HIGH IMPACT PRACTICES

Evidence-informed practices in home and community care that result in better care, better outcomes and better value.

Telehomecare in Ontario: Better Health, at Home

Improving care for individuals with chronic illness requires a person-centred, evidence-informed and coordinated community-based approach to care. Increasing evidence supports the role of information technology as a critical enabler in accelerating this model of care delivery.[1] This High Impact Practice showcases the large scale deployment of Telehomecare as an enabler of care delivery across Ontario. It profiles the role of the Ontario Telemedicine Network (OTN) as a driver and catalyst in establishing virtual care models and mobile technologies that improve patient satisfaction and health system efficiencies.

BACKGROUND

Chronic diseases are the major cause of death and disability worldwide, having a significant impact on health care systems, economic prosperity and quality of life for those living with chronic disease and their caregivers.[2] It is estimated that the major categories of chronic diseases—diabetes, heart disease, chronic respiratory illness and cancer—were responsible for more than 65 percent of the total health care expenditures in Ontario in 2010/11.[3]

With the right management interventions, people diagnosed with a chronic disease can maintain a high quality of life and live independently in their own homes. This goal can be effectively achieved when care delivery focuses on self-management of lifestyle choices and long-term monitoring to prevent exacerbations and preserve functional ability.

OTN's Telehomecare initiative is a chronic disease self-management intervention that engages patients as partners in their care plan, in their home, enabled by the use of technology. The program serves patients with chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF) and associated comorbidities. Common comorbidities for these patients include diabetes, mental health illness, atrial fibrillation and chronic kidney disease.

Telehomecare is a time-limited intervention of six months. Simple-to-use technology installed in the home enables remote patient monitoring of vital signs and symptoms, remote assessments and management through just-in-time and regularly scheduled health coaching sessions.

OTN's strategic vision as a mainstream channel to support patients living with complex chronic conditions in Ontario has enabled a fundamental change in health care delivery philosophy from:

- Provider-oriented to patient-centred by empowering patients to become self-managers of their own health.
- Silos to team-based by fostering inter-professional collaboration and integrated models of care that connect the patient's care across providers to ensure care continuity.
- Bricks and mortar centric to better access from anywhere by shifting health delivery from expensive hospital-based acute care to proactive community-based models.

IMPLEMENTATION

The current provincial Telehomecare program and care delivery model evolved through experience and evidence. A 2007 pilot program, co-funded by the Ontario Ministry of Health and Long-Term Care (MOHLTC) and Canada Health Infoway (Infoway), introduced Telehomecare to patients with COPD and CHF. Overseen and managed by OTN, the program was deployed to eight Family Health Teams in both urban and rural settings. The teams

Virtual Care offers a promising pathway to high quality health and social care, while bending the cost curve for ever-growing health care expenditures. As a strategic priority, the Canadian Home Care Association (CHCA) identifies and stimulates innovative models of care and technology applications that support independence and improving health outcomes in the home setting.

enrolled a total of 813 patients over two years. External third-party evaluation identified key benefits for these patients and opportunities for further enhancement.

Leveraging the experience of the phase one pilot program, OTN began its provincial Telehomecare expansion in 2012. To date, 11 Local Health Integration Networks (LHINs) and their partners host Telehomecare across the province.

Collaborative Teams: Key Players

The successful implementation of Telehomecare requires multi-organizational engagement and accountability. It is a team effort, centred on implementation by host organizations.

Infoway – an active partner and funder to accelerate the development, adoption, and effective use of telehealth across Canada and Telehomecare in Ontario.

MOHLTC – provides executive oversight and conducts evaluations to ensure cost-efficiency and value for patients and clinicians.

OTN – provides leadership and overall support for continued Telehomecare implementation, adoption and scalability. OTN acts as a digital steward and leads the business and technical virtual care processes, training and professional development, change management, quality improvement, communications, marketing and support. OTN continually seeks and collaborates with new partners.

