

## **My Background and Context:**

I worked for a number of years for OHIP at the Ministry of Health in Kingston. Several major project initiative involved converting the Ontario population to an individual health number (previously largely family / group coverage), and shortly after that to a photo health card. The environment in the mid-90's was very paper-based – physicians didn't use electronic systems, hospitals had systems that supported their work – but to a large extent the information was not automated, largely paper-based. In the early 2000's, the government provided funding to support the automation of physician offices and that eventually became the work of OntarioMD. At OHIP we were working on getting physicians away from paper-based claims submissions. I explain this as a preface to the first question – what value has been created so far as there has been considerable advancement since the later 90's. For the last decade, I worked in Toronto in senior positions at the Ministry of Health and Long-Term Care, and most recently as the CEO at the Toronto Central LHIN.

## **What Value Has Been Created So Far?**

The value that I see that has been created is as follows:

- **Provincial Information Systems/Repositories:** One of the first major initiatives was the Ontario Laboratory Information System (OLIS) which was major system to automate all laboratory tests within private labs, hospital labs, and public health laboratories with common input and reporting, It has faced huge challenges, is operational – almost all private labs on using it; only some hospitals. Physicians with EMRs are starting to use the information. At his time, I am not aware that a capacity to send lab orders electronically to the labs is in place. Still very much based on paper requisitions generated in physician offices. At least one private laboratory has a patient portal for accessing test results.
- **Connectivity:** Connecting Ontario is a strategy with partners such as UHN. eHealth Ontario working with partners such as UHN has created connectivity layers – for the Toronto area it is called Connecting GTA. It is a health record repository for all hospital-based reports, lab results, and CCAC reports that can be viewed securely by registered clinicians. Various health sector partners are putting information into it that can be accessed by registered participants. Currently the major participants are hospitals and CCAC, and it is starting to be available to primary care physicians. It may be that this will evolve into the provincial EHR.

- **Secure Email Communications:** One Mail is the secure email offering from eHealth Ontario that much of the health system is using including community physicians. It allows registered health care professionals to share patient information securely with other healthcare providers.
- **Physician EMR:** eHealth Ontario has worked with OntarioMD to get the majority of the provinces family physicians on to an EMR with a lot of supports and financial incentives. There are certified vendors but changes are occurring – for example Nightingale had the enterprise implementation for Community Health Centres and have now been bought by Telus. Some of today’s challenges are meaningful use of the full capability of the EMR, connectivity with other physicians and health sector providers, and use of data for clinical care and planning. The EMR data is largely an untapped resource although there are initiatives such as Utopian in Toronto that are working with the EMR data.
- **Provider Identity:** One ID is provided by eHealth Ontario for identity and access management that allows providers to access secure eHealth services
- **PACS: Picture Archiving and Communications System:** Used to transfer medical imaging between sites and physicians – largely operational
- **Public Health / Immunization:** The Ministry implemented Panorama, a system implemented at the public health units to create electronic records for immunizations and also standardized coding/reporting. Not yet deployed to capture physician immunization information to my knowledge, but in process.
- **Applications:** There have been a lot of initiatives that have addressed various issues and opportunities in the system that are in various stages of maturity including:
  - Clinical Connects: Physicians in some communities (Hamilton, London) have access to the hospital information system to access their patient information, initially supported by the Ministry.
  - Comprehensive Care Tool (CCT): Developed by the Ministry to support Health Links, it is an electronic patient record where all health care providers can store and access information for complex patients that they share. In a pilot phase, most Health Links in Toronto Central LHIN did not have access to the pilot and had to create the comprehensive care plan manually.
  - eConsult pilots: Physicians can communicate electronically for specialist consults, and where appropriate can eliminate an in-patient visit. Very limited roll-out, sponsored by OntarioMD and OTN.

- eNotification: Physicians and community providers are notified in near real time when their patients are in the Emergency Department and/or admitted to or discharged from the hospital. Developed by OntarioMD and OACCAC.
- Electronic scheduling: patients can book appointments on line, available for some hospital services and for some primary care practices.
- Hospital Report Manager (HRM): Hospitals can share reports such as discharge summaries and diagnostic imaging reports electronically with physicians directly into the patient EMR chart – mostly available now at Toronto hospitals.
- Ontario Telemedicine Network (OTN): OTN operates a video-conferencing capability that enables physicians to interact with patients remotely.
- Patient Portals: Some hospitals and private labs have patient portals where patients can access their information – often test information
- eReferral/Resource Matching and Referral (RM&R): Local developments to automate referrals, including a TC LHIN solution to match community resources to requests/referrals
- Telehomecare pilots: Patients are monitored remotely at home with electronic tools for chronic diseases such as COPD; CHF. Supported by OTN and operated by the CCAC.
- Telehealth 1-800: Provincial number to call for assistance available 24/7

### **(What is noticeably missing?)**

- **Drug Information System**

One of the most noticeable gaps is that lack of an accessible drug database for physicians (and e-prescribing), although there is an application for emergency use only that allow ER physicians to access vital information about the patient's drug history. The Health Network is a system that supports pharmacies that dispense the prescription drug but the information is not available to those who prescribe the drugs – largely physicians. Physicians have identified access to drug information as hugely useful in managing patient care and moving to meaningful use of their EMR.

