



Seven Health Care Organizations – One Common Goal: Keeping patients needs front and centre

Matthew Anderson

Matthew Anderson is the Vice President, University Health Network, the CIO, SIMS Partnership, and eHealth Lead, Central Toronto LHIN.

Over the course of the past 18 months, University Health Network (UHN) has remained focused on its long-term vision for information management (IM) – investing significantly in the implementation of new technologies that continually build upon existing infrastructure, focusing heavily on continuity of care and privacy of health information, and continuing with the use of information technology (IT) to support the delivery of care as well as business processes. As a result, the organization is making a profound impact on initiatives around patient safety, such as UHN's electronic Medication Order Entry and Medication Administration Record (MOE/MAR).

A primary component of UHN's Information Management Strategy 2009: Information Enabling Care, MOE/MAR represents a relative rarity of having all three aspects of medication management – physician order entry, pharmacy verification and nursing documentation – electronically connected. The application integrates UHN's Health Information System (HIS) with its pharmacy system to provide computerized order entry by physicians, subsequent medication documentation at the bedside by nurses and electronic validation of orders by the pharmacist.

In collaboration with the University of Toronto, numerous studies and measurements have been conducted to understand the true benefits the project has provided to the organization's hospital sites, including Princess Margaret, Toronto General and Toronto Western. Some examples of benefits collected to date include:

- 100% completeness of electronic medication orders (correct medication name, dose, route and frequency);
- 60% increase in co-signature of verbal medication orders;

- 30-50% decrease in time from medication order entry to pharmacy review and acceptance of orders.

As recognition of this accomplishment, in November 2005, UHN received the Gold Level Award in the Customer Care, Not for Profit Category for the MOE/MAR project from the Canadian Information Productivity Awards (CIPA), Canada's largest business awards program relating to the field of information management.

It is important to note that while computerized physician order entry of medications and the electronic MAR itself have been a great success, like many IT initiatives, the project has highlighted a number of other issues in the environment that UHN is now wrestling with. For example, the need to communicate verbally with fellow care providers is being reinforced for orders that need immediate follow-up. Previously, the physician would have been on the unit to make changes to an order and verbal communications occurred naturally between the clinicians. Now, with the ability to place orders online from anywhere in the hospital, traditional communication is sometimes not taking place as often. Similarly, when MOE/MAR was introduced on surgical units, one of the main challenges the organization faced related to workflow around order entry because the surgeons spend the majority of their day in the operating room. To add to these challenges, many of the prior ordering practices that were in place throughout the organization were no longer acceptable with the introduction of strict (and safer) policies and procedures.

Like any organization undergoing considerable clinical change, these issues remain front and centre, being addressed through guidance by multi-disciplinary committees at the unit and corporate level.

The Shift to Health Services Integration

Another agenda that has gained tremendous momentum at UHN as it has across the country is the push towards health services integration. The lack of coordination throughout the continuum of care is leaving patients feeling frustrated and health care organizations searching for the answers for improving service delivery. On a provincial level, governments are looking for ways to transform the entire health-care system. Ontario, for example, is introducing 14 Local Health Integrations Networks (LHINs) with a mandate to plan, coordinate, integrate, manage and fund care at the local level within specific demographic areas.¹ From a technology standpoint, Nova Scotia is in the process of implementing a single-integrated hospital information system, which will link 34 hospitals and support more than 6,000 staff province-wide.²

In January 2006, the Health Council of Canada presented its second annual report, pointing out that to improve the health of the nation, Canadians need quality health care – not just quicker health care. Council Chair Michael Decker added, “The discussion about healthcare has focused overwhelmingly on wait times and access to care. Access is important, but

it’s time to balance the discussion and devote equal attention to the quality of care we receive.”³

Can a health-care system in much need of an overhaul be successfully turned around so that patients’ needs are front and centre? For UHN and six other health care organizations in the Greater Toronto Area, the answer is a resounding “yes.”

