Two More P's Required: A path Towards the Wide-Spread Adoption of Standards-Based eHealth Solutions

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One needs look no further than this journal over the years to learn about the range of roadblocks to sustained adoption of eHealth solutions. A particularly thoughtful treatment of the challenges on EMR adoption in Medical Clinics by Alan Brookstone from the November 2010 edition identifies the 6 P's (Policy, Process, Privacy, Professional, Perception, and Practice) to outline the barriers and to propose various solutions. Although Dr. Brookstone's focus was on adoption in Clinic settings, these P's provide an excellent framework to exploring the challenges system wide. However, rather than taking on that broad task this column remains focused on the role of eHealth standards in the overall adoption equation. From that stance, we'd like to add two critical P's to the framework: **Public** (or Patient) and **Provinces** (and Territories).

Public pressure or demand for integrated Consumer Health offerings

It is surprising how little consumer pressure has been brought to bear on our various Canadian health care systems to increase the level of convenience and service. Those of us who travel periodically have surely become highly accustomed to email reminders from travel service providers for upcoming hotel stays, airline check in, anticipated delays or post travel feedback. Our credit card companies and banks have established billing reminders and more sophisticated transaction warnings to help us monitor the health of our finances. Cell phone companies have discovered texting as a mechanism to remind subscribers of special offers and opportunities. Even schools have begun to automate their "call-back" lines that trigger recorded safety messages to parents when students are late or absent.

These communication and engagement tactics between service providers and us, the consumers, demand sound business processes and an effective information systems infrastructure that is ideally standardized across the various divisions and operating units of these service providers. Where the service spans suppliers, the applicable de facto and de jure standards become critical. For example, all flight tracking services in North America leverage the US Federal Aviation Administration's (FAA) Aircraft Situation Display to Industry (ASDI) data feed – this feed represents the standard of service and connects the airline operational industry with a range of users – including consumers. It leverages data from service providers (in this case, pilots), aggregates it and makes it available for any number of uses.

The analogous scenario in Health Care is, of course, the establishment of feeds – albeit significantly more detailed feeds – to various consumer focused applications as well as the added complexity of seeking bi-directional communication for tracking of day-to-day patient feedback pertaining to symptoms, pain, and basic observations as well as more in-depth transactions such as appointment booking. While various provinces are working on Personal Health Portals (PHP) and while the major Canada eHealth catalyst, Infoway, has made nascent efforts to legitimize the market for consumer health platforms by certifying potential market entrants, it is clear that most PHP initiatives remain focused on very low handing fruit for the foreseeable future– many appear to be starting with the distribution of general, trustworthy health information and are moving relatively slowly towards the provision of health record related data. It remains unclear when any of them will move towards bi-directional information flows between patients and providers. The challenges are of course myriad and range from the deep policy issues (including privacy, one of those other P's) to the difficulty in connecting existing systems (often due to a weak standards architecture or incomplete or non-compliant standards adoption). Connecting the many non-existent (i.e. yet to be adopted and implemented) systems, particularly at the Clinic level, is of course infinitely more challenging.

Given the market distortions in our health systems, which result from the inability of consumers to exert direct influence on the system through their purchasing decisions and which limit them to work solely through the more buffered path established by their elected representatives, we would argue that there is a need for significantly more public discourse to help surface this demand as well as to create the needed consumer pressure to overcome the current inertia and to shift the debate from "why" to "why not". This is critical not for the "cool factor" of these linkages or the proverbial "technology tail" wagging the "medical system dog", but for the efficiency inducing aspects of bringing patients more fully into the business equation. Without a sound booking system and a clear standard for exposing booking transactions, online booking cannot be enabled. Without a sound laboratory or imaging resulting framework and a sound data transmission standard, these information feeds cannot be shared with affected patients. Without a solid Chronic Disease Management infrastructure that can be extended remotely to patients through clearly defined, standardized data feeds, the needed follow-up reminders and other care interventions rely solely on phone calls and costly clinic visits. Moreover, the extent to which the various standards that underpin these capabilities are global or national in nature will surely help to expand the marketplace for consumer applications that help people to benefit from this data and these online interactions in their daily lives.

It is interesting to note that the US is using legislation as a public demand driver, starting with the 2010 Clinical Laboratory Improvement Amendments (CLIA) which allow laboratories to exchange data with each other and which enables patients to also receive their results. It supports public demand, clarifies policy (subject to state regulations) and provides guidance on standards at a national level.

Let's bring the public into the discussion whether through outreach or by taking a legislative stance in a transparent manner that encourages public-debate.

Provincial (and Territorial) engagement in the pan-Canadian Standards process

The need to encourage public debate – whether through consultation or by taking a legislative stance – is, of course, a perfect segue to the key role that the sub-national governments have in Canada when it comes to health IT strategy. Given our argument that broadly adopted standards enable a higher degree of patient engagement, let's talk about the role of the Provinces and Territories in Canada's eHealth standards system.

