The Ontario Telemedicine Network:

Virtual Care: Where We’ve Been and Where We Are Going

April 29, 2014

Dr. Ed Brown, CEO
VOOR ALLE ONZEKERHEID

Dr. Google
The views expressed here do not necessarily reflect those of the Government of Ontario
Contents

- Where we’ve been: Telemedicine today in Ontario
- Where is virtual care headed?
What is Telemedicine?

Use of information technology by health care providers:
- To deliver care to their patients;
- To engage their patients in their own health management and/or:
- To collaborate with each other to improve care delivery.
About OTN

An independent not-for-profit corporation funded by the Government of Ontario

Members include:
- 1,289 health care and education organizations at more than 1,600 sites

Partners include:
- eHealth Ontario
- OntarioMD
- Canada Health Infoway
- Keewaytinook Okamakanak Tribal Council

[Map of Ontario showing locations and connections]
Ontario: 1 M sq km
13.5 M people
Our vision: Telemedicine will be a mainstream channel for health care delivery and education.
OTN Telemedicine Services

1. Clinical Videoconferencing
2. Provider eConsult
3. Acute Care
4. Learning
5. Telehomecare
1. Clinical Videoconferencing
Personal Videoconferencing
Clinical Videoconferencing

At March 31, 2014:
- 3,298 hardware-based clinical videoconferencing systems in use
- 1,164 Personal Videoconferencing users

In the past year:
- 2,745 consultants (1,852 physicians) provided telemedicine consultations
- 390,000 patient events
The (Patient) Results Are In …

- 92% were satisfied with their telemedicine visit.
- 91% indicated they would use it again.
- 87% felt as comfortable receiving care through telemedicine as they would have in person.
- 74% saved money using telemedicine, with average savings of $C 242.
Avoided Travel in Northern Ontario
(in millions)

- 2009-10: Avoided Travel in the North (km) = 46, Estimated NHTG Cost Avoidance ($) = $19, Polutant Load Eliminated (kg) = 13
- 2010-11: Avoided Travel in the North (km) = 61, Estimated NHTG Cost Avoidance ($) = $25, Polutant Load Eliminated (kg) = 17
- 2011-12: Avoided Travel in the North (km) = 108, Estimated NHTG Cost Avoidance ($) = $45, Polutant Load Eliminated (kg) = 30
- 2012-13: Avoided Travel in the North (km) = 146, Estimated NHTG Cost Avoidance ($) = $60.4, Polutant Load Eliminated (kg) = 40.2
From the hospital … to the home

- Community: 54%
- Hospital: 27%
- Primary Care: 14%
- Other: 5%
2. Provider to Provider eConsult
(AKA store-forward telemedicine)

- Current uses: dermatology, ophthalmology & retinal screening, wound care, psychiatry
3. Acute Care

Provincial Programs
(24/7 On-call)
- Telestroke
- Sign language service
- Teleburn

Regional Programs:
- Crisis telepsychiatry
- Virtual critical care
- Teletrauma
- Vascular surgery emergencies
4. Education and Meetings

Includes multi-point videoconferences, webcasts & webconferences
Learning Centre

Home

- **Oncology Grand Rounds**
  *Presented By: TOH Organizer and Coordinates: Jill Greenwood, x 73984*
  *Event Title: Oncology Grand Rounds Speaker Name: Dr. Susan Dent*
  *Ottawa*
  *Poster (23 Feb 2012 Oncology Grand Rounds.pdf)*

- **The Dean's Hour "Transforming the Health Care System to Face the Aging Population"**
  *Presented By: Dr. Rejean Jeebert*
  *Thunder Bay*
  *Poster (Dean's Hour Poster Feb 23 2012 KL (1).pdf)*

- **North Simcoe Muskoka Geriatric Insights: Congestive Heart Failure ((((((((((((((((((()))))))))))))))))) WEBCAST**

http://learning.otn.ca/
5. Telehomecare

Remote Monitoring and Coaching for People with Chronic Disease
Results for the period April to September 30, 2013 indicate a reduction of 43% in ED visits and a reduction of 71% in hospital admissions (when compared with the pre-Telehomecare rate)*

*William Osler Health System utilization data review of first 130 patients in the Central West LHIN Telehomecare Program; September, 2013
Telehomecare Provincial Expansion

- Heart failure and chronic lung patients
- No charge to eligible patients
- Currently available in 5 LHINS and 3 more by September 2014
2014/15 OTN Service Enhancements

- Personal Videoconferencing on iOS
- Direct to home pilots (eg post-op, mental health) and “sandbox”
- eConsult growth
- Telemedicine Centre launch (aka OTNhub)
Find the people and places that make telemedicine work!