The SIMS Partnership

In the fall of 2004, UHN formed an IM/IT partnership with the Toronto Community Care Access Centre with the initial goal to enable clinical integration and, ultimately, deliver care that is centred on the patient regardless of where the care is being delivered. Known as the “Shared Information Management Services (SIMS) Partnership,” the partnership later expanded to include Bridgepoint Health, North York Community Care Access Centre, St. John’s Rehabilitation Hospital, Toronto Rehabilitation Institute and West Park Healthcare Centre. (Figure 1)

The collaboration brings together the IM/IT departments of the organizations into one single IM/IT service led by an integrated Chief Information Officer. The scope of activity includes IM/IT strategic

planning, IT support, application development and the implementation of IM/IT projects. In many cases, the partnership also includes an integrated Management Decision Support function.

Crossing three sectors of health care as well as two LHINs, the seven organizations represent \$1.5B in operating budget. They have joined together, not at the hip – but at the server. With a \$30M commitment over three years for new projects, this mega-collaboration is the driver of health system redesign for each partner site, demonstrating a model of



Front Row (l-r): Dr. Robert Bell, President and CEO, University Health Network; Malcolm Moffat, President and CEO, St. John’s Rehabilitation Hospital

Back Row (l-r): Marian Walsh, President and CEO, Bridgepoint Health; Matthew Anderson, CIO, SIMS Partnership; Camille Orridge, Executive Director, Toronto Community Care Access Centre

Missing: Anne-Marie Malek, President and CEO, West Park Healthcare Centre; Linda Stark, Acting Executive Director, North York Community Care Access Centre; Mark Rochon, President and CEO, Toronto Rehabilitation Institute

¹Ontario Ministry of Health & Long Term Care, Local Health Integration Networks, Bulletin #1 http://www.health.gov.on.ca/transformation/lhin/100604/lhin_bul_1_100604.html

²Nova Scotia Ministry of Health, Hospital Information System, Overview <http://www.gov.ns.ca/health/nshis/overview/default.htm>

³Canadian Healthcare Technology, “Canadians Need Quality, Not just Quicker Healthcare” <http://www.canhealth.com/News302.html>

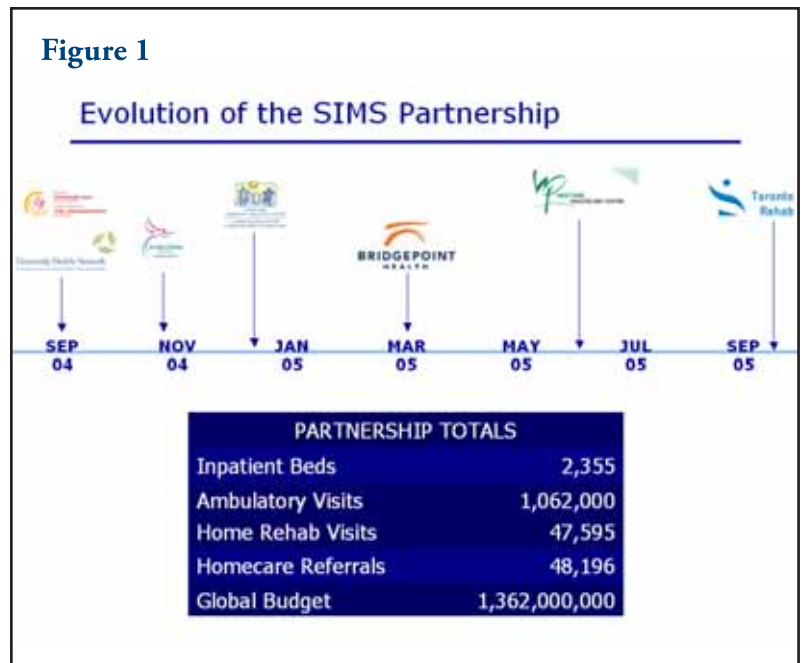
adaptability to evolving circumstances, sustainable change and quantum impact for providers and patients.

