

The Healthcare Interview: Canada's EMR guru evaluates the challenges that lie ahead

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Dr. Alan Brookstone is the founder of CanadianEMR.ca and probably the most knowledgeable physician in Canada about electronic medical records. He has wide experience in primary care, initially in South Africa and later in Canada, and has consulted for provincial EMR programs here as well as internationally. In 2007, the Vancouver doctor gave up his practice to focus purely on information technology.

Q: EMRs in physicians' offices today are an improvement over paper charts. But when it comes to communicating with the larger health-care system, in many parts of Canada it seems like EMRs are still interfacing with paper-based processes. Is that a fair take?

Yes, to an extent. The average physician in their practice probably connects with up to 40 or 50 different entities over a year. Those would include ancillary care providers, physiotherapists, occupational therapists, the hospitals, the lab systems (and) other colleagues. So there is an incredibly comprehensive network of exchange that takes place. There are a lot of components in the system that need to be enabled in order for that information exchange to happen electronically.

We're at the phase of: We've certainly got some of the cars for the roads but not all the roads have been built—and there's some places you just can't get to. We depend in Canada on paper to a large degree because there is no formal electronic process available at the moment.

Q: So, we need standards?

Yes. One of the challenges we've got in Canada is that we don't have a national standard established for data exchange for EMRs, and this covers a few areas:

- First, the ability of an EMR to communicate with an EMR. So, for instance, I'm a GP and I need to send to a specialist.
- Second, the ability of an EMR to communicate with a hospital system, so I can refer patients for an X-ray or other investigation.
- Third, the ability to transfer data from one system to another one that is different—for patients moving from one practice to another. (If the EMR systems are different) that may require printing out a copy of that patient's record from one EMR, then handing it to the patient or sending it to the other practice, and they've got to re-enter some of that data into the system.

Q: Because the paper format still forms the backbone of information exchange, we see practices with EMRs today basically scanning a hospital form they regularly have to send to their local hospital into their EMR. Then dragging patient data onto the scanned version of that form and printing it out—or perhaps faxing it without printing it. Right?

Yes. Let us say you're sending a requisition for a patient for a certain service. What they've done is they have taken the normal paper form the hospital uses and they have created a field that can be completed. But it is literally being pasted on top of that form and then you print it out it. So it at least allows data to be pulled from the EMR to populate the patient demographics on the form and some of the patient history. It improves some efficiency in the physician office because of auto-completion. Otherwise, you have to do it by hand.

We need to have standards that are accepted by both the hospital (and the larger health-care system) and the physician at the point-of-care system. Currently, we have some of that work that is being done at the hospital level work through Canada Health Infoway in developing data exchange standards so you can exchange information between different hospitals.

But that same kind of diligence has not been applied on the physician EMR side.

Q: Do you think the work at Canada Health Infoway is moving fast enough?

Definitely not. Even after Infoway has been in place for nine years we still haven't seen a lot of data exchange between even the big systems. If the big systems can't exchange information, how do they expect the small systems to interact when a single point-of-care system might need to interact with 50 care providers or entities?

Q: It is Infoway's role to move EMRs along?

Their initial focus was on the electronic health record (EHR). But their focus in their application for new funding has been on getting a significant amount of funding for EMRs for doctor's offices.

But—and I have been a member of, and chair of, Infoway's clinical subcommittee on standards—there's not been enough focus on defining which are the standards that should be used for the data exchange between EMRs.

Q: This is things like HL7, the "language" used to communicate between EMRs?

Exactly. But there are different versions of HL7, so defining which version and the (standard) messaging format needs to be done at the national level, so an EMR vendor can actually develop one standard for information exchange to send a message and (ensure) that message—if it is a referral or consultation—is the same in New Brunswick as it is in Saskatchewan. That work has not happened.

Q: What do doctors and people interested in improving healthcare IT in Canada need to be doing?

