6.0 eHealth Readiness

6.1 Provincial Perspective

The goals of eHealth are to use information technology to modernize the health system, and to provide better and safer patient care. The MOHLTC identifies the anticipated qualitative benefits of eHealth for Ontario as including[121] :

- Healthier people: eHealth helps Ontarians to manage their own health and health care, reduces preventable errors and empowers people and their health providers with their timely and accurate health information.
- Better health decisions and productivity: Secure access for health providers to comprehensive patient information will help them make better diagnoses and save valuable time.
- Better administrative and system-wide resource allocation: Health administrators and planners have the accurate and timely information needed to support long-term system planning, measurement, and continuous Improvement. This, in turn, will help ensure that tax dollars are spent more efficiently.

Successes achieved through eHealth should help deliver better and safer health care, resulting in a healthier Ontario population. Improved system management will lead to a more efficient and effective system of care. eHealth applications such as telemedicine are particularly important in a region like the Northwest, with very large distances between populations and providers.

eHealth Ontario

eHealth Ontario will play the leading role in harnessing information technology and innovation to improve patient care, safety and access in support of the Ontario Government's health strategy.

eHealth Ontario will provide a single, harmonized, coherent province-wide eHealth Strategy and align it through a single point of accountability. Its work will enable and fulfill the government's strategic healthcare priorities.

The long-term objectives of current Ontario eHealth investments include the modernization of healthcare Information Technology (IT) infrastructure and the implementation of electronic health records (EHRs) for Ontarians by 2015 as indicated in eHealth Ontario's Strategy described below.

Core priorities of eHealth Ontario's Strategy 2009-2012

eHealth Ontario's Strategy has two closely linked core priorities: clinical and foundational. Within each of these priorities, there are clearly defined solutions that will be achieved, specific actions and performance targets that will be attained and measurable results that will be realized by 2012.

[121] Ontario eHealth Forum, eHealth Vision.

The eHealth Ontario Strategy document is one of the supporting documents for the IHSP which can be found at:

http://www.ehealthontario.on.ca/pdfs/About/eHealthStrategy.pdf .

The Ontario eHealth Strategy is being implemented in part by the LHINs in close cooperation with and under the leadership of eHealth Ontario. Each LHIN has an appointed Lead for eHealth, and the province has established a LHIN eHealth Leads Council.

Within Ontario's eHealth Program, an Implementation & Adoption Strategy has been developed that provides a focused approach to successfully implement the eHealth solutions across the LHINs and related communities, and to work with the LHINs and related communities to meet the eHealth adoption targets.

Ontario Hospital Association and eHealth

The Ontario Hospital Association (OHA) believes eHealth is the foundation of a modern, integrated, accessible and sustainable health care system. It is a priority of the OHA to promote effective adoption of eHealth that will support hospitals' delivery of the best possible patient care through reduced wait times, increased patient involvement, fewer errors, better access to services and a more efficient health system.

Labour Market Survey

In 2008, the OHA conducted an Ontario Labour Market Survey: eHealth supplement which provides results including the current supply of eHealth staff in Ontario hospitals, vacancies, turnovers and forecasted capacity. The eHealth supplement is the first survey in Ontario to gather data on the eHealth workforce.

The high-level conclusions from the survey include:

- Current staffing is mainly comprised of eHealth professionals who fall under the Technical discipline.
- Professions in Leadership and Technical disciplines are experiencing the highest rate of turnover.
- Systems implementation and project management are two areas where hospitals outsource the most when it comes to eHealth initiatives.
- Generally speaking, the hospital respondents foresee an increase in FTE dedicated to eHealth in the future.
- Specific results for the North West LHIN hospitals indicate there were zero eHealth vacancies reported in the LHIN, and an employee turnover rate of 16.67% versus an Ontario average of 8.47%.[122]

eHealth adoption by Ontario hospitals

For the past three years, the results from the OHA eHealth Adoption Survey: Clinical Capabilities has provided an understanding of the clinical functions and information sharing Ontario's hospitals are performing electronically. With a

[122] Ontario Hospital Association. 2008 Ontario Hospital eHealth Labour Market Survey, 2008.

97% participation rate among Ontario's hospital corporations, this survey provides the most comprehensive examination of the state of eHealth in Ontario's hospitals.

