WHITE PAPER

Extending your EHR investment

An integrated care model is within reach

Electronic health record (EHR) use has reached critical mass in Canada and EHR has now become an essential part of a medical practice. While this is a noteworthy accomplishment, the challenge now lies in maximizing the power of the EHR in conjunction with existing clinical information systems to deliver improved healthcare value.

EHR optimization is driven by a myriad of factors, ranging from the migration to the patient-centric care model to technology infrastructure limitations and opportunities. Within these drivers, a common element is the critical need for continuity of information to support the goal of integrated and connected care.

The main challenge from a continuity perspective is the transition of care between the various disciplines – for example, acute care, community care, long-term care and palliative care. The gap between these functions is where the right IT architecture can greatly enhance care and facilitate transitions for patients.

The integrated care model is considered by many to be the utopian ideal. The concept is straightforward enough: the need to "glue together" different areas of a patient's care to facilitate care planning and ensure a seamless transition. In other words, the idea that a healthcare facility could have the ability to share the necessary and relevant patient information through a single interface via a platform of choice, (e.g. mobile, patient portal, etc.), so as to enhance the continuity of care.

The execution of this ideal is another matter. A one-size-fits-all solution and/or complex one-off integration projects are proving to be out of reach both technically and economically. No one tool will ever become the Microsoft Office in the EMR world. The IT models we work with are simply too mature, and the investments too substantial, to warrant a rip and replace scenario.

One key to a brighter future in healthcare delivery is understanding what tools we currently have and how to leverage them. Rather than focusing on a technology solution that would demand massive upheaval and expense, the focus should be on taking what's available and connecting the flow of information to make better decisions for the patient.

WHERE WE ARE TODAY

There are numerous examples that illustrate the power behind an integrated information delivery model. For example:

- In New Zealand and parts of Australia, most hospitals generate and transmit all electronic discharges and referrals resulting in significantly improved provider satisfaction and system efficiency.
- The Australian government has placed a priority on enabling citizen access to their health record via a secure patient portal, as a means to encourage their involvement and improve access to health care services.
- In the U.S., Spain and certain provinces in Canada, data integration has enabled improved coordinated care for chronic conditions such as Diabetes, COPD and CHF.
- In the U.S., the Continuity of Care Document (CCD) is well-recognized as a standardized form for aggregating patient summary information. Digitized data can be populated from multiple sources to provide a comprehensive view of a patient's past history, medications, allergies and event histories, among other information.

While Canada does not make use of the CCD standard developed in the U.S., we do have a number of tools in place for the development of a CCD model. However, this has not been pursued to any extent.

The elements to allow data integration amongst multiple stakeholders are readily available today. That is, communication protocol standards, portal technology and the data transformation engine. The integration engine is an especially critical part of the picture, since it can extract data from any repository or information source and write it to a message form that any EHR can assimilate. Having common messaging protocols is a vast efficiency improvement over writing individual interface programs to connect disparate systems.

RAISING THE EHR BAR

Given the availability of these components, the potential to raise the bar in information integration is enormous. What is encouraging is that the ability to integrate information from systems such as e-referrals, disease management and home-based care, among others, is well within reach.

The transition away from an acute care focus to more patient- and/or citizen-centric care is bringing an entirely different level of thinking to the role of EHR and how existing toolsets are being used, adapted and implemented. The touch points will only expand, as we see a trend towards concepts such as self-service patient portals, mobile health apps and wireless disease management/monitoring.

Orion Health has long recognized the value of integrated information delivery, and has been focusing its efforts on aligning technologies and capabilities to enable seamless data transfer within the EHR structure. Having engaged in major projects in a majority of the Canadian provinces and territories, this approach has had a significant influence on the past and ongoing development of EHR capabilities across the country.

Orion Health has developed a stack of technologies that provide a number of components within the EHR blueprint. These components allow users to move ahead quickly in achieving their EHR mandates, without demanding excessive technology investment and/or replacement. This evolutionary approach allows decision makers to move forward and build on existing systems and processes to link future healthcare initiatives with ease.

The key components of this approach are:

- **An Integration Engine** - This is a flexible, secure and robust solution for sharing information from disparate sources. It has been specifically designed to meet the present and future needs of health interoperability. An integration engine manages and streamlines message exchange among applications, databases and external systems.

- **The Clinical Portal** - This open platform provides a universal solution for accessing and viewing accurate patient information and results. Clinical Portal can be layered on top of existing data structures to deliver single-view access to multiple data resources.

WHERE DO WE GO FROM HERE?

With the development of EHRs providing a complete view of all the health information for all patients in a jurisdiction, it is now possible to accurately measure the quality of care and also to influence the quality of care as it is delivered. Proposed extensions to the EHR must be viewed through the same lens of how much improved care quality will result and its role in containing cost.

The onus is on the system to identify the gaps that can be filled with what is being put in place today. There is a great deal that can be done in using the same foundations to connect key functional areas such as e-referrals, e-discharges, medication reconciliation, web-based services, lab reports, clinical pathways, disease management, telehealth, clinical decision support, patient access to EHR, mobile health, business intelligence and analytics and even billing systems.

Having the capability to coordinate data through an integration engine that can pull information from disparate sources and present it in a variety of formats should be an underlying principle in any architectural blueprint today.

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It's clear that the system can't meet all of our needs with a single overarching solution. One could compare the whole concept to an iPhone, where you can choose numerous apps that all work for the end user. Given we live in a world where financial and airline industries have kept abreast of technology changes to integrate information delivery, healthcare needs to do the same.

The issue is less about technology advancement relative to devices and software, than the ability to deliver information regardless of the source and the device in use. In other words, it's about achieving data liquidity.

Healthcare jurisdictions in Canada are uniquely placed to extend their EHR investments in several directions. Each opportunity has the potential to deliver major benefits for providers, patients and the health jurisdiction by improving the quality of care and reducing total system costs. As a starting point, each capability must be evaluated in terms of how much healthcare value it delivers.

With EHR initiatives we are seeing today, there is no question the basics are there. We simply need to use them to their best advantage.