Battleford has about the same population size as Berrien County, Georgia, in the United States – a low-income, rural area that in August 2010 started using telehealth in its schools.

The Berrien County school system received a grant, and with assistance and leadership from the Georgia Partnership for Telehealth it implemented a "Med Clinic" at Berrien Elementary. The Med

Clinic is one of the first School-Based Health Centers (SBHCs) in the south-east United States that provides telemedicine consultation.

Students at Berrien Elementary (many of whom do not have health insurance) can now be seen by a remote, primary care physician during the school day, and their parents do not have to lose income by taking time off work for a doctor's appointment. The Med Clinic also participates with local pharmacies, so students can begin tak-

Telehealth in the school system has resulted in fewer ER visits, healthier students, and convenience for parents.

ing necessary medications soon after their teleconsultation.

Underlying this expanded access to care is Medi Port, offered by Rubbermaid Healthcare. This advanced mobile telemedicine platform combines high-definition video and audio with the ability to share content from external medical devices such as stethoscopes.

This particular telehealth program will be expanded to all of the Berrien County schools this fall because the benefits have been so dramatic: fewer emergency room visits, fewer student sick-days, and greater convenience for

parents. But the benefits of telehealth aren't limited to primary care.

A similar example of patient access benefits can be found in the work of Anne Patterson, M.D., a Maternal Fetal Medicine (MFM) specialist in northeast Georgia who uses the Medi Port solution to monitor high-risk pregnancies in rural communities. Georgia ranks 43rd out of the 50 U.S. states in low-birth weight infants. Dr. Patterson believes that access to telemedicine can greatly improve those outcomes.

Her practice is now connected to the Shaw Center for Women's Health in Thomasville, Ga., which is more than an hour's drive away from the nearest MFM specialist. Instead of having to make multiple 100-mile round-trip visits to the doctor, women can quickly be seen by Dr. Patterson via Medi Port. She anticipates that Thomasville's preterm births and low birth weight deliveries will steadily decline in the years ahead.

Many communities in Canada now have the technology to expand the telehealth opportunity to even larger numbers of underserved patients. As telemedicine takes the next step and moves from a purely technological focus to a consumer-friendly approach, its best days are ahead.

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