Today, that system revolves around Infoway's Standards Collaborative (SC) – a tidy bundling of various eHealth standards frameworks and bodies, well connected with applicable international standards development organizations such as Health Level Seven (HL7), the International Standards Organization (ISO), the International Health Terminology SDO (IHTSDO) and Integrating the Health Enterprise (IHE). The SC has established a governance framework and operational model that allows new eHealth standards to be promulgated and existing standards to be maintained. It is also the conduit that brings the Intellectual Property of HL7, IHTSDO (primarily SNOMED CT®), ISO and IHE to the Canadian table so that the Provinces, Territories, federal agencies and other stakeholders can leverage the associated standards products in their own operations or as part of any pan-Canadian standards. However, beneath this shining exterior there are a variety of critical challenges one of which we aim to tackle today. Perhaps the easiest way to assess these challenges and to surface the key impediment to broad standards adoption, is to use an age-old approach: "follow the money". A substantial portion of the SC's operating budget is currently funded by Canada Health Infoway, with modest contributions from member fees (including Provincial and Territorial health ministries and departments) as well as revenues from education events of conferences. Given this relative imbalance of contributions it should be unsurprising that operational efforts are very well aligned with Infoway's own program objective and potentially less well aligned with the needs of other, non-paying stakeholders. Presumably those Provinces and Territories who are implementing projects within Infoway program envelopes – and are recipients of the associated Infoway funding contributions – would report a positive degree of alignment between the SC's (read Infoway's) standards agenda and the needs of their respective eHealth programs. However, for projects that are not part of Infoway's funding programs the degree to which the SC is well aligned with jurisdictional priorities becomes more murky and complex. Add to this the fact that jurisdictional members of the SC are not mandated to implement the specifications, other than through their Infoway funded-project gateway obligations and then only to the degree that Infoway enforces such obligations.

Contrast this to other collaborative, standard setting organizations which have tied some degree of commitment and funding, to the participation of their members. For example the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) brings together the US, the European Community and Japan – three highly autonomous and independent nations or national groupings – with Industry to pursue the laudable goal of harmonizing regulations and associated technical standards pertaining to the pharmaceutical product regulatory regime. These players are sovereign bodies who are individually accountable for their legislation and yet they come together in a forum to help harmonize their approaches so as to present a relatively coordinated face to industry.

If Canada's health jurisdictions were to foot their share of the bill for the SC and approach their engagement from the perspective of enlightened self-interest with a commitment to deploy the emerging standards, this would surely bring a sea change to the Canadian eHealth standards milieu. While it would surely be disruptive in the near term, particularly given the requisite needed changes to the overall governance, management and, of course, funding structures, it would provide an opportunity for the health ministries and departments to influence the agenda in a much more purposeful and direct manner to ensure that (1) SC work is prioritized to meet their business needs and becomes accountable to the paying customers; (2) Standards are designed to address the unique business requirements of each jurisdiction while aiming for the highest degree of alignment and market influence; (3) a forum is established that also provides a table from which regulatory discussions can be launched; and (4) a "skin in the game" perspective is taken by the key stakeholders when it comes to standards adoption within their respective jurisdiction and associated eHealth investments.

Clearly this is only part of the challenge given the independence of regions or hospitals in some jurisdictions. But this only suggests that a similar model needs to be considered at a provincial level. There are also those who will be concerned that this would undermine the influence of the key professional groups and other players. However, that is simply a challenge that the designers of a new organizational approach to SC governance and operations would need to address. Clearly those who foot the bill have to remain accountable for decisions about priority, resourcing, scoping and adoption – as tax payers we would demand no less. However, the clinical and business content of standards as well as input to the prioritization and scoping decisions have to come from all affected stakeholders. Separating the business governance from content governance is one way this can be approached.

So, in the spirit of this issue's theme, "Adoption and Use of eHealth: Shortcuts, Roadblocks and Victories" and following our two P's approach to discussing standards related roadblocks, we would advocate for:

1. greater **public** involvement to help drive the demand for consumer accessible online eHealth solutions – particularly the type of online engagement that is become de rigeur in other industries – and the required adoption of the enabling, standards-driven eHealth solutions at the many points of care; and
2. greater **provincial** (and territorial) engagement in the pan-Canadian eHealth standards regime through funding and vigorous participation in the associated governance and operational processes with enlightened self-interest and a strong and public commitment towards standards adoption;

Barriers to the Adoption of EMRs in Medical Clinics. Accessed from http://www.healthcareimc.com/bcovers/previous/Vol_XXIV_No_3/pdfs/brookstone.pdf on September 30, 2011

Since the SC does not publish its finances publicly it is unclear how big a contribution is Infoway's. However, given the relatively modest membership fees and looking at the cost models of large SDOs, it is undoubtedly well over 50% and, more likely, in the 90% range.