We need to push Canada Health Infoway to improve the prioritization of this. What they call POSR—or Physician Office System Requirements—is about number 50 on their priority list from their technical standards perspective. This needs to be number one or two—especially if they are going out and asking for hundreds of millions of dollars from the federal government to enable information exchange.

Once you get systems enabled, the next critical piece is data exchange and allowing the systems to intra-operate with one another.

My understanding of the experience in other countries—particularly in Denmark and New Zealand, where primary care physicians have been highly connected to the overall health-care system—is that one of the great incentives, and where significant uptake happens, is as soon as there is the ability to exchange information, people buy EMR systems. Because when you think about it, the work that health-care providers do all the time is about exchanging information. Just enabling the automation of processes within the office is not enough. We're at that point now.

Q: Those nations—Denmark, New Zealand—have almost 100% EMR use. How did they do that? Did the governments just buy the systems for those doctors?

No, they didn't. They provided some incentives.

Q: OK, let me play devil's advocate for a moment: I was speaking to a doctor recently about the problems physicians have transitioning their electronic data from one EMR system—when they decide that system is no longer working for them or no longer being supported—to another. This friend said to me: "I wonder if we would have been better off without choice?" Is there any case for that, or is this process we're going through going to reach the best result?

In a situation where you have no choice and a single entity is supplying software for the country, well, those situations have occurred out of natural selection in other countries. For example, in New Zealand, they do have a vendor who is the dominant vendor.

When one vendor controls the marketplace, what is the desire for them to innovate and improve their product if they have a monopoly?

Monopoly systems—and this is a challenge they have in New Zealand—are not necessarily the best approach.

Q: What is the situation in Denmark?

They have about 20 vendors. And they all seem to work very effectively.

Q: So how did the Danes get there?

Denmark created a data exchange transfer and they said to EMR vendors: "We don't care about the functionality of your EMR system. All that your systems have to do is they have to be able to send and receive these 30, 40 (or) 50 types of messages—I don't know how many it is—cohesively.

Q: Who did that? The Danish equivalent of Infoway?

MedCom, the Danish Centre for Health Telematics. It is an officially sanctioned central certification authority.

Q: We don't have that in Canada?

No. We've got Canada Health Infoway and they define standards for these large EHR systems, not for the EMR systems.

We don't have an entity in Canada that actually says these are the messages, and, by the way, B.C.,

Alberta, Manitoba, these are how these messages need to be configured in order to move between systems.

Q: Do you think the provincial nature of our health-care system in this country might prevent us from having a central certification authority like Denmark?

Is the fact that the provinces tend to go their own way a problem? Possibly.

But I think if you had strong leadership that set out what the entity needed to be, that defined those messaging structures, and then provided that as a solid, locked-in guideline. . . . Well, the vendors would be very, very thankful for that.

And I think the provincial organizations that are doing this work would be thankful, too, to receive clear guidance—without telling them what they have to do—on what the message structure needs to be.

That is the success of Denmark. They have ended up with messages that are now standardized across multiple hundreds of systems—in the acute, primary and community care sectors, labs, diagnostic imaging—they all use the same standards.

It is critical that we do this now. If we don't, the provinces are going to be forced to go along their own pathways. They will out of necessity define the messaging specs they need in order to get the work done. And we're going to end up with vendors now having to support five different types of messages across the country.

The problem about data transfer? Ultimately, this all comes down to standards.

It is like trying to drive a train on the track where every province has got a different gauge. Basically, you can get to the border of Alberta but you can't get any farther. Similarly, without those standards to define exactly what the data fields are, how does the data get exchanged? One always has those problems.

Q: OK, let us move on to something a little more concrete: What do doctors need to think about in selecting an EMR system?

Doctors need to have a clear understanding of their needs to ensure the EMR is going to fit their particular practice and clinical setting. For example, if they work in a family practice and have a large patient population with chronic and co-morbid diseases, their needs would be different than a psychiatrist in a private practice setting who has to document encounter notes and generate consultation reports.