The full survey findings report can be seen at:

http://www.oha.com/CurrentIssues/Issues/eHealth/Pages/OntarioHospitaleHealthAdoptionSurvey.aspx

Exhibit 6.1[123] shows the eHealth adoption index scores of the average hospital aggregated by LHIN. The scores represent the average hospital within each LHIN, not the LHIN as a whole.

Exhibit 6.1 eHealth Adoption Index Scores by LHIN

LHIN (number of participating hospitals)	1.1 Patient Registration, Records Management & Registry Services	1.2 Order Entry		1.3 Clinical Documentation	1.4 Results Reporting	1.5 Information Infrastructure	2.1 e-Health Leadership & Planning	3.1 Inter-Organizational Data Sharing for your EPR	3.2 Interoperability for a Shared EHR	2008 e-Health Adoption Index Score	2008 CORE e-Health Adoption Index Score	2007 CORE e-Health Adoption Index Score	2006 CORE e-Health Adoption Index Score
		OE	CPOE										
Central (8)	86	68	31	62	71	70	100	40	34	64	72	67	60
Central East (9)	77	57	15	58	64	70	63	38	35	55	60	61	56
Central West (2)	95	73	18	72	88	82	86	74	44	73	75	71	63
Champlain (19)	73	24	16	46	59	58	75	18	41	49	54	47	45
Erie St. Clair (5)	96	71	27	65	90	72	77	51	46	68	74	76	68
Hamilton Niagara Haldimand Brant (10)	76	52	28	52	72	54	77	28	31	53	59	53	48
Mississauga Halton (3)	95	81	34	79	92	74	90	53	66	76	81	74	74
North East (20)	72	40	11	56	67	51	61	29	43	51	55	52	46
North Simcoe Muskoka (7)	83	40	13	58	59	59	63	42	46	55	58	48	55
North West (11)	81	61	29	61	75	70	66	40	63	63	69	57	52
South East (7)	86	65	35	68	76	74	88	49	46	67	71	67	62
South West (16)	88	70	33	69	81	76	83	52	68	71	77	74	65
Toronto Central (15)	85	54	41	61	72	69	98	37	48	65	69	64	51
Waterloo Wellington (8)	92	56	33	67	62	79	79	44	27	61	65	62	55

Above Average - scores within the top quarter among peers
Average - scores within the middle two quarters among peers
Below Average - scores within the bottom quarter among peers

[123] 2008 Ontario Hospital eHealth Adoption Survey: Clinical Capabilities

According to the annual Core eHealth Adoption Index Scores (last three columns of the table above) the hospitals in the North West LHIN are improving year on year as to their eHealth clinical capabilities. Of note, the average score for North West LHIN hospitals on the Interoperability for a Shared EHR index is much higher than all but two of the other LHINs. Contributing to this strength is that 12 of 13 hospitals now share a common Electronic Health Record (EHR) using MediTech Hospital Information System.

Telemedicine

"Telemedicine" most commonly refers to the use of telecommunications technology like videoconferencing for medical diagnosis and patient care. Telemedicine technology can also be used for education and training.

The Ministry of Health and Long-Term Care has adopted the term "telehealth" to specifically refer to its free, confidential phone service for the public to get health advice or general health information from a Registered Nurse (Telehealth Ontario).

Ontario Telemedicine Network (OTN)

