



Guest Editorial

# Wouldn't it be lovely? Putting the Pygmalion Effect to work in modernizing health care

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I am a firm believer in the notion that our expectations of people can have a huge influence on how they perform. The power of expectations is the basis of George Bernard Shaw's play, *Pygmalion* and the musical adaptation, *My Fair Lady*. Professor Higgins transforms a cockney flower girl into a refined lady through high expectations and dogged determination.

I'm convinced we can apply the Pygmalion Effect, as this phenomenon is known, to modernize our healthcare system through an electronic health record (EHR) for Canadians. High expectations lead to outstanding results.

And when it comes to our healthcare system, we shouldn't settle for anything less. For an overwhelming number of Canadians, improving our healthcare system is not merely another item on the national agenda. It is the national agenda.

Information technology, which has revolutionized every other aspect of our lives, is painfully absent from the way we manage and share our health information. Information is the lifeblood of Canada's huge healthcare system. Yet each year most of the patient data generated from approximately one billion healthcare encounters is captured on paper.

Consider that of 100 million physician exam records, half a billion lab and radiology tests, and 382 million prescriptions – almost all are handwritten. This critical information lies scattered and buried in the filing rooms of 40,000 doctors' offices, test centres, hospitals and clinics.

There are good reasons to be worried about this. Health care does not look good on paper. Paper puts our safety at risk. It wastes money and scarce resources. It undermines every healthcare priority we have.

How can we efficiently reduce wait times if up to 70 million of the tests we take annually are wasteful duplicates? How can we improve access to care when 68 per cent of specialists seeing a new patient receive no information up front?

A study completed two years ago found that between 9,000 and 23,000 Canadians die each year in our hospitals from preventable adverse events. Many of

these deaths result from missed drug interactions, inappropriate medications or failures in healthcare co-ordination. To put that in perspective, 23,000 preventable deaths is equivalent to the population of Whitehorse, Yukon; Langley, B.C.; or Conception Bay, Nfld.

George Bernard Shaw's Professor Higgins claims that Eliza Doolittle will never be able to "leave the gutter" unless she learns to speak properly. If Canada's healthcare system is to break loose from the 19th century, then we must accelerate the adoption of electronic health records across the country.

Canada urgently needs a groundwork of proven information technologies to manage and exchange healthcare information. The right information must be available to the right healthcare provider at the right time. Quite simply it's a matter of life and death.

We live in a world where information technology is everywhere – except when it comes to our health. The good news is we are finally doing something about it and making excellent progress across the country.

Our mission at Canada Health Infoway is to transform a 19th century paper-based system into a safer, 21st century electronic system able to move important clinical information for your benefit. Since our inception in 2001, the federal government has provided us with funding of \$1.2 billion to make progress in this regard. We received an additional \$400 million in new investment capital from the federal government's March 2007 budget. This is an excellent start, but recognizing the scope of work that needs to occur, additional investment will clearly be required if we are to provide an electronic health record for every Canadian.

The great news is that all 13 provinces and territories have embraced this innovative model of collaboration. They've established three- to five-year roadmaps to build the foundation of electronic health record systems.

Infoway invests 75 per cent of the eligible costs of a provincial project while the province invests the remaining 25 per cent. With more than 200 e-health projects from coast-to-coast-to-coast, all provinces and territories are making huge strides. They are doing

everything from developing telehealth services in remote regions to providing chronic kidney patients with on-line portals to better manage their wellness.

Just as importantly, the provinces and territories are pursuing their plans within a common framework so that best practices and successful systems in one province can be shared or replicated in another. In the process, these jurisdictions reduce risk, lower development cost and speed progress.

As a result of this remarkable headway, we now know what success looks like.

In Ontario, any senior now arriving at any emergency room of any hospital in the province is able to have physicians and nurses instantly retrieve a complete medication profile online in the ER.

In Nova Scotia and in large areas of Ontario and British Columbia, that child falling off her bike today is no longer transported to the big city. The CT scanner in the small local hospital has gone digital – there's no film involved – and is networked to a larger hospital. This new system allows instant sharing of the digital images across their secure network. Success today is a radiologist at the Halifax Infirmary and a neurosurgeon at home on Sunday quickly determining the treatment required, avoiding dangerous travel and delay.

In Alberta, a chronically ill diabetic has her care actively monitored by a coordinated team of specialists, communicating and making decisions based on her complete and always available electronic health record. The patient routinely receives reminders for follow-up cardiac and eye tests, and advice about preventive measures.

These are not wishful future scenarios. These stories, and thousands like them, attest to a powerful transformation taking hold right across this country.

What's even more encouraging is that by 2010, when Infoway's initial seed money is completely invested, more than 32 million Canadians will have access to at least some of these clinical systems. Close to half of Canadians will have a complete electronic health record which integrates all these systems, providing an accurate history of medications, lab tests, diagnostic images, hospital summaries and immunizations.

That's the good news. The bad news is that our journey is far from complete. Many key areas that should be tackled lie beyond the scope of our current mandate. For example, by 2010, half of all Canadians will still be without a complete, individual electronic health record.

The vast majority of doctors offices will not have the automated clinical systems for electronic ordering of prescriptions which alert them to dangerous drug interactions and inappropriate dosages. Without these tools, doctors' ability to effectively manage their patients' chronic disease is limited, whether it's diabetes, arthritis, respiratory or heart disease.

This at a time when chronic disease already demands three-quarters of Canada's public and private healthcare budgets.

All of our healthcare reforms, from homecare and primary care improvements requiring coordinated teams to improved patient safety and public health, will fail or fall short of achieving their full potential if we do not complete the work we have started.

So what does it take to get the job done?

It takes an understanding by the public that antiquated healthcare systems compromise our safety, increase wait times and aggravate professional shortages.

It means making Canada's healthcare infrastructure a specific policy priority. It was gratifying to hear Prime Minister Stephen Harper in a recent speech recognize the impact of health information and communications technologies on the efficiency of our healthcare system.

And, of course, it takes money.

Recent studies estimate that between \$10 billion and \$12 billion, spread over 10 years, is needed to complete our work in Canada. The encouraging news is that these same studies confirm that once in place, these new clinical systems will deliver a six-fold return on investment, saving \$6 billion to \$7 billion each year. This is money that can be more productively re-invested in other priorities, whether it's health care, education, innovation or infrastructure. This is particularly important as health care costs today consume more than 30 per cent of provincial budgets in most instances.

This investment is not a drain on the public purse. It is good news for the Canadian economy. A preliminary study by the Conference Board of Canada estimates that EHR activity will have created 37,000 jobs by 2010 or the equivalent of \$2 billion in new labour income for Canadians. These investments will also have generated \$1 billion in pre-tax corporate profits and every dollar invested by Infoway and the provinces adds an average of \$1.34 to Canada's gross domestic product.

Just as the "Rain in Spain stays mainly in the plain" scene marks a turning point in *My Fair Lady*, we are also at a crossroads in Canada. We have established strong momentum and a solid track record. We know what needs to be done and how to do it. That's why I want to emphasize that investments to transform our healthcare system, locally and nationally, need your support.

We must cooperate and push for change not just on an individual basis or within the informatics community, but across the healthcare industry. Let's recruit others to do the same.

And to return to my Pygmalion analogy, what better time to remind ourselves that our expectations and determination can have a powerful influence on success. ●