



Ontario Telemedicine Network

2011/12 Annual Report



Telemedicine's Leader



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A year in review



MAY
OTN co-hosts a Telemedicine Nursing Forum with the NE and NW LHINs, a collaborative and interactive forum for those engaged in front-line delivery of Telemedicine.

JULY
Dr. Ed Brown uses videoconferencing to participate in Singapore's "National Health Informatics Summit".

OCTOBER
OTN launches the Learning Centre, an online, easy-to-use single point of access to all OTN distance education offerings.

FEBRUARY
OTN begins rolling out its Clinical TMC Certificate training in the North West LHIN, a component of the LHIN TM Nursing Initiative.
OTN's Contact Centre and Service Desk introduce bilingual associates to support calls in French.



APRIL
OTN celebrates five years as an organization and introduces fresh new branding to confirm the organization as the global leader in Telemedicine.

OTN introduces Premium Services, enabling commercial and not-for-profit organizations to access the Network for non-clinical events.



JUNE
OTN is the proud winner of the Information Technology Association of Canada's 2011 *Ingenious Award* for excellence in the use of information and communications technology for business transformation and enterprise improvement.

SEPTEMBER
OTN takes home the International Association of Privacy Professionals (IAPP) *Privacy Innovation Award* in recognition of its efforts to reduce privacy breaches in the organization.

OTN launches its Webconferencing service, allowing multiple meeting participants to meet virtually to share audio, video and other files in real time.

NOVEMBER
OTN launches the Telemedicine Directory, the "go to" place to find the people and places that make Telemedicine work!

MARCH
OTN supports delivery of care for more than 200,000 patients, a 52% increase over last year!
OTN introduces the Telemedicine Resource Guide, a "one stop shop" for materials used daily to support the integration of Telemedicine in organizations.



“Less expensive, less time wasted,
and better for the environment.”

OTN 2012 Patient Satisfaction Survey

Moving the vision
closer to reality

**Telemedicine will
be a mainstream
channel for health
care delivery
and education.**



Telemedicine's Leader

Store Forward: moving the information, not the patient

Otn.teledermSF

Launched province-wide at the end of last year, Otn.teledermSF allows a physician to take a digital image of a patient's skin condition and send the referral electronically to a dermatologist through OTN's secure servers.

The dermatologist reviews the information, returns a diagnosis and suggested treatment to the referrer- all without a long wait, added costs or travel time for patients. Last year, dermatologists used Otn.teledermSF to provide more than 1200 consultations, with an average response time of less than five days - significantly less than the eight to twelve month wait times for a face-to-face appointment.

Increased interest in Otn.teledermSF was facilitated by an extremely successful dermatology CME in February. Jointly presented by Drs. Ben Barankin and Anatoli Freiman, both Otn.teledermSF users, OTN hosted 59 sites by video and 19 by webcast, with a further 114 webcast views of the CME to the end of March.

Teleophthalmology

Retinopathy is a complication of diabetes that, when detected through retinal screening and treated, can prevent blindness in up to 90% of those affected. Approximately one-third of Ontarians with diabetes do not receive retinal screening, something OTN is working to resolve with its Teleophthalmology program.

Through this program, patients referred for retinal screening at one of six sites in the province have their images uploaded to a secure central server. One of six ophthalmology specialists involved in the program reviews the images and provides assessment, diagnosis and treatment recommendations. 781 patients were examined and 352 had "abnormal" findings that required follow-up treatment.

OTN had the opportunity to collaborate with the Thunder Bay Regional Health Science Centre to extend the service in Thunder Bay and Sioux Lookout through Thunder Bay's Center for Complex Diabetes Care program.



LHIN Telemedicine Nurse initiative – championing telemedicine care

The Government's Open Ontario Plan to provide more access to health care services while improving quality and accountability for patients resulted in the recruitment of 191 full time nursing positions focused on delivering clinical telemedicine at Member sites throughout the 14 LHINs. This number of resources

dedicated to support Telemedicine provided OTN with a unique opportunity to train, mentor and develop a Telemedicine Coordinator (TMC) network.