## What Can Be Created?

- A provincial strategy for hospitals: to include a master plan for hospital information system technology procurement. We have about 140 to 150 hospital corporations with individual boards that make major IT procurement decisions that do not appear to be considering connectivity outside of their organization – either for sharing information between hospitals or with other health sector providers in the community – we could potentially be mandating participation with Connecting GTA. In Toronto Central LHIN, several hospitals have HIS that do not communicate well with other hospitals. There is currently no strategy to have common software within the LHIN, a shared procurement etc. The recent recommendations of the HIS Advisory Panel will help with their recommendation with respect to a clustering approach. When one looks at an organization such as Kaiser Permanente, about the same size as Ontario and all sites using the same IT system, there is clear demonstration of benefits. A broader strategic aim could be leveraging hospital IT to connect community providers (more on that below).
- Organizational Considerations. We are not necessarily spending money effectively with autonomous and distributed decision-making on IT procurement across the health sector, especially hospitals. There is also a lot of different IT applications in the community sector although the 2 major provincial systems are CHRIS and CCIM. With the new sub-regions, we could have a hospital hub and link all health sector providers to the same technology. Alternatively, we could use the LHIN as a hub, or use the already existing ehealth hubs: Central Ontario, Southwest Ontario, Northern and Eastern Ontario.
- Expand Connectivity strategy - to include data from primary care and the community sectors, and allow access across the full health sector.
- Secure Email strategy for communicating health information across the health sector and for communicating with patients is necessary, and especially to support care of the very most complex patients.
- Standardize some input - into the EMR/EHR through identification of a common language so that information can be extracted for planning and analysis.
- Continue to increase meaningful use of Physician EMR - look at how physician EMR data can be used on an enterprise wide basis to support planning, analysis, and improvements to care.
- Develop a solid analytics capability - one that can support broader population health approaches.

- Develop a robust virtual care strategy which includes telemedicine. This will need careful consideration of funding implications. We are so far behind best in class organizations like Kaiser who are reporting that virtual visits now exceed face to face visits.
- Create a Customer Service Orientation - for example many physicians deal with multiple sign-ons, separate for each application. A single sign-on such as Apple uses for iTunes, and then allow the provider to select their “applications”. We saw this in Boston when we visited Athena Healthcare.
- Leverage Patients as Consumers – Lots of opportunity to engage with patients, listen to what they would find helpful, and provide electronic tools so that they can better manage their health care.
- Consider more closely aligning the major ehealth organizations. The distinction of roles between eHealth Ontario; OTN; and OntarioMD is quite blurred. There doesn't seem to be a good business reason for them to be separate.

### What Are The Barriers?

- **Privacy** – Continues to be challenging. Through initiatives, such as Health Links, we are encouraging health providers who provide services to the same patients to coordinate services and care plans. They run into roadblocks on sharing information and this needs to be solved (and gets much more complicated when the partners are outside of health – for example community, municipal organizations). Has led to long delays in moving critical initiatives forward.
- **Funding for IT** – Funding for IT across the system is a challenge. Hospitals are best resourced but also face challenges in funding IT, and ultimately the impact on their operational funding model.
- **Appropriate Incentives** – The current system does not have the appropriate incentives to encourage use of electronic health records or virtual care. This will need to be looked at within the context of the overall value to both provider and patients of active participation in electronic record systems. We must create a broader interest in the communities that health system providers are part of and that encourages better electronic communications with and between local providers in support of patients in their communities.
- **Health System Independence** – The health system has multiple providers and boards all of which operate somewhat independently. We do not operate as an integrated system and the way we are organized is a key factor. With Patients First, LHIN are working locally and at the sub-region level to create greater collaboration and service integration.

- **Leadership** – The Ministry needs to continue to lead the eHealth strategy with the roles of the external organizations such as eHealth Ontario clearly focused on delivery.
- **Clear Accountability** – Accountability of the agency and other organizations including OTN, OntarioMD. Role of government and ability to use the various levers that are available to them.
- **Innovation/Vulnerability:** Ontario is a small market and is vulnerable to changing EMR and HIS providers who no longer want to focus on the Ontario market.
- **Connectivity** is one of the biggest issues that we hear about from Health Service Providers and also from patients. Records are not consistently shared so the patient is left trying to coordinate their health information. We can do better.