

## **Building a coast-to-coast connection**

### **Canada lags other industrialized countries in creating a national electronic health records system, but there are some success stories**

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One of the pillars of U.S. President Barack Obama's economic stimulus package is investing in health care. More precisely, he has promised a whopping \$50-billion investment in the creation of electronic health records.

"Our recovery plan will invest in electronic health records and new technology that will reduce errors, bring down costs, ensure privacy, and save lives," Mr. Obama told a special joint session of Congress last month. The announcement garnered little attention in the U.S. because it was overshadowed by bigger and more controversial items in the economic recovery plan.

But in Canada the plan was greeted with a mixture of joy and consternation.

"It can't hurt to have President Obama on side. He's made this a big issue and that's going to make people pay attention," Richard Alvarez, president and chief executive officer of Canada Health Infoway, said in an interview.

The flip side of the equation is that the massive influx of dollars from the U.S. - which has been a laggard in e-health - could lead to shortages of information technology workers and resources that make it difficult for Canadian institutions to continue their upgrading.

"We could be squeezed," Mr. Alvarez said.

To date, the federal government has invested \$2.1-billion in Canada Health Infoway, a non-profit agency whose role is to promote electronic health record systems. (That includes \$500-million announced in Stephen Harper's recent stimulus package.) The provinces and health regions have, between them, committed about the same amount, bringing the total investment close to \$4-billion.

The results, to date, are modest. About 5 per cent of Canadians have a fully electronic health record. That means that every "health transaction" is recorded electronically, including all medical files (from routine doctors' visits to hospital stays), prescription records, laboratory tests and diagnostic images (x-rays, MRIs, etc.), and they are readily available to their physicians and other healthcare providers in a secure electronic format.

While five per cent seems paltry, there is actually a lot of infrastructure (or infostructure as they like to say in the e-health field) in place and the plan is to boost that number close to 50 per cent by the end of 2010, and to have 100 per cent of Canadians with e-health records by 2016.

"I'm confident that we've now reached the tipping point," Mr. Alvarez said. "In the next couple of years, Canadians will really start to see this and live it."

But he cautioned that it will take \$10-billion to \$12-billion in total to do the job, and it is no time to skimp.

Steven Lewis, a health policy consultant based in Saskatoon, agreed that the total investment in electronic health records will need to be in the \$10-billion range, but he is highly critical of the slow pace of implementation and the lack of coherent guiding vision.

"We have under-invested and the process has been deliberately slow and plodding so it's no surprise that we're lagging behind virtually every industrialized country in this area," he said.

Mr. Lewis said the problem is essentially a cultural one. "In this country, we don't believe that first-rate health information is a priority," he said.

But good information - and good electronic health records - could improve safety, make the delivery of health care more cost-effective and allow for improvement through better analysis of outcomes.

Yet, across Canada, most hospitals, pharmacies, labs and doctors' offices still rely principally on paper to manage their systems and records.

A recent survey showed, for example, that only one in four doctors use electronic records. The typical patient health record remains sheets of paper stuffed into a manila folder and housed in a filing cabinet.

The exception is billing, which is almost universally done in an electronic format; that is because, years ago, provincial health plans said they would only reimburse health-care providers who sent their bills electronically.

Mr. Lewis said governments should take the same approach to patient records. "We have to say: 'Enough is enough. We're not going to stand for quill pens any more.' There is no reason this couldn't be done in two to three years with a serious commitment," he said.

What Canada has had, in reality, is funding that comes in dribs and drabs and which has been used to fund hundreds of projects. This has not created a national electronic health records system but, rather, pockets of excellence that are rarely interconnected.

Nevertheless, there are a number of success stories that are serving as models, including:

**PharmaNet:** A comprehensive drug information system in B.C. that tracks all prescriptions, flagging potential drug interactions and avoiding medication errors;

**Chronic Disease Registry:** Alberta has been able to better co-ordinate care for diabetics with a Web-based system, and reduced costly complications;

**Ontario Telemedicine Network:** OTN links more than 2,000 health-care professionals across more than 615 sites around the province so patients have

access to health-care providers or specialists without having to travel or sometimes even leave their homes;

**Web Surgical Medical Records:** WebSMR enables cancer surgeons to record patients' surgical outcomes electronically in a database, improving post-operative care quality and safety;

**Computerized Physician Order Entry system:** CPOE has been implemented in 21 cancer care centres in Ontario to make drug delivery more efficient and effective;

**Diagnostic Imaging:** X-rays, MRIs, ultrasounds and CT scans are now almost 80-per-cent electronic now in Canada, resulting in savings estimated at \$800-million a year.

The real challenge, however, is not implementing these individual projects but linking them in a manner that no health transaction is missed - and bearing in mind there are some 2,000 such transactions every minute, including everything from filling a prescription for blood pressure medication to undergoing a heart transplant, and from a pregnancy test at a family physician's office through to the baby's delivery at a birthing centre.

And these transactions involve 400,000 health professionals who toil in 700 hospitals, 1,600 long-term care facilities and countless clinics and retail outlets from coast-to-coast-to-coast.

"When you look at it from the outside, the idea of an electronic health record seems simple," Mr. Alvarez said. "But nothing is ever simple in the healthcare context."

But he added confidently: "We can do it."

To which President Obama would not doubt add a hearty: "Yes we can."

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MAKING TELEMEDICINE WORK

Neurosurgeon Christopher Wallace, above, does a videoconference consultation with Sudbury resident Norman Tang from Toronto Western Hospital.

Dr. Wallace has all the patient's medical information on one screen, and the videoconference on the other screen.

It turned out the diagnosis wasn't urgent, and it "saved the patient coming to Toronto just to be reassured," says Kambria Ernst, a registered nurse and telemedicine co-ordinator with the University Health Network. TWH is one of three hospitals that are part of the University Health Network.

And Mr. Tang's family was able to participate in the consult, as well, which may have been impossible if he'd had to travel to Toronto for the meeting.

Dr. Wallace is able to see patients remotely because the Ontario Telemedicine Network (OTN) provides the secure infrastructure that links more than 2,000 health-care professionals in more than 615 sites around the province.

This allows patients to have access to health-care providers or specialists without travelling, or sometimes even leaving their homes.

*Staff*

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