OTN developed a TMC Curriculum to support the development of the newly-hired nurses. The training included a one-day “in person” training session, an invitation to which was extended to existing TMCs.

Training began in the North West LHIN in February, with subsequent training sessions scheduled across the province throughout the Spring.



Telehomecare – access to care from the convenience of home

A new way to manage chronic disease and a catalyst for changing the delivery of health care, Telehomecare uses technology to engage patients as partners in their care plan.

The results of an extremely successful pilot project managed by OTN resulted in agreement to expand the program provincially. Over the past year, OTN engaged in extensive planning to determine the business and technical requirements for a provincial rollout, examining everything from appropriate patient monitoring software and hardware, to clinical leadership and business process support to change management and marketing.

With funding from the Ministry of Health and Long-Term Care, Canada Health Infoway and participating Local Health Integration Networks (Central West, North East and Toronto Central), OTN will serve as the project manager for the Telehomecare Expansion Project as it rolls out over the

coming year. The Project will support 2300 patients with Chronic Obstructive Pulmonary Disorder (COPD), Heart Failure (HF) and other associated comorbidities and will expand to include other LHINs, ultimately enrolling upward of 40,000 patients with complex chronic disease by 2015.



OTN Telemedicine Directory – “the” place for finding the people and places using Telemedicine

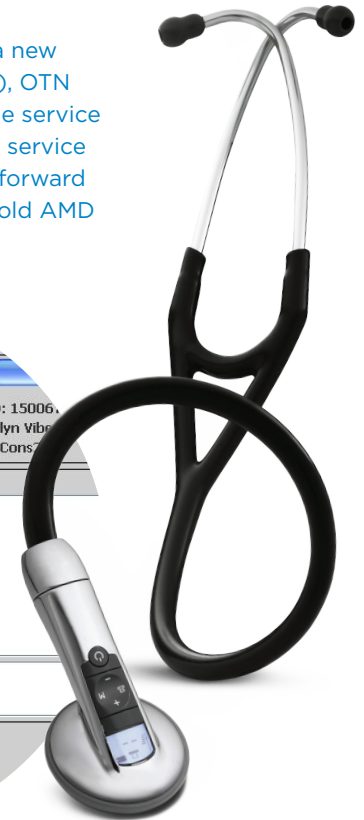
OTN’s Telemedicine Directory (TM Directory) launched in November, making it easier for OTN consultants, referrers and Telemedicine Coordinators to find the people and places using telemedicine. According to a January, 2012 survey of clinical schedulers, 80% said that more information about sites was likely or highly likely to help them to self-schedule more often. Consultants and Telemedicine sites complete a simple, one-page profile providing relevant contact

information and a detailed summary of specific patient services and/or specialties and submit it to the TM Directory for publication. At the end of the year, the TM Directory provided access to more than 400 consultants! The Directory will dramatically improve access to health care and facilitate collaboration with the right stakeholders in a telemedicine consultation.



OTN Telesteth – a new and improved delivery of heart and lung sounds

After a brief but successful pilot of a new digital stethoscope (the 3M Littman), OTN decided to launch a new stethoscope service in May. OTN Telesteth – a lower-cost service that offers both real-time and store forward functionality – replaces the decade-old AMD stethoscope service.



OTN Learning Centre – customizing your education needs

Launched in October, OTN’s Learning Centre offers an online and easy-to-use single point of access to thousands of health education events annually. More than 400,000 health care professionals across Ontario participated in rounds, seminars and other events. If options like a searchable calendar or customized learning alerts weren’t enough, the next month OTN launched Learning Centre Mobile as its first mobile feature, providing access to the Learning Centre from a smartphone or tablet! In just six months, the Learning Centre reached 30,500 page views.



Webcasting – extending the reach of your events


OTN’s webcasting service allows those using the Network for educational and/or administrative events to extend the reach of that event beyond rooms with videoconferencing equipment. From the convenience of a personal computer, individuals may watch a webcast and if the webcast is archived, they may watch at their convenience. Last year, the unofficial “award” for most-watched webcast went to the Northeastern Ontario Prehospital Care Program (NEOPCP), which garnered 880 views of its “New Medical Directives” webcast on August 3! OTN hosted 1762 webcasts last year, for a total of 62,258 webcast views, a 17% increase over last year.

