Welcome and thank you for joining us.
Bienvenue et merci de vous joindre à nous.

Notre séance débutera bientôt
We will begin shortly
To listen in **English** please confirm your computer speakers are on and check that your volume is not muted.

If you do not have computer speakers, then please dial 1-855-856-8710 to listen to the English audio.

Pour écouter en **Français**, SVP mettre vos haut-parleurs hors fonction et composer le 1-866-269-7155 pour vous connecter.
Bridging the Gap between Patients and Providers through Telehealth in Rural and Remote Regions

Jeter le pont entre les patients et les prestataires grâce à la télésanté dans les régions rurales et éloignées

Speakers / Conférenciers:

Laurie Poole
Vice-President, Telemedicine Solutions at Ontario Telemedicine Network (OTN)

Hugh Brown
General Practitioner (GP)/Telehealth Clinical Lead (Primary Care)

Kenneth Brooksbank
General Practitioner (GP) Partner, Girvan Community Hospital, Girvan

Claudia Amar
Improvement Lead, Collaboration for Innovation & Improvement, CFHI

Jennifer Verma
Senior Director, Collaboration for Innovation & Improvement, CFHI

Hosts / Animatrices:
Shifting Culture, Shifting Care: Series Objectives

• Discuss the challenges we face, along with the requirements to shift our healthcare focus
• Highlight optimal conditions for chronic care improvement and explore what kinds of changes are needed to improved chronic care
• Address the unique challenges of providing chronic care treatment in rural and remote areas of Canada – and emerging technologies to support this care
• Address the readiness of family caregivers to provide chronic care in a home setting
Today’s Session Objectives

• Explore the unique challenges of providing good chronic care in rural and remote regions across Canada
• Share case examples from Canada and internationally using telehealth to support care
• Learn from the case examples and share strategies for implementing telehealth more widely within rural and remote regions
What is Telehealth?

• Telehealth refers to the delivery of services by healthcare organizations using information and communications technology (ICT) solutions when the clinician and patient are not in the same location. Practically, this includes the use of these technologies:
  - Live Videoconferencing
  - Store-and-Forward Solutions
  - Telemonitoring Solutions

Canada Health Infoway, 2011
Use of Telehealth on the Rise...

Figure 1: Total Number of Telehealth Sessions in 2010

Source(s): 2010 CTF Pan-Canadian Telehealth Survey. Quebec data and Alberta administrative numbers were collected from key informant interviews with the respective Ministries of Health. Data for Prince Edward Island were unavailable.

Canada Health Infoway, 2011
Use of Telehealth on the Rise... (Cont’d)

Figure 4. Total Number of Clinical Sessions Provided in the Last 12 Months

CHIMA, 2013
Challenges of Providing Good Chronic Care in Rural and Remote Regions Across Canada

20% of Canadians live in rural and remote areas

Only about 17% of physicians, 18% of nurses and about 7% of specialists practice in these areas

Estimates suggest that we are short about 1,500 rural family doctors in Canada

Challenges of Providing Good Chronic Care in Rural and Remote Regions Across Canada

- 2/3 of residents of remote northern communities live more than 100 km from the nearest physician
- Hospitalization rates are higher in rural and remote areas than urban areas
- Travelling long distances for health services is costly and may adversely affect health outcomes
Bridging the Gap between Patients and Providers through Telehealth in Rural and Remote Regions

Laurie Poole, Vice President, OTN

June 10, 2015
About OTN

The Ontario Telemedicine Network (OTN) is the global leader in telemedicine. We’re a made-in-Ontario solution for healthcare transformation and sustainability.

1,748
OTN SITES

390,906
PATIENTS SERVED

21,477
LEARNING EVENTS
OTN’s Services

Telemedicine services that have been scaled province-wide:

**Programs:**
- Telepsychiatry
- Internal Medicine
- Oncology
- Surgery
- Paediatrics

**Services:**
- Business Consulting
- Learning

**Emergency Services**
- Teledermatology
- Telehomecare
- Teleophthalmology
- Telestroke

**Products/Apps:**
- Videoconferencing
- eConsult
- Directory
- Scheduling
Telehomecare Overview

- Supports **patients living in their own homes** through health coaching and monitoring
- Delivered by clinicians with training in **self-management support and health coaching**
- **Complements the care** provided by the primary care provider
- Time limited **secondary-prevention intervention** for patients with COPD or CHF
- Derived from **evidence based guidelines**, and approved by a provincial clinical expert committee
Telehomecare: Patient Centred Model

