



An Agenda for the Future: A National Electronic Health Records System

- Andrew Siman -

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Picture, if you will, the following scenario. A man leaves his hotel and makes his way through a crowd of strangers for an important meeting – in a city far from home. Suddenly he clutches his chest, as a searing pain wracks his body. Without warning, he falls to the pavement. A crowd gathers, and someone shouts: “Call 911”. When the man is wheeled into Emergency, not only do the local hospital staff know who Mr. Peterson is; they’re also aware, from his electronic health record, that he suffers an adverse reaction to some commonly administered heart drugs, and that alternate measures will be required to stabilize him. They’ve confirmed, too, with his family physician, that some suspicious abnormalities showed up on recent lab tests Mr. Peterson had – which they’ve already downloaded and viewed. So they won’t have to waste precious time re-running the same tests.

Sounds like science fiction? While some may think this scenario is far-fetched, it could, in fact, become a reality in Canada within 20 years, if we have the will and the imagination to make it happen.

If we Canadians are to maintain our reputation for excellence and continue to enjoy one of the best universal health care systems in the world, we need to work together to seize the opportunities that health information and communications technologies – applied on a national basis, right across the country – offer us. Only then can we realize our dream of providing quality care to all Canadians, no matter what part of the country they live in.

Love it or hate it, technology is here to stay. We cannot function without it in today’s information-based society. Rather than letting technology rule us, however, we can choose to use technology for the betterment of all our citizens.

As our earlier example illustrates, a national electronic health records system offers an excellent means to ensure that all Canadians get access to the care they need, when and where they need it.

To illustrate this vision a reality will require the imagination to forge ahead, the desire to strive for excellence, the fortitude not to be deterred by obstacles and the collective will to work together.

What is a national electronic health records system, and why is it so powerful? Simply put, it is a collection of all of an individual’s relevant interactions with the health care system – whether with a physician, a pharmacist, a hospital or a lab, a community health centre or a home care agency – that would be available to health care professionals anywhere in the country, on a need-to-know basis. The patient would retain control over who gets what information when, and for what purpose, and stringent measures would be built in to safeguard patient privacy and confidentiality.

To illustrate just some of the complexities involved in developing a national electronic health records system – which would make our national health care system far more effective and efficient – we have only to look at the profile of the average Canadian to understand the magnitude of the task in being able to track a person’s medical history from the cradle to the grave.

If you’re like most Canadians – and we live in an extremely mobile society – chances are you’re no longer residing in the same place where you spent your childhood, so you’re no longer in touch with your original family physician.

Or your doctor may have retired, or you’ve moved to another location with a different job, and you find it more convenient to visit a physician closer to where you live or work. You may have decided to try the clinic that opened up nearby, where they offer care on a 24-hour-a-day, seven-day-a-week basis. And there’s the odd time you made a trip to a local hospital, with a family emergency, but you can’t recall which hospital or when, or what the prescribed treatment was.

All of which paints a picture of just how many times, and in how many places, over the course of a lifetime, the average individual in Canada interacts with the health care system – and the complexity of capturing these interventions. Millions of health care transactions take place in Canada each day, with lab tests, X-rays, hospital in-patient and out-patient visits, and some tens of thousands of doctors seeing 30 to 50 patients daily!

A national electronic health records system would go a long way to pulling this information together, and overcome the challenges posed by geography and the multitude of information systems that exist currently, because of the number of providers and jurisdictions involved in offering health care in Canada.

It would allow us to do away with overlapping or incompatible systems that can’t ‘talk’ to one another, or that capture only some of the data health care providers need to have access to. It would integrate the disparate elements into a cohesive whole, and provide a complete picture.

This would mean that all of a patient’s encounters with doctors, hospitals, laboratories, pharmacists, nurse-practitioners and home care workers, among others, could be pulled together from the various sources where this information currently resides, and be called up when and where it’s needed.

While the challenge to bring all of the pieces together in a user-friendly, workable and coherent national system is immense, and the pricetag considerable, if we do not choose this option and remain on our present course, we risk wasting millions of precious dollars developing patchwork systems that can only supply some “pieces of the information puzzle”.

This would fragment our health care system further, rather than achieve the kind of integration Canadians expect and want. We must respond to this challenge if we are to create a reliable, cost-effective health care system that all Canadians can depend on.

What are the benefits a national electronic health records system could offer? For one thing, it would make vital health information available 24 hours a day, seven days a week, no matter where in Canada the person requiring care happened to be.

For another, since health care practitioners would be able to view a patient’s relevant medical history, they would be better positioned to offer

more effective, efficient treatment, and could spend more quality time with the patient. Contrast this with the current situation, where practitioners often have access to a partial or inaccurate patient history, and may undertake a course of treatment that could, potentially, be life-threatening – as in the case of an allergy to drugs or an adverse reaction to a particular procedure. Having more complete information would also reduce the risk of malpractice suits, as well as the liability of caregivers.