Search for:

Sites that offer Telemedicine
Telemedicine Programs
Telemedicine Consultants
Dr. Adam Peter Smith  MD, FACC  
Cardiologist

Practice Name: University Health Network  
Phone: 705-522-2682  
Fax: 705-522-3293  
Practise Location: 208 Caswell Drive,  
Sudbury, P3E 2N8  
LHIN: 13 - North East

Accepting Video Referrals: Yes, Conditional  
Average Wait Time: 2-4 weeks

Accepting eConsult Requests: Yes, Conditional  
Average Response Time: 1-2 weeks

Types of Video Referrals accepted:
- Both Initial and Follow up

Sites / Regions from which video referrals are accepted:
LHIN 13 & 14 only

Other conditions for accepting video referrals:
Nurse required for consultations, Digital Stethoscope must be powered on and ready for use during consultation. Stretcher may be required for exam.

Sites / Regions from which eConsult requests are accepted:
LHIN 13 & 14 only

Other Conditions for accepting eConsult requests:
Nurse required for consultations, Digital Stethoscope must be powered on and ready for use during consultation. Stretcher may be required for exam.
North York General Hospital

Site ID: SIT00202
Practice Name: North York General Hospital
Practice Location: 4001 Leslie Street, Toronto, M2K 1E1
LHIN: 8 - Central
Patient Eligibility: Any patient

Health Care Professional Available:
- Registered Nurse
- Nurse Practitioner
- Registered Practical Nurse

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Instructions for Booking Telemedicine Appointments:
This site is available for telemedicine activity only during following time periods. Please get in touch with local system administrator to book an appointment.

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Catchment Area Serviced
Primarily Ontario. Referrals from other Canadian jurisdictions accepted by select programs.

Services and Programs Available
TGH: Diabetes/Endocrinology, Eating Disorders, Endoscopy, General Internal Medicine, General Surgery, Hemodialysis, Hyperbaric Medicine, Immunodeficiency, Infectious Diseases, Neuro-Otology, Osteoporosis, Otolaryngology, Psychiatry, Red Blood Cell Disorders, Renal Medicine.

Telemedicine Program Instructions
Please visit the Clinical Programs and Services website link below. Inquiries can be made directly within each clinical program for their referral instructions.

Scheduling and Referral Instructions
The Future
NEXT EXIT
We are in a Virtual Health Care Revolution ...
Where Will You Get Your Care?

“By 2019, more care will be delivered virtually than in person”
Convergence of Consumer Technology and Consumer Empowerment Will Forever Change Health Care Delivery

- Faster, easier, cheaper, ubiquitous
- An “Awakening” has occurred

Telemedicine technology is moving quickly to consumer devices

People want access to services and information
Where Are We Headed…

Self Management & Monitoring Tools
Where Are We Headed

Technology “prescriptions”

Take 2 Apps and Call me in the morning
Where Are We Headed…. One Tool for Care Coordination

The Care Coordinator View

The Provider View

The Patient View

Priority Patients

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>Gender</th>
<th>Age</th>
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</thead>
<tbody>
<tr>
<td>947834</td>
<td>Gupta, Harpreet</td>
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<td>937465</td>
<td>Reynolds, Janny</td>
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Where Are We Headed…

*Integrated Care Pathways, Decision Support and Analytics*

1. A plan designed around the patient
2. Standard approaches to responding to changes
3. Care coordination for those with highest needs
4. Remote Monitoring and Health Coaching to improve self management of overall health (e.g. telehomecare)
The general population wants the following from their providers:

**Consumer-centric Communication**
- Prescription refill
- Appointment request
- Patient eVisit

**Personal Digital Health Care**
- Access to personal records (sporadic)
The chronic disease population needs the following:

- Communication with Providers
  - Same

- Care Coordination Tools

- Personal Digital Health Care
  - Telehomecare
  - Prescribed monitoring and apps
There are 600 million annual visits to general practitioner offices in US and Canada, and almost half are for issues that can be solved by an eVisit.  
(Deloitte Prediction 2014)
Provider to Provider eConsult

1. Quick Question or Phone Call
2. e-Consult
3. Videoconference
4. In-person Visit

Hypothesis
Depending on the specialty, between 20% and 50% of visits can be delivered remotely.
Healthcare is Undergoing a Shift

<table>
<thead>
<tr>
<th>Moving from ...</th>
<th>... towards</th>
</tr>
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<tbody>
<tr>
<td>• Highly fragmented</td>
<td>• Highly coordinated</td>
</tr>
<tr>
<td>• Episodic care</td>
<td>• Patient-centered</td>
</tr>
<tr>
<td>• Data repositories</td>
<td>• Information sharing and engagement</td>
</tr>
<tr>
<td>• Passive patients</td>
<td>• Informed patients</td>
</tr>
<tr>
<td>• Focus on quantity of care</td>
<td>• Focus on quality and improved outcomes</td>
</tr>
<tr>
<td>• Low incentive for innovation</td>
<td>• Innovation to improve service, reduce costs</td>
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Chronic disease management is the challenge of our generation. It requires a shift towards a more responsive, patient-centered system.

Telemedicine is the key enabler