LHINs – ensure a community-based, patient-centred approach. LHINs are responsible for fiscal management and the creation of sustainable programs to meet local regional needs. A local governance and leadership strategy defines enrolment targets, goals and selection of host organizations—hospitals or Community Care Access Centres (CCACs)—to deliver the program.

Host Organizations – oversee the day-to-day program operations and management of Telehomecare staff. Includes: Central CCAC, Central East CCAC, Erie St. Clair CCAC, North East CCAC, North Simcoe Muskoka CCAC, North West CCAC, Southlake Regional Health Centre, South West CCAC, Thunder Bay Regional Health Sciences Centre, Toronto Central CCAC and William Osler Health System.

Patient Circle of Care – to ensure continuity and consistency of patient care, Telehomecare host organization clinicians work closely with the patient's Most Responsible Provider, tailoring monitoring protocols to each patient and providing timely management of signs and symptoms. Clinicians notify relevant Circle of Care members in the event of changes in health status and when changes to the treatment plan are required.

Telehomecare supplements the face-to-face clinical interactions that are a necessary part of ongoing patient care management.

Patients – Patients can be referred by any member of the patient's care team or self-refer. They must be over 18 years of age, residing in Ontario in a residential setting with an active landline or Internet, living with COPD or CHF, willing and capable of partnering in their own health, and able to operate simple-to-use equipment or have a consistent caregiver who can operate the equipment. Once enrolled in the program, patients:

- Become comfortable with easy-to-use equipment.
- Engage in daily self-monitoring.
- Gain better understanding of their condition.
- Learn simple but important strategies to better manage medications and symptoms.
- Work with clinicians to create short-term achievable plans to more actively manage their condition.
- Learn simple behaviour change skills and gain confidence in starting healthier behaviours.

OTN Telehomecare Service Model

The Telehomecare program includes three core elements.

1) Remote Patient Monitoring

A Telehomecare technician delivers a tablet computer, blood pressure cuff, weight scale and pulse oximeter to the patient's home, on loan over the course of the program, and trains them on how to use the equipment. Connected via a phone line or Internet, patients regularly measure and submit vital signs (blood pressure, weight, heart rate and oxygen saturation) as well as responses to specific health questions. This health data is transmitted to a Telehomecare clinician who remotely monitors the patient's health status. Automatic notifications occur if data falls outside the normal limits. This early identification provides an opportunity for intervention and just-in-time teaching before the patient's condition worsens, often resulting in the prevention of a hospital visit/admission.

2) Clinical Best Practices and Quality Leadership

Telehomecare leverages clinical best practices to facilitate safe and evidence-informed care that is consistent and standardized across the province. Regardless of where the patient lives and who the provider is, each patient receives the same standard of quality care.

OTN's Telehomecare program has been awarded the designation of Best Practice Spotlight Organization (BPSO®). In partnering with Registered Nurses' Association of Ontario (RNAO) via the BPSO® initiative, OTN ensures a systematic way to incorporate evidence-based practices in Telehomecare program delivery, care provision, processes used and supported structures.

OTN has established a robust quality improvement program to support continuous improvement. Host organizations use quality tools to monitor their progress and improve the care they provide. Developed by OTN, the "quality dashboard" captures data about the delivery of Telehomecare provincially and at each individual site. Key performance indicators included are clinical process and outcome measures, customer service/patient experience data and financial data.