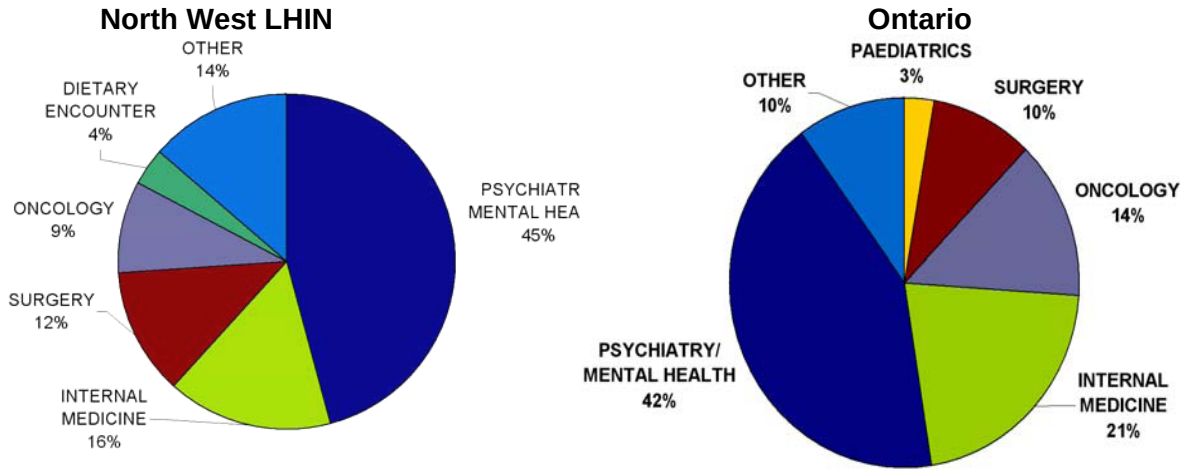
The Ontario Telemedicine Network's telemedicine programs and services are delivered in more than 660 sites across Ontario. OTN offers technical and operational services to more than 336 Ontario members, including academic health sciences centres, community hospitals, psychiatric hospitals, clinics, nursing stations, LTC homes, CCACs, public health units, and educational facilities.

In 2008/2009, 53,745 clinical consultations in Ontario were conducted using telemedicine. Of those, 15,963 were hosted in the North West LHIN. Of the 18,501 events in total hosted in the Northwest, 86% were for clinical activities, 7% were for educational events and 7% were for administrative activities. [124]

On the following page, Exhibit 6.2 shows the distribution of clinical consultations in the North West LHIN and Ontario by Area of Care. For clinical events, the patient site is considered the host, while the consultant site is the participant. Activity reported for a particular LHIN refers to only the side of the event occurring within that LHIN.

[124] http://www.otn.ca/en/otn/who-we-are/

Exhibit 6.2 Top Therapeutic Areas of Care for the North West LHIN and Ontario Clinical Consultations via OTN, fiscal year 2008 (08/09)[125]



An example of a specific telemedicine service currently benefiting the residents of the Northwest is the Tele-radiology Service, which allows hospitals and First Nation communities in Northwestern Ontario that do not have the services of nearby radiologists, to transmit X-rays to larger centres where these specialists are located. A picture archiving system in Thunder Bay networks the independent facilities in the region. Tele-radiology improves the timeliness of radiology diagnostic test results, which in turn will allow a patient's treatment to proceed sooner.

Keewaytinook Okimakanak Telemedicine

Keewaytinook Okimakanak Telemedicine (KOTM) helps to deliver telemedicine services to remote First Nation communities in Northwestern Ontario. Its main goals are to improve First Nations' access to health professionals, to enhance the level and quality of services, and to reduce isolation for First Nations health workers. KOTM provides services to 24 First Nations communities in the Northwest. In 2008, 2563 clinical events were hosted in these communities.

Agreement between OTN and KOTM

On May 29, 2009 KOTM and OTN signed a Partnering Agreement, making it the first of its kind between First Nations and provincial organizations. Although the two organizations have been working together over the last ten years, this partnership formalizes the collaboration between the KO First Nation and the federal and provincial governments to continue expanding access to this technology to all First Nations and remote communities in Ontario.[126]

6.2 Regional Perspective

2008-2012 Northern Ontario eHealth Blueprint Tactical Plan

In 2007, Northern Ontario health service providers developed a Tactical Plan which identified the priority projects necessary for the effective implementation of the eHealth Information and Communication (ICT) Blueprints (Phase I and II)

[125] Ibid.
[126] O'Neill, Pamela. *KO Telemedicine & Ontario Telemedicine Network Sign Historical Partnering Agreement: Another step towards improving overall health of remote First Nations communities.* Northern Sun News, June 3, 2009.

that were developed from 2005 to 2007. The 2007 "Northern Ontario eHealth Information and Communication Technology Blueprint Tactical Plan" covers the period 2008-2012. The full report can be found through the North West LHIN's website at:

http://www.northwestlhin.com/Page.aspx?id=2378

The project was carried out under the leadership of the two Northern Ontario Local Health Integration Networks (LHINs) – the North East LHIN and the North West LHIN. The project was guided by a Steering Committee who reported to the ONeHealth Steering Committee, the North East LHIN and the North West LHIN.