OTN Webconferencing – accommodating collaboration, eliminating the distance

OTN launched its Webconferencing service in September, based on the results of an extremely successful pilot, which confirmed that use of Webconferencing reduced travel and conference costs. OTN’s Webconferencing service allows multiple meeting participants to meet in a virtual room to share audio, video and other files in real time, making it an extremely cost-effective tool for meetings or training. In just seven months, the service hosted 3,995 hours of use.

User response to a survey sent out by OTN demonstrated a high level of satisfaction (92%) and offered anecdotal evidence about cost savings. OTN used the information in the survey (average km travel avoidance/participant and the cost of travel avoided) and developed a calculator to determine the cost savings associated with webconferencing. Check out Webconferencing at www.otn.ca.





“ I think this is a valuable, indispensable service. It allows me to see my practitioner more frequently and I feel I am benefitting from treatment/therapy. Great idea! ”

OTN 2012 Patient Satisfaction Survey

Mission possible!

To develop and support telemedicine solutions that enhances access and quality of health care in Ontario and inspires adoption by health care providers, organizations, and the public.

Otn.
Telemedicine's Leader

The Mission in Action

Treating trauma from a distance

Teletrauma is another type of emergency telemedicine application in which a trauma specialist in one location can provide assessment and treatment for a trauma patient located elsewhere through live, two-way videoconferencing.

Launched in October, the “Telemedicine for Trauma Resuscitation (TTR)” program is a joint initiative of St. Michael’s Hospital and Sunnybrook Health Sciences Centre, championed by Doctors Christopher Hicks and Homer Tien. It provides 24/7 emergency trauma service for critically injured patients

Dr. Chris Hicks,
St. Michael’s Hospital

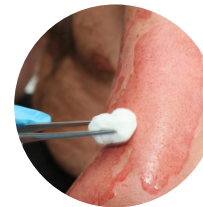
through OTN, supporting discussions between physicians and the health care team regarding the stabilization and treatment of trauma patients prior to, or in place of, transport to a trauma centre. The goal of the program is to guide care at the referring site to reduce the need for patient and family travel for care.



Bridging the distance for burn care

Teleburn is an urgent/emergent telemedicine application that allows for the assessment and treatment of burn patients through a “consult” using live, two-way videoconferencing with a remote burn specialist.

Burns - which can be electrical, chemical, inhalation injuries and even frostbite - can be difficult to diagnose and treat so access to a specialist who can provide advice in a timely way is critical. Spearheaded by Dr. Marc Jeschke, Director of the Ross Tilley Burn Centre at Sunnybrook Health Sciences Centre, the Sunnybrook Teleburn Program provides 24/7 emergency burn service via OTN. Emergency Departments admitting a burn patient can request a burn consult through CitiCall Ontario, which contacts the burn team at Sunnybrook. The team connects to the patient at the remote ED through OTN and assesses what the course of treatment should be - which can include treating the patient in their hospital, or transferring the patient to the Burn Centre. Regardless of the decision around where to treat, the ability to make that decision using Telemedicine improves overall prognosis for the patient.



Dr. Marc Jeschke. Photo courtesy of Sunnybrook Health Sciences Centre

Care at home when home is long-term care

Residents of long-term care homes are among the most frail and elderly of the population. When they become ill, they go by ambulance to a hospital, where they wait in Emergency for assessment and care. These trips can be uncomfortable and confusing and increase the chances of a negative outcome for the elderly patient. While the decision to send a patient to Emergency remains the decision of the resident's family doctor, Dryden's Princess Court long-term care home wanted to provide an alternative method that could be used to reduce the need to send their residents to Emergency for care. They decided to install 92 special circuits – one in each resident room – to allow for bedside patient assessment with staff at Dryden Regional Health Centre (DRHC) using portable Telemedicine equipment.