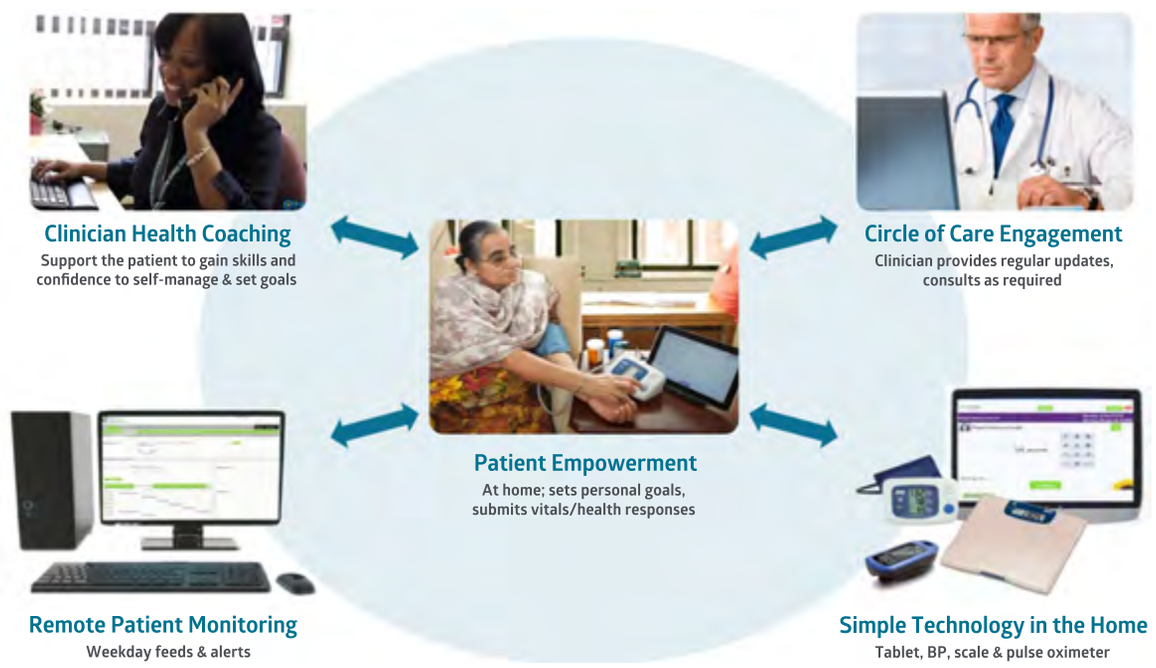
A mandatory training program is provided to all Telehomecare frontline providers, clinicians and administrative support staff.

Training includes chronic disease management, motivational coaching techniques, behaviour modification strategies and Telehomecare technology.

An established Telehomecare Community of Practice is fostered and facilitated by virtual monthly Telehomecare Rounds via web conference, regular quality committee sessions and a web-based platform that provides discussion forums, event calendars and regularly updated electronic resources.

3) Self-Management Support
Based on the Stanford Model for Chronic Disease Self-Management, Telehomecare patients receive self-management education and support that includes self-monitoring and symptom management, medication management, and education on lifestyle changes including nutrition, physical activity and smoking cessation. Telehomecare patients participate in weekly health coaching sessions by phone that combine evidence-informed techniques of motivational interviewing, goal-focused action planning and problem solving. Health coaching helps to build patient skills in self-reflection, decision-making and planning to support healthy behaviour changes. To support patients on their path to change behaviour, clinicians establish a therapeutic relationship to thoroughly understand the individuals' goals, attitudes, beliefs and culture.

TELEHOMECARE: A PATIENT-CENTRED MODEL



EVALUATION

Patient Experience – In partnership with Infoway, OTN conducted a comprehensive post-discharge survey to capture patient-reported experience measures and patient-reported outcome measures. Patient surveys were collected from eight LHINs/host organizations, representing 183 respondents over a six-month period, July 2015 to January 2016. Results showed:

- 88.3 percent of respondents indicated a positive response in the following key indicators: overall satisfaction with the service, quality of teaching and coaching they received, usability of technology, confidence in their self-management skills and understanding of their condition.
- 91.9 percent responded that they have less need to visit the emergency department.
- 75.8 percent indicated a reduced need to visit their primary care provider since being enrolled in the program.