Sixteen priority projects were selected by the Tactical Plan Steering Committee to be focused upon over the next 3 to 5 years to implement the Blueprint's vision and strategies. They are a useful way to target activity that is needed to improve information and communication technology capability among health service providers in Northern Ontario.

The sixteen projects are:

1. Establish a Project Management Office for the Northern Ontario eHealth Information and Communication Technology (ICT) Tactical Plan.
2. Develop a regional ICT infrastructure, support and integration program, including the development of a technology integration framework, architecture and standards.
3. Enable Smart Systems for Health Agency (SSHA) connectivity.
4. Implement SSHA's ONE Mail.
5. Leverage the provincial Enterprise Master Patient Index (EMPI).
6. Increase access to Telehealth.
7. Implement a Clinical Provider Portal (Clinical Viewer).
8. Support the referral processes through e-Referrals.
9. Implement an e-Physician strategy.
10. Continue to develop organizational electronic records and the regional Electronic Health Record.
11. Implement the Pan Northern Ontario Picture Archiving Communications System (PACS) Project.
12. Continue to implement administrative information systems.
13. Expand Ontario Drug Benefit (ODB) Plan Viewer access.
14. Develop the Northern Ontario Directory of Services.
15. Develop a Consumer Portal.
16. Align with Ontario Laboratories Information System (OLIS).

Details of the sixteen priority projects are available in the Tactical Plan.

2008 Northern Ontario eHealth ICT Planning Survey Report

In 2008, the Northern Ontario ICT Planning Survey was conducted in order to:

- Inventory current technology infrastructure in the North
- Assess the level of project management resources existing in the North

- Inventory current eHealth projects underway in the North
- Assess the level of privacy policies and practices in the North.

The inventory of current technology infrastructure was done in order to help develop a standard technical infrastructure which is necessary for:

- Building the foundation for the regional EHR
- Developing an integration framework, architecture and standards
- Defining regional and vendor strategies
- Optimizing systems.

Some key findings from the report include:

Project Management Capabilities:

- Hospitals were identified as having the greatest project management capability.
- There were 17 eHealth projects ongoing or starting in the near future in the North West LHIN.

Regional Approach, shared services, shared resources, capacity of ICT:

- At the sector level, only 23 organizations had the capacity to take on or add resources to new projects. Hospitals, Community Health Centres and Community Mental Health and Addictions sectors had the greatest capability to take on or add resources to new projects.

Information Technology:

- 155 Full Time Equivalent staff supporting ICT
- Hospitals account for 70% of total users
- MediTech is the most common vendor software for client care, patient registration, EMR/EHR, drug viewer and PACS
- 113 organizations across the north are sharing data with at least one other agency.

2009 eHealth Readiness Tactical Plan

In March 2009, the North West LHIN completed the North West Community Tactical Plan: Getting Ready for eHealth which outlines the North West LHIN's eHealth readiness in the areas of governance, project management, LHIN-planned projects, support capabilities for eHealth solutions, technology infrastructure readiness, change management ability, and privacy and security expertise.

A summary of key tactical plan tasks required by the North West LHIN to fully prepare for regional eHealth adoption include:

- Connectivity: Within the North West LHIN, many service providers do not have access to a secure high-speed internet connection. This is a particular concern for small physician groups and First Nation Health Service Providers. Without connectivity, it is difficult to build eHealth capacity.
- Knowledge Management: One of the key developments of the PMO will be to establish a comprehensive knowledge management system to ensure information is collected/captured, disseminated and distributed in an appropriate fashion.
- Tactical Plan Alignment: The ICT Blueprint and Tactical Plan were developed two years ago. While these documents provided a starting point for eHealth in the North, it is essential that they be refreshed to ensure that they are consistent with the direction of the LHIN and eHealth Ontario.
- Ongoing Community Engagement: In order to expand the adoption of eHealth technologies, extensive community engagement and education will be required.
- Human Resources: The advancement of eHealth projects requires individuals with a specialized set of skills. An increase in project management capacity across the North is required.