Developing a requirements document for the practice is an important first step. It is used as a planning tool for processes, such as the management of referrals, incoming faxes, prescriptions and how notes are going to be entered into the EMR.

Q: Could you run through how CanadianEMR.ca works in assisting that process?

The concept behind CanadianEMR.ca is to provide a mechanism for physicians to select, implement, use and ultimately optimize their EMRs through educational media.

In the selection phase, the site allows an individual to select certain criteria around an EMR that they might want use in their practice. In other words: Is the EMR certified and does it qualify for funding in their particular province? They can then compare the functionality of different systems side by side and even e-mail a comparison to a colleague. Also, there is info on the support policy, and how training and implementation services are provided.

They can also look at star ratings provided by other users of that system that can be used as feedback, almost as we look at sites like TripAdvisor.com right now.

The information needs to be seen in the context of a support tool. Websites such as CanadianEMR.ca should be used by physicians as just another resource and should be used in addition to speaking with colleagues, doing site visits and getting some hands-on experience, if possible.

Q: Why do we not have consumer reports for EMRs—where experts have independently examined various systems and given their take?

One reason is it comes down specialty. What might be a five-star system for a GP, might be a two-star system for an ophthalmologist.

It is also difficult because the systems tend to be upgraded in a rapid turnaround, with functionality being added. So any "consumer report" would quickly be out of date.

Q: Tell us about patient portals, where a patient can log in to a page in the physician's EMR and look at certain results. They raise some interesting ethical questions: Should patients be allowed to receive terrible news online, away from the doctor?

I think what we're seeing is the definite desire of the consumer now to gain access to more information, particularly as they begin to use cellphones more.

I think this is a very interesting ethical discussion to have because if you've ever been a patient and been waiting for a result, well, one knows the anxiety around that: the fear of the unknown.

There may be certain things that are quite inappropriate to share through a patient portal but I think the bar is moving much more toward the consumer deciding what it is they would like to have access to.

Healthcare has always been provided in a very paternalistic way—and I say that in the best possible sense; that of being there to provide comfort and protection to the patient. But I think the old role of the physician holding the information and then only notifying the patient when you're face to face is something we need to re-examine.

Q: How so?

For example, think of a situation where a patient comes into the office by themselves and they are told by the physician that they have some form of cancer. After the physician says the word "cancer," I don't think the patient hears very much.

Is that better than the individual having access to the information online, when they'll see it when they have support around them? At least they can think about this and say, "Well, I better get so-and-so to come with me when I go and talk to the doctor and get more information about this."

Once people do know what their diagnosis is . . . the first place they go is the Internet. Whether they get the news from the doctor or whether they get it online, they go and search the Internet.

There may be certain things that are quite inappropriate to share through a patient portal but I think the bar is moving much more toward the consumer deciding what it is they would like to have access to.

Q: Do you have any closing advice/comments about EMRs?

The only thing I'd like to mention is the influence of the three Ps: politics, policy and privacy.

Healthcare is very political in Canada. So some of the stuff we can do, which is quite logical to do through the EMR, is often limited because of political changes that happen. For example, governments renegotiating master agreements with the provincial medical associations and then getting into a conflict, and that becoming a barrier to funding that might have been committed to an EMR.

We're doing things with (health IT) where the pendulum swings once every 10 years but the politics might flip every three to four years.

It becomes a question of can a program actually be implemented before the next government comes in and says, "No, that's wrong, we're going start and do this over again." How do you reconcile that?

Q: What about privacy?

On the privacy side, we've actually got two different legislations in Canada: One that governs the public system and one for the private system. That, to me, is a disconnect.

We don't have single healthcare legislation for B.C., so there are questions that have to be mediated by third parties, such as the privacy commissioner, with regard to how certain information needs to flow.

Advancing health IT is not just about the technology and the desire of physicians to adopt the systems. Politics, policy and privacy are all factors.

Tags: EHR, electronic health record, electronic medical record, EMR, Healthcare Interview, Infoway