System Utilization – Evaluation results for three host programs (total of 1,633 patients) showed significant improvements in the key metrics:

- All sites demonstrated a 58 to 73 percent reduction in emergency department visits post-enrolment compared to pre-enrolment.
- There was a reduction in acute in-patient admission rates for all hosts ranging from 67 to 81 percent post-enrolment compared to pre-enrolment.

KEYS TO SUCCESS

Telehomecare is a new way of managing and delivering care. It involves new technologies, relationships and attitudes. Experience has yielded the following key learnings:

- **Have a game plan** for long-term and short-term sustainability. Developing a robust process, setting clear targets for enrolment and measuring performance, embedding clinicians, and confirming senior leadership commitment are essential to driving performance.
- **Target the right patients** who will experience measurable benefits from the new care modality. Consider severity of disease and ability to participate in a self-management program.
- **Engage frontline staff early and often** by providing training and tools to make implementation as seamless as possible, identify gaps in practice and try out new solutions.
- **Engaging primary care** is essential. Physicians and specialists are more likely to continue referring if they are kept informed and recognize the value of this care modality for their patients.
- **Make it easy for providers** by working directly with clinical leaders to align Telehomecare with other system priorities and integrate it into care delivery, patient order sets and other core operational processes.
- **Assign dedicated engagement leads** rather than relying solely on the clinical staff to reach out to multiple providers. The skill set for this critical function is primarily communications, marketing and community engagement.
- **Promote the program using a physician champion** who can follow up with physician groups and/or assist with other engagement efforts.
- **Generate and provide regular reports** to referring organizations so that organizations can see how they compare to others.

FUTURE OF TELEHOMECARE

Telehomecare has proven to be a viable way to provide high quality, cost-effective care and support for patients with COPD and CHF. Work is underway to further extend the Telehomecare program across the province and with more patient groups. The following demonstration pilots are underway:

- **Type 2 Diabetes:** Provide automated, real-time coaching for patients on physical activity, healthy diet strategies and medication management. Partners include the Diabetes Education Centres associated with St. Joseph's Care Group (Thunder Bay), William Osler Health System and North York General Hospital.
- **Chronic Kidney Disease:** Support people receiving home peritoneal dialysis. This initiative is led by Lawson Health Research Institute and clinicians at London Health Sciences Centre.
- **Mental Health:** Provide an online community for mental health patients on waiting lists in Durham region and Toronto who can access supports to track mood swings, share feelings and take online courses—all moderated by mental health workers. This project is led by Ontario Shores, Lakeridge Health and Women's College Hospital.

In addition to scaling and spreading the core Telehomecare program across Ontario, OTN is also launching pilots to evaluate the use of virtual solutions in the home to support palliative care and wound care.

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Ontario Telemedicine Network (OTN)

OTN is an independent, not-for-profit organization, funded by the Government of Ontario. A world leader in telemedicine, OTN helps Ontarians get more out of the health care system by bridging the distance of time and geography to bring more patients the care they need, where and when they need it. Its core province-wide services include: eVisit (clinical videoconferencing), eConsult (for primary care providers to "ask a specialist a question"), eCare (e.g. Telehomecare), eLearning and ePodium.
For more information about the Ontario Telemedicine Network, please visit www.otn.ca

1 Canada Health Infoway. 2014. Connecting Patients with Providers: A Pan-Canadian Study on Remote Patient Monitoring, Executive Summary. Retrieved from: https://www.infoway-inforoute.ca/en/component/edocman/resources/reports/benefits-evaluation/1890-connecting-patients-with-providers-a-pan-canadian-study-on-remote-patient-monitoring-executive-summary
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Canadian Home Care Association
canadienne de soins et services à domicile

The Canadian Home Care Association is a national not-for-profit membership association dedicated to ensuring the availability of accessible, responsive home care and community supports to enable people to safely stay in their homes with dignity, independence, and quality of life. Members include governments, administration organizations, service providers, researchers, educators and others with an interest in home care. The Canadian Home Care Association advances excellence in home care and continuing care through leadership, awareness, advocacy and knowledge.
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