The staff at Dryden Regional developed the processes and training required to support the consultations at both the hospital and at Princess Court. While a Nurse Practitioner provides assessments during the day, evening coverage is available using physician coverage from the Emergency Department.

Dryden Regional has also extended the use of telemedicine to include televisitation, supporting family visits for patients in the hospital or Princess Court.



“I wish I could do telemedicine with my other doctors and specialists.”

OTN 2012 Patient Satisfaction Survey



“ I’m so grateful to have a support group to enable a more pro-active approach to my healthcare. ”

OTN 2012 Patient Satisfaction Survey

OTN BY THE NUMBERS

DID YOU KNOW?

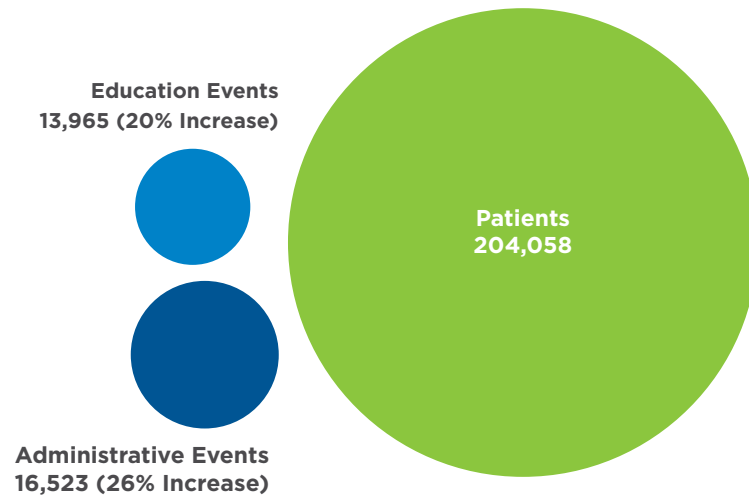
- More than 3000 referrers and consultants now use OTN to provide care to patients. OTN's consultant base grew by 15% this year, while the physician base grew by 11%. Allied health health consultants using the Network increased by 24%.
- 92% of patients using Telemedicine indicated they were satisfied with their telemedicine visit and 91% of patients would use it again, according to a 2012 OTN patient satisfaction survey.



Telemedicine's Leader

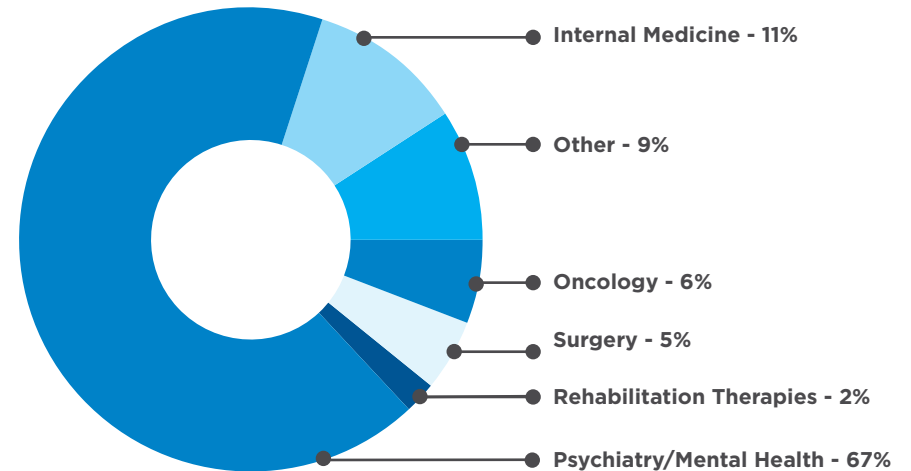
Maximizing the Value of Telemedicine

Last year, more than 200,000 patients received care via OTN, a 52% increase over the same period last year.