**Clinician Health Coaching:**
Teaching the Patient how to self-manage & meet their goals

**Patient Empowerment:**
At home; Sets Personal Goals; Submits vitals/ health responses

**Efficient MRP Engagement:**
Clinician provides regular updates, consults as required

**Remote Patient Monitoring:**
Weekday feeds & Alerts

**Simple Technology in Home:**
Tablet, BP Cuff, Scale & Pulse oximeter
Telehomecare: Over 5000 Patients and Counting*…

Currently implemented in:
- Erie St. Clair
- Central West
- Toronto Central
- Central
- North Simcoe Muskoka
- North East
- North West

Planning Stage:
- South West

*as of May 1, 2015
Telehomecare Delivery Model

**Infoway & MOHLTC**
- Funding
- Alignment
- Benefits evaluation

**Local Health Integration Networks (health regions)**
- Sustainability
- Alignment
- Funding
- Oversight
- Integration

**OTN**
- Project management
- Training & support
- Quality improvement
- Asset management
- Engagement

**Host Organization**
- Coach & monitor patients
- Coordinator, Manager, Engagement Lead
- Adoption
Central West Outcomes
Acute IP & ED Activity Before, During and After Telehomecare

71% decrease in ER visits and a 76% decrease in inpatient admissions.
Toronto Central - Outcomes
Acute IP & ED Activity Before, During and After Telehomecare

Patients with an ED Visit
- 61% (117 clients) during 6 month period prior to THC
- 30% (57 clients) while on THC (an avg. of 4.3 months)
- 27% (51 clients) during 6 month period after THC

56% reduction in # of patients with ED visits

Patients with a Hospital Admission
- 52% (99 clients) during 6 month period prior to THC
- 27% (51 clients) while on THC (an avg. of 4.3 months)
- 23% (44 clients) during 6 month period after THC

55.5% reduction in # of patients with ED visits

THC patients n = 191
Patient Satisfaction

A survey of the patients who completed the program revealed the following:

- **93%** said that they understood the purpose of each medication
- **93%** said that they were able to recognize the signs and symptoms of their disease getting worse
- **80%** of patients felt that the equipment was easy to use
- **87%** of patients would definitely recommend the program to others.
Leadership
- Clinical Advisory Committee – find the thought leaders & influencers
- Local Champions – not necessarily the most “senior”

Adoption strategies
- Local Engagement Leads – dedicated staff (incentive funding)
- Leverage existing programs – “not another shiny, new toy”
- Weekly/monthly targets = accountability

Service Delivery
- Initially LHINs bought patient devices outright, now centralized at OTN and LHINs or Health Orgs pay $73.00 per month, per patient (includes HW/SW, license, support)
Critical Success Factors

• Clinical Model
  – Protocols reviewed by external Clinical Advisory Committee, evidence-based, leverage RNAO BPGs
  – Each LHIN Host Org site responsible for patient care delivery – OTN clinical team supplements with QA and Competency frameworks

• Patient Engagement
  – Satisfaction
  – Consumer driven initiatives
  – Patients Canada Association engagement

• Evidence
  – Local (work with Host Org decision support teams)
  – University of Toronto (THEATA) undertaking provincial evaluation
Critical Success Factors

- **Technology**
  - Clinical focus is important
  - Need to continue to drive costs down with cheap BUT reliable solutions

- **ROI model – demonstrating value**
  - More work to be done
  - Cost avoidance model

- **Integration Priorities**
  - Physician EMRs – Progress Reports & key Notifications, Referrals
  - Community Record integration
  - eHealth Ontario /Provincial Architecture
Telehomecare Evolution

Integrated Chronic Disease Model of Care

- Chronic Kidney Disease
- Mental Health & Addictions
- Palliative Care
- Diabetes
- Post Acute Care
MARTHA

DIDN’T HAVE TO GO TO THE HOSPITAL TODAY.
Telehealth Ayrshire and Arran

Dr. Hugh Brown, GP Dalmellington
Dr. Kenny Brooksbank, GP Girvan
Ayrshire and Arran Vision

- To promote a fully Integrated and effective approach to the health and care of the people of Ayrshire through mainstream implementation of Telehealth and Telecare thereby enhancing access and care across the patient pathway
Local Progress

- Two telecare monitoring and response stations
- Telecare demonstration flats within localities
- Experience and outcomes of COPD monitoring pilots
COPD Pilots

