



# Investment in Health IT: Heading down the wrong road?

William Pascal, Guest Editor

Bill Pascal is the Chief Technology Officer of the Canadian Medical Association in Ottawa

*Two roads diverged in a wood, and I – I took the one less traveled by, and that has made all the difference.*

*– Robert Frost*

**T**hese lines from Robert Frost’s “The Road Not Taken” may be a prophetic statement for the information technology agenda in Canada

Despite ever-growing investments of funding, planning and goodwill, the current process for building an electronic infrastructure for the Canadian health care system faces a very real danger of delivering a flawed, fragmented system that provides little value to patients in terms of providing better care, and alienates the majority of physicians expected to embrace these new tools. Without serious re-evaluation of our investment priorities and the timing of those investments, as well as how best to involve and support frontline health care workers - especially physicians - in meaningful ways throughout this process, we all risk falling far short of our goal of improving healthcare outcomes through the intelligent application of information technology and seriously impairing the achievement of an adequate return on value (ROV - Return on Value is the assessment of quantitative and qualitative costs and benefits from IT investments in the health care sector. It is richer than ROI which only deals with the quantification side of the equation.)

While the analysis above may seem harsh it reflects the frustrations felt by the Canadian medical profession. Canadian physicians and organized medicine recognize and acknowledge the benefits of supporting the introduction of information technology into medical practice. They do so because they believe it will lead to better health care outcomes and improved efficiencies in the way they work. However, as Canada Health Infoway, provincial and regional jurisdictions go about their work, there is growing concern within the medical community about how the process is unfolding without their involvement.

There are three noticeable flaws in the IT agenda currently unfolding in this country.

### Investment priorities

Greatest gains in health care outcomes occur in the community care side of the health care system. It is estimated that over 80% of care originates and is delivered in community settings. So why all the attention to the acute care sector? Why concentrate on the construction of large data bases when physicians and other health care workers have little or no connectivity to neither this information, nor the electronic capabilities in their offices to capture or display it? BC Pharmanet is probably the richest drug database in the country but currently it is of little value to the front line healthcare provider because of a lack of connectivity and IT in practitioner offices.

One of the goals of the Canada Infoway Strategy (2001) was to have the right information, at the right place, with the right provider, at the right time to provide the best care possible. To do this there has to be connectivity between points of care and the necessary technologies available at them when the encounter occurs. The majority of health information that will make up an EHR or that will be shared among providers to support the care of a patient will be generated at the community level and captured in EMRs.

### Timing of our investments

CIOs all across this country are under pressure from their CEOs to show a return on value for all the money put into IT. How can we accelerate achieving improved health care outcomes? The majority of



health care transactions occur at the local level and only rarely do family practitioners and specialists who have community based clinics need the support of large system applications to provide clinical services. Consultations with family physicians in Canada who have automated the clinical side of their offices indicate that the benefits to patients, physicians and the broader health care system are achieved in a matter of months, not years. These physicians estimate that even without being connected to the rest of the health care system, they are achieving 50%-60% of the expected benefits by integrating IT into their health care delivery processes. These benefits include cost avoidance, better patient management, and better health care outcomes. The majority of these physicians can be described as IT “islands” that have no connectivity beyond their office walls other than Internet access for medical information research and a fax machine to connect with other points of care in the health care system.

Information technology adoption is a slow and complicated business. It has been estimated that without government intervention, it will take at least 25 years to achieve a 90% penetration rate of EMRs throughout the health care system. Approximately 15% of physicians in this country are active users of EMRs. These are the early adopters. The remainder of the physician population is more conservative and more demanding about the return on an investment in EMRs. This group will take more time to join up and therefore putting off investments in EMRs and not facilitating the transition will only delay the benefit streams that are expected from this strategic investment. The Alberta POSP program is an interesting example. After four years, approximately 50% of Alberta physicians have an EMR in their offices but only 25% are using it as an active support tool for clinical care. Uptake of a new technology takes time and the current process is not focusing on helping community-based physicians and other healthcare providers make the transition. This will only delay achieving the benefit streams expected from building an IT infrastructure.

Where would governments and health care providers achieve the biggest ROV from IT investment? It is estimated that the total IT spending required to bring the health care sector up to comparable standards in other industries is around \$10 billion. The community-based physician component of that expenditure is estimated to be \$1.5 billion. Therefore, for less than 20% of the estimated cost of IT infrastructure, 50% to 60% of the health care benefits can be achieved in the community care setting. Value to physicians will grow as connectivity expands to other providers and points of care, but the achievement of early benefits, whether in improved care outcomes and patient management or cost avoidance, is not contingent on the integration with the larger system.

## Involving and supporting front line physicians and health care providers

Leaders in information technology (IT) in both Canada and the US acknowledge that automating physician offices is an essential part of the IT agenda. Research continues to show that without direct financial and other support, the majority of community-based physicians are unwilling or unable to invest in IT. Meaningful direct support for physicians in Canada is currently limited to Alberta and to a lesser extent Ontario, with physicians in other jurisdictions having to go it alone unless they are salaried employees or affiliated with a primary care reform project. While Canada Health Infoway has initiated an end-user strategy in an attempt to better involve physicians and other health care providers in the process, there are few examples of meaningful programs within jurisdictions.

And as noted above, the bulk of the physician community that we would like to see transition into a digital world are more conservative, more cautious, and leery of government led initiatives that do not involve them. From my time in the health care sector the most successful initiatives that I have seen have been those where a strategic framework has been set out and the implementation lead is given to front line healthcare providers. The current IT agenda suffers from too much of a top down approach and risks alienating the very providers we need to be successful.

These observations regarding the flaws in our current approach lead to the conclusions that:

- The biggest return on investment for IT expenditure is in the community care setting.
- Benefit streams and timing point to the need for early investments in community care settings and, in particular, automating physician offices.
- Maximizing the broad system cost savings or cost avoidance can only be achieved when community-based physicians are automated and connected and therefore engaged in an early, meaningful and ongoing manner.

Federal, provincial and territorial governments have a clear role in accelerating the IT investment that will generate financial and clinical benefits for Canadians, but success will require a reordering of priorities and a willingness to work more closely with the physician community. Failure to do this has the very real potential to threaten the success of this agenda.

The Road Not Taken: Robert Frost's poem speaks to taking a different road. I suggest it is time we heed his poetic advice. ●