Provincial Therapeutic Areas of Care

Telemedicine supports access to care across a wide variety of clinical therapeutic areas of care. The top six clinical categories are:

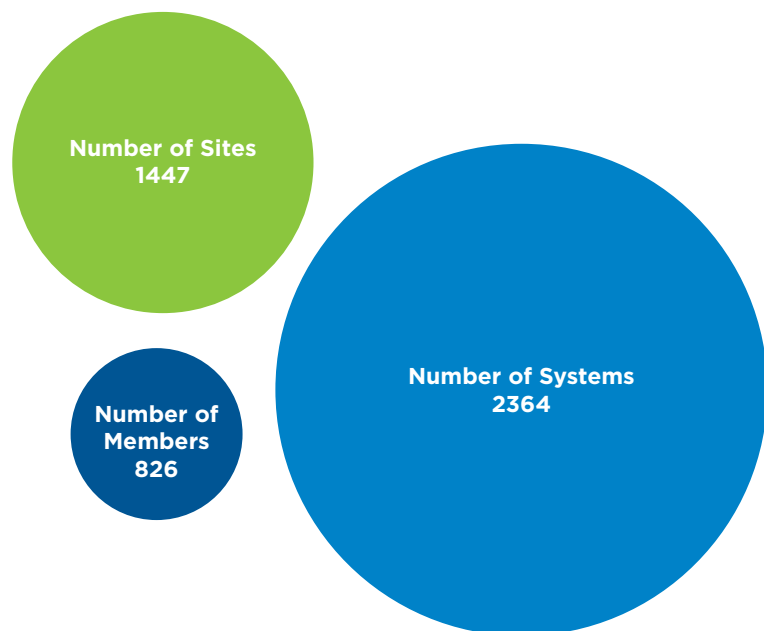


DID YOU KNOW?

- Use of Telemedicine resulted in more than \$44M in avoided costs charged to the Northern Health Travel Grant if patients had travelled for care.
- 208,598,556 kilometres of patient travel (roughly equivalent to 5151 trips around the equator!) was avoided by using Telemedicine!
- More than 57 million kilograms of pollutants was avoided and nearly 23 million litres of fuel was saved by using Telemedicine!

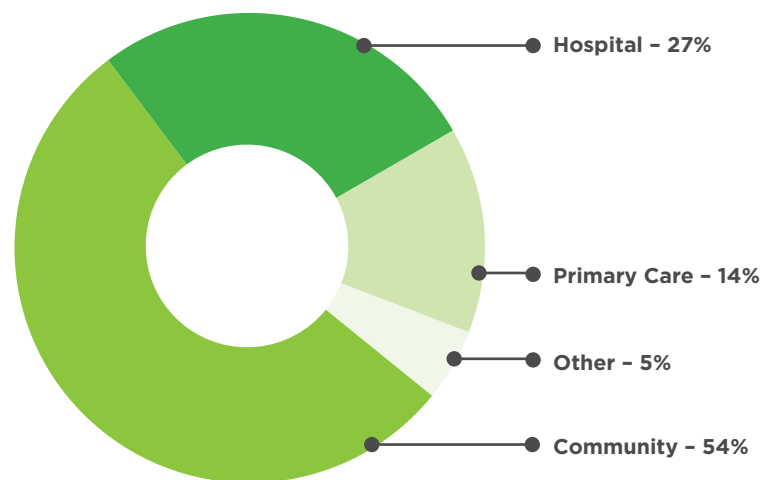
Sites, Systems and Members

OTN membership provides access to the world's largest collaborative community of telemedicine-enabled organizations, enabling participation in clinical, educational and administrative events.



Active Sites by Setting

Although a majority of patients still access telemedicine in a hospital setting, the number of patients seen in primary and community care settings are growing significantly. In fact, non-hospital telemedicine sites are now more numerous than those in hospitals!



DID YOU KNOW?

- Since 2002, 2433 patients have received care through the Provincial Telestroke Program and of those individuals, tPA was used 741 times.
- 1256 people access training through OTN's Training Centre in the last fiscal year.