- One in Girvan run across 2 practices by the attached district nursing team
- One in Dalmellington run by one practice nurse, GP and district nursing team
Inclusion Criteria

- Main condition COPD and one or more of the following:
  - Two or more exacerbations in the last year
  - Two or more visits to GP with COPD symptoms in last year
  - At least one hospital admission in last year
Equipment

- Tablet
- Pulse-oximeter
- Blood pressure cuff
- Scales (Optional)
Outcomes Dalmellington- Year One

- 70% reduction in emergency hospital admissions
- 86% reduction in use of out of hours GP service
- Respiratory outpatient clinics halved
- Increase in practice nurse contacts
### Outcomes – Girvan

<table>
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<th>Health professional contact</th>
<th>In 12 months before telehealth</th>
<th>During 12 month monitoring period</th>
<th>Change</th>
<th>%Change</th>
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<tr>
<td>Emergency admissions to GCH, Ayr, XH</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>80%</td>
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<tr>
<td>GP appointments</td>
<td>102</td>
<td>74</td>
<td>28</td>
<td>27%</td>
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<td>GP home visits</td>
<td>11</td>
<td>25</td>
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<td>127%</td>
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<td>188</td>
<td>188</td>
<td>188%</td>
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<tr>
<td>ADOC Calls</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>40%</td>
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<tr>
<td>Respiratory outpatient contacts</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>100%</td>
</tr>
</tbody>
</table>
Clinician Feedback

- “Since the first patients have had the equipment in their homes, I have had less need to see them in the surgery. Patients seem to be more in control of their condition.”

- “Because we check for alerts daily, we have managed to contact patients with early signs of exacerbations of COPD and advised them to start medicines in reserve, possibly averting an admission.”
Patient Story

- 68 year old female (50 pack years smoking – stopped 2009)
- Diagnosed with COPD in 2000
- 2010 FEV1 19% predicted, FEV1/FVC 24%, MRC score 5, BMI 16, commenced LTOT
- 5 exacerbations in 2010
- 2011 enrolled in teleheath and self-management programme
Patient Story Continued

- No further admissions until September 2014
- Continues to monitor on a daily basis, supported in use of opiate to palliate breathlessness as well as compliance with optimal medical management of COPD
Patient Comments

- Initially wary, means of reducing cost and doctor/nurse workload

- Improved confidence after attending self-management programme

- “Having telehealth has been a positive experience. In the past, I would see my doctor or nurse on a home visit when I was unwell or sometimes on a monthly basis. With telehealth, I felt that I was being monitored and supported on a daily basis. I became more aware of my condition, my breathing and was supported by my nurses in making decisions about my medication and when to recognise an exacerbation...”
Patient Feedback

- “I used to be really bad at taking my medication and quite often would end up very ill or even having to go into hospital, since I have had the equipment I get a phone call from one of the girls and they tell me to start taking my antibiotics. I haven’t been in hospital since this started.”
A Note of Caution

- Savings appeared to disappear by 3rd year of monitoring but was that down to disease progression? – further work is needed.
What Are We Doing Now?

- United4 Health
- A European study on widespread deployment of telehealth one arm of which is COPD
COPD Monitoring

- 10 working days from discharge Homepod plus contact by video or phone by nurse
- Further 3 months alert based contacts
- Then lighter touch with patients having individualized targets from pulse oximetry and question based alerts telling them to contact doctor or nurse
Primary Outcome

- Number of (re)admissions for COPD exacerbations within one month between intervention and comparator groups
Secondary Outcomes

- Admission data
- Number re admissions at 3, 6, and 12 months
- Number of days in hospital for COPD over 12 months
- Mean length of stay for COPD
- Mean/median time to first COPD readmission
Secondary Outcomes Continued

- Health contacts
- Number of ED visits
- Number of visits to GP and primary healthcare
- Number of specialist nurse home visits
- Number of clinic visits to secondary care
- Mortality rate at 12 months
Other Outcomes

- Cost per admission avoided
- Qualitative report on barriers to implementation of telehealth
- Adverse events attributed to telehealth
- CAT score development at 3, 6, 12 months (optional)
Questions?

Please submit your questions using the chat box on the bottom of your screen.

Veuillez nous transmettre vos questions et observations à l’aide de la « boîte de dialogue » électronique située au bas de votre écran.
Stay in the know!
Subscribe to our monthly newsletter
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Thank you!

Merci!