Being able to access information on medical or lab tests carried out previously would reduce the number of redundant procedures and result in greater cost savings and efficiencies. It would also avoid procedures being undertaken that might pose a health risk to patients if they were repeated.

The information that a national electronic health records system would provide to researchers (with safeguards built in to protect patients' identities and ensure consent) would vastly improve the quality of care to individuals, and the ability of health care planners and administrators to develop relevant health care policies for the future, determine trends and analyze the health of various sectors of the population.

Electronic health records would greatly empower individuals who use the health care system by giving them access to their own personal health records – something that many Canadians have been demanding for some time. They would also be able to exercise greater control over who has access to their personal health record, and on what basis and for what purpose, than they can at the present time with our paper-based system.

So compelling, in fact, are the arguments for a national electronic health records system, that a number of countries around the world – including the United Kingdom, some European countries and Canada – are striving to develop workable models. The U.K. has earmarked the equivalent of 2.5 billion Canadian dollars, over a seven-year period, for this purpose.

If we are to succeed in achieving a national electronic health records system, we must first address a number of crucial issues. One of the urgent challenges facing us is the need to develop a collective or “pan-Canadian” strategy, in order to implement a coordinated national approach.

Interoperability – or the lack of it – is also an issue, with so many providers in Canada creating their own information or record management systems in specific sectors of the health care system, within their own jurisdictions.

Quite apart from the daunting technical challenges of defining a common set of standards, common core elements and a common system architecture – which various countries are working to resolve – is the need for agreement on how to provide safeguards for accessing information and how to address privacy and confidentiality concerns. Canada has been very pro-active in this area, with its ongoing efforts to harmonize federal/provincial/territorial initiatives related to protecting the privacy of personal health information.

Other complex challenges that will require considerable time and effort to resolve are the need to: respond to people's natural resistance to change; effect major shifts in corporate cultures and thinking; convince stakeholders of the advantages of a national electronic health records system; encourage them to consider new ways of “doing business” and to invest time and effort for re-training; and set aside personal agendas or the instinct to “protect one's turf”, and share information – when faced with the imperative of working towards the common good.

How do we go about tackling these challenges? Where do we begin? How do we find the answers?

Given the complexity of these issues, and the importance of creating a national vision of health care for Canada for the 21st century and beyond,

this is not a simple matter that governments, alone, can resolve. What we require is the collective wisdom of all key stakeholders – the federal government; the provinces and territories; hospitals and clinics; community health centres and home care organizations; laboratories and pharmacies; health care professionals and consumers of health care; community and special interest groups; and all concerned citizens who are willing to participate in developing a shared vision, as well as a shared commitment towards the achievement of that vision.

With our excellent universal health care system and our world-class leadership in advanced technologies we have a unique opportunity to create a truly superior national electronic health records system. We are not talking about “re-inventing the wheel”, or erecting some monolithic new structure, or creating a new bureaucracy. We are speaking about building on the excellent work that has preceded our current efforts and integrating the countless existing networks and systems of data collection that already provide valuable information to Canadian health care providers and users.

We have seen what can be achieved by working together, when we look at some of the pilot projects we have already implemented in Canada to improve the accessibility, cost-effectiveness and quality of health care. These include initiatives such as telehealth, in remote regions of the country, and many smaller-scale projects, in other centres, which are allowing health care workers to share clinical or patient information. By combining these efforts we would realize important economies of scale, obtain a better value for our investment dollars and achieve concrete benefits for all Canadians using the health care system.

We cannot afford *not* to take up the challenge, if we are to improve the delivery of health care services for all members of our population and retain

the legacy of excellence that has been handed to us – and improve upon it for future generations.

The vision we have outlined of a national electronic health records system will empower individuals and communities to become active participants in their own health care. It will enable them to make informed choices about the options available to them and give them the opportunity to exercise greater control over their own health.

A national electronic health records system will allow us to strengthen and integrate our existing system of health care delivery, and make it possible for all Canadians to obtain access to the right care, at the right time and place – whether they live in a major metropolitan area, a rural community or a remote settlement.

It will give health care providers the information they need to make informed decisions, and facilitate the sharing of patient records, clinical information, lab and diagnostic results, and other vital information in a secure and confidential manner, across the broad continuum of care, and across all boundaries and jurisdictions.

It will enable Canada to undertake future health care planning based on comprehensive historical and research data previously unavailable or unobtainable, and to project a more complete picture of the health of our nation.

So let us take up the challenge of building a national electronic health records system and demonstrate the leadership of which we are capable.

Do we have the collective will, the determination and the staying power to make this vision a reality?

Health Canada's Office of Health and the Information Highway looks forward to developing this vision with you, and venturing together, with all key stakeholders, to make it happen.