For the past year, the shared IM/IT service that supports the healthcare information needs of each of the respective organizations has been working towards a common goal for the benefit of the thousands of patients treated at each site – the sharing of information, helping improve coordination of referrals, enhancing patient safety and reducing wait times for services. In other words, health care providers from each of the partner organizations spanning family physician practices, hospitals, rehabilitation institutes and home care agencies will be sharing information confidentially online, enabling them to provide care in a more timely and seamless fashion.

For Ontario’s health system, the partnership provides an opportunity to learn from a working model of integration; support for Public Health and Provincial eHealth strategies through a single node for multi-access; utilization of already established regional infrastructure; and increased data capture for facilitating health system planning and management decision making.

Most importantly, from the standpoint of all the patients/clients of each of the organizations involved, the partnership will provide a health record that spans community, rehab, primary care and acute care; improved coordination of referrals, resulting in seamless movement between the health-care facilities; reduced waiting times for appointments; enhanced

Figure 1



safety through a comprehensive chart and the development of clinical alerts throughout the system; and increased education in regards to a patient’s health needs and how patients can access appropriate services.

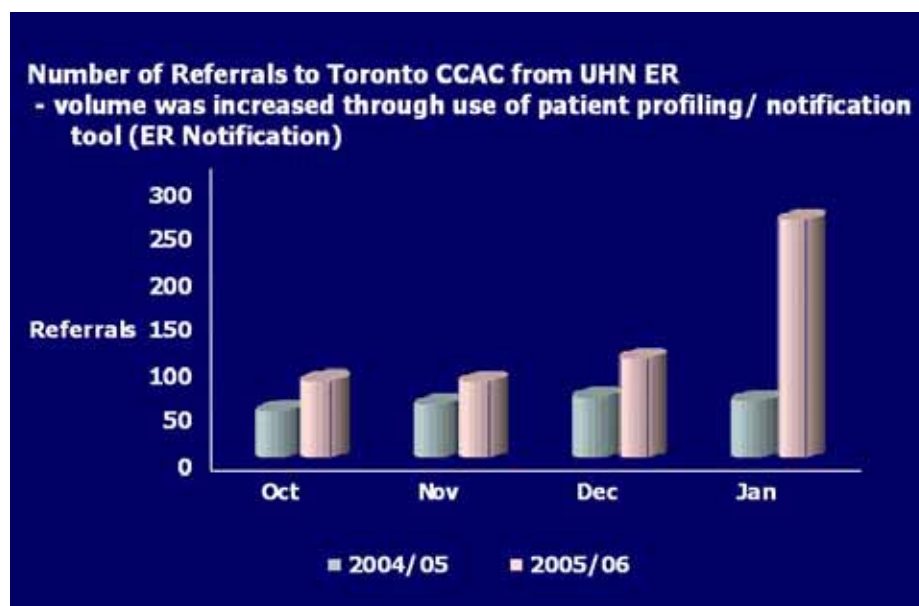
Challenges

As with any new initiative, there are always key challenges to overcome. To be successful, the establishment of the SIMS Partnership required bold vision and leadership from each partner organization. The structure is based on a relationship of trust and a common belief that seamless information will result in benefits for patients. Each of the partner organization CEOs and Executive Directors has been involved significantly in the planning and spearheading of this initiative. These seven leaders continue to be

champions of system change and integration to achieve the partnership goals.

In addition to the shared vision, senior management’s commitment has been a critical element to achieve success, placing IM/IT as a corporate strategic priority at each organization and collectively. Without the dedication and vision of senior leadership, the partnership would not be able to exist in its current form. Clinician involvement, stakeholder

Figure 2



engagement, rigorous project management processes, streamlined structures and a relationship of trust have been key success factors.