LHIN Activity

Ontario's 14 Local Health Integration Networks (LHINs) are responsible for planning, funding and integrating health care tailored to local community needs within broader provincial strategic directions. **The chart below represents a high-level summary of telemedicine distribution and activity across the LHINs in Ontario at the end of 2011/12.**

Telemedicine Distribution & Activity Across the LHINs in Ontario, 2011/12

Patients Served 2011/12

LHIN	Active Sites		Active Systems		Hosted Utilization		Participated Utilization	
	#	%	#	%	#	%	#	%
1 Erie St. Clair	72	5	127	5	13,023	6	4,838	2
2 South West	140	10	303	12	26,466	13	27,870	14
3 Waterloo Wellington	67	5	108	4	9,682	5	1,619	1
4 Hamilton Niagara Haldimand Brant	127	9	196	7	6,747	3	7,399	4
5 Central West	15	1	22	1	2,036		3,105	2
6 Mississauga Halton	21	1	35	1	387	0	1,738	1
7 Toronto Central	100	7	295	11	3,324	2	24,912	12
8 Central	68	5	104	4	2,192	1	50,333	25
9 Central East	80	6	132	5	22,695	11	18,733	9
10 South East	115	8	208	8	8,113	4	2,073	1
11 Champlain	154	11	307	12	22,633	11	12,702	6
12 North Simcoe Muskoka	66	5	110	4	4,626	2	2,541	1
13 North East	261	18	443	17	50,367	25	31,467	16
14 North West	157	11	240	9	28,671	14	10,881	5
TOTAL Ontario	1,447		2,634		200,962	100	200,211	100

Chart totals reflect LHIN activity only.

Report from the CEO and Board Chair

This past year has been a watershed for awareness of Telemedicine. Perhaps it is the result of the growth of smartphones and other wireless devices, but more than ever before, people seem to know what Telemedicine is and more providers are using it routinely.

How can we be sure of this? Well, the numbers don't lie! We have jumped from a fairly impressive 30% annual growth over the past few years to more than 50% in the last year alone. That means that more than 200,000 patients received care through Telemedicine last year. 200,000! And that is just patient care. We have also experienced a 20% increase in the number of distance education events we hosted, and a 26% increase in the number of administrative events.

What this says, is that for the most part, people would just rather stay home than have to travel for their healthcare fix. This is certainly true for patients, 92% of whom gave Telemedicine "two-thumbs up" in terms of satisfaction in a recent survey. It is also true for providers, who would much rather sit in their office to watch a lunch and learn session than have to park downtown or fly to another city for their continuing education.

While a clear win for patients and providers, the icing on the cake is that Telemedicine is also a win for the health care system and the taxpayers. Consider telehomecare for example. In the Phase One Telehomecare Program, we achieved some "eye-popping" numbers: a 70% reduction of emergency department visits and a more than 60% reduction in hospitalization rates*. Taken together, the various types of Telemedicine - live video, store-forward and telehomecare - have enormous potential to improve health system performance by reducing travel costs, improving timeliness of care, reducing hospital pressures and introducing significant efficiencies into clinical delivery. Of course that's why technology is used to innovate any industry - to improve the quality and efficiency of their processes.

The Board and staff of OTN are enormously proud of our role in supporting this Telemedicine activity, but we also recognize the challenge that lies ahead to scale up to meet the increasing demand and to make Telemedicine even easier, more available and less expensive.

We are excited and thrilled to have the opportunity to meet this challenge, so that we may better serve our Members and the health care providers who use OTN and who share our vision of making Telemedicine a mainstream channel for health care delivery and education.

** based on results of an independent evaluation of OTN Phase One Telehomecare Project by Pricewaterhouse Coopers*



A handwritten signature in blue ink that reads "E.M. Brown".

Edward M. Brown, MD,
Chief Executive Officer



A handwritten signature in blue ink that reads "Ray Marshall".

Ray Marshall, OTN Board Chair & President
& CEO, Brockville General Hospital

Board of Directors

Ray Marshall (Chair)

President & CEO, Brockville General Hospital

Jean Bartkowiak

President & CEO, Soins continus Bruyère Continuing Care

Mark Guttman, MD

Director of the Centre for Movement Disorders, Markham

Robert S. Lester, MD

David Murray

CEO, Sioux Lookout Meno-Ya-Win Health Centre

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Executive Director, Toronto Central Local Health Integration Network

Stephen Sorocky

President, Exigent Innovations Inc.

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