Adding to this is the principle value of the partnership – focusing on promoting diverse organizational approaches to IM/IT initiatives rather than applying a “one size fits all” strategy to integration.

The First 12 Months

While barely one year old, the collaboration has seen several clinical, financial and operational achievements.

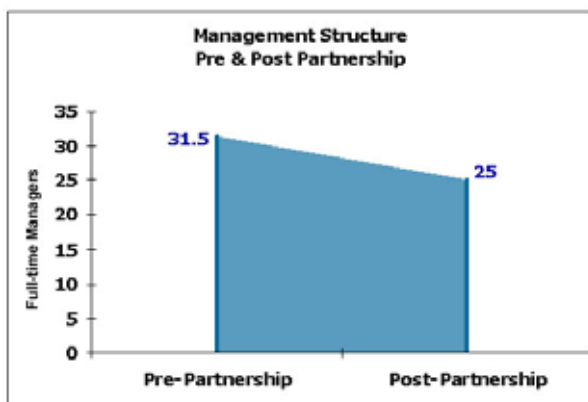
Clinical achievements:

- Emergency Room notification – Toronto CCAC is leading just about everyone in terms of providing leadership in client-centred health solutions. The amazing impact of the ER notification project is one example; (Refer to Figure 2)
- Integrated electronic health record (iEHR) – Development of a complete cross- continuum iEHR giving 7,000 users in primary, acute, rehab, community and continuing care settings access to lab and pathology results along with discharge summary notes and various other results and notes. Utilization runs at more than 2,500 reports viewed per month;
- Chronic Disease Management – An innovative multi-sector approach to improved and coordinated diabetes management services. With the participation of all seven partners, this program will examine gaps in service delivery and design new clinical roles to allow coverage across all management functions for seamless diabetes care.

Financial achievements:

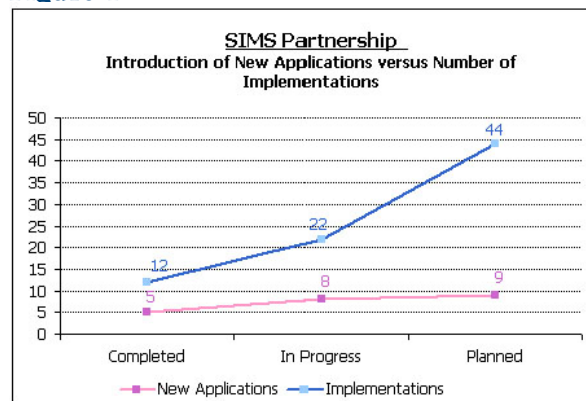
- Reducing overhead – Shared IM/IT management across the seven partner sites. Prior to the partnership, management overhead accounted for 31.5 Full-Time Employees (FTE) between the organizations. Now, there are 25 FTEs managing activities; (Refer to Figure 3)

Figure 3



- Sharing applications – Before the partnership, each organization would have had to purchase, develop and implement applications individually – a costly venture. Instead, the partnership has been able to buy one product and license it to each partner involved; (Refer to Figure 4)
- Vendor Relations – Does this mean less of a role for private companies to work with the hospitals? No, just the contrary. Total spending on IM/IT is in fact growing. In turn, total consulting dollars are going up, but the dollars are being focused on short-term value added activities of project planning and implementation. In addition, the partnership allows software vendors access to customers they would not normally market to.

Figure 4



Operational achievements:

- Improving contract management with service providers with the Service Volume Management System. The system eliminated approximately 30 phone calls per day for CCAC staff and achieved \$46,000 in cost reduction through increased compliance with service provider contractual agreements;
- Leveraging the UHN/HP relationship to Toronto CCAC and for integration with West Park’s HIS, signalling a new realm of collaboration and integration between two large hospitals in Toronto;
- A single node for interaction with Ontario’s provincial eHealth strategy. Active and often the lead participants in the: Wait Times agenda; Continuing Care eHealth strategy; Secure e-Mail for Health initiative; Provincial Case Costing initiative.

What’s on the Horizon?

For the next 12 months, the organizations involved in the partnership will have IM strategies that have two, almost dichotomous agendas – the first strategy continues to support the integration of clinical services across the continuum of care; the second strategy

continues to build internal IT capacity and internal health services that are supported and managed electronically for each organization. Of note on the latter point, the Ontario Hospitals eHealth Council commissioned a study to measure the readiness of hospitals to serve as feeders of information to an Electronic Health Record (EHR) as well as be able to access and utilize the information in an EHR. As Dominic Covvey noted in the February edition of HIMCC, the results of the survey were staggering. The majority of health-care organizations across the province have a long way to go to be e-enabled.⁴

This assessment is largely true of the organizations in the SIMS Partnership as well. There is a considerable amount of work to do internally at each organization in order for them to contribute data to the iEHR and, more importantly, for them to fully utilize the tools being created to support the flow and exchange of patients/clients through the system (e.g. traditional tools like ADT, orders/results viewing and electronic documentation capability). All seven partner organizations have projects looking at various aspects of safety, quality and the IT infrastructure required to support each respective organization. This is ultimately the backbone of the EHR and eReferral network that will enable the necessary changes required in the regional health system.

That said, we need to continue to build out our integrative capabilities. For certain, the expansion of our eReferral capacity will be a priority. As well, Chronic Disease Management is a clinical direction where IM/IT will be used as enablers to support and sustain the change. Together, the partners are working to build comprehensive, coordinated and structured programs to better serve those living with diabetes in the Greater Toronto Area. While the initial focus is on diabetes, the program will be expandable to include other chronic illnesses, such as heart disease, kidney disease, asthma and depression.

Other areas of focus over the next year for the partnership include:

- eReferral automation for Arthroplasty patients;
- A pilot project for Emergency Department and General Internal Medicine Units, examining the challenges of patient flow between the two areas and back into the community or other health care setting;
- The development of a comprehensive Patient/Client portal, integrating information from UHN and the Toronto and North York CCACs into one view for consumers across the Toronto Central LHIN and beyond;

- Improving the patient experience with the North York and Toronto CCACs leading the connections for moving patients back into the community throughout our LHINs – to long-term care, home care and primary care;
- Further development of decision support applications, the building blocks for measuring the performance of this regional health system.

Despite the comments earlier of the long way health care organizations have to go to achieving a seamless record, there is an abundance of IT tools in the environment that can make the process of care more efficient. The SIMS organizations are just beginning a new leg of this journey, but it is one that will likely have a dominant impact on the overall agenda going forward.

Conclusions

SIMS is active across the continuum of care. The organizational commitment is in place, as is the support and the talent needed to implement the projects being rolled out. The real question is, “Can the SIMS Partnership make a lasting difference?” Without a doubt – yes.

How will the SIMS Partnership achieve this? By focusing on providing outstanding customer service to each of the organizations involved; precise system management; the development of disease-specific programs – with particular focus on chronic disease management and electronic tools; and an unwavering commitment to implementing quality solutions.

The first year’s experience with the partnership has provided a new look at critical success factors required for successful large-scale change initiatives. The experiences gained over the past year can provide valuable lessons learned to other jurisdictions facing multi-organizational collaboration to support health system redesign.

Technology is expensive for any health care organization to develop and implement alone. Tying together community, rehabilitation, specialized complex continuing, primary and acute care for the benefit of the patient, the SIMS Partnership makes effective use of resources and maximizes the strengths of each of the partner organizations. Working together, these seven organizations are taking an important step along the path to achieving the national agenda of establishing an integrated Electronic Health Record. ●

⁴EHR: Empty Health Record; Healthcare Information Management & Communications Canada; 1st Quarter, February 2006; Dominic Covvey; p. 44-45.