OTN Annual Report

2017/18



Content

03.	MESSAGE FROM THE CEO AND BOARD CHAIR
04.	STRATEGY AT A GLANCE
06.	2017-18 BY THE NUMBERS
07.	ACCESS TO CARE eVisit (secure videoconferencing) eConsult Telederm eVisit Primary Care
12.	DIGITAL CHRONIC DISEASE SELF-MANAGEMENT PROGRAMS AND TOOLS Telehomecare Online mental health/Big White Wall
15.	PROVINCIAL PROGRAMS Telestroke Teleophthalmology Virtual Critical Care Telecorrections Ontario First Nations Health Access Plan
20.	INNOVATION The Innovation Centre Clinical pilots
22.	THOUGHT LEADERSHIP
24.	THE OTNHUB
26.	LEARNING AND PROFESSIONAL DEVELOPMENT
27.	LOOKING AHEAD
29	CORPORATE GOVERNANCE

Message from the CEO and Board Chair

Virtual care promises better, more coordinated patient care

More and more healthcare consumers – and we are ALL healthcare consumers – are looking for and enthusiastically embracing options that improve care delivery, access to care and the overall care experience. Increasingly, virtual care is being recognized as both a catalyst for accelerating the change we desire and as a key enabler.

More and more care providers have recognized the potential. They are using these tools in growing numbers to extend the reach of their practices, coordinate care delivery, shorten wait times and help bring care out of the hospital and into the home. In fact, more than 28,000 people, including over 10,000 physicians, are members of OTN's online service – the OTNhub – the secure, online environment that is home to several virtual care programs.

The tools of virtual care – including secure videoconferencing, remote monitoring, apps and platforms – have powerful potential to influence and support the change that matters most to Ontarians. They support everything from the sharing of life-saving Telestroke expertise across the province, to timely access to specialist care, to improving quality of life for patients living with mental health challenges or chronic disease. Virtual care helps break down geographic, socio-demographic and cultural barriers to help deliver easier, smarter and faster care. It helps people everywhere connect with providers and community support services in the comfort of their own homes.

Collaborating with its many partners, OTN continues to source, validate and implement virtual care options that address these key challenges in our healthcare system. We make them available to healthcare organizations and providers across the province as well as directly to consumers, empowering them to drive their own health care.

OTN is working diligently with our partners to achieve our vision: that every Ontarian have easy access to the best health care, when and where they need it. Please read on to see what we and our partners have achieved so far.

Best,



Marcia Visser Board Chair 2017/18



Ed Brown, MD
Chief Executive Officer

Strategy at a glance

OTN is committed to transforming health care, specifically by enhancing access to care and making health care work better for Ontarians. We do this by being an enabler for virtual solutions that support distance care and health self-management.

Who we support and how



Consumers/patients — Arm them with virtual care solutions and empower them with knowledge to access and better manage their care and enhance their experience, and the experience of their loved ones.



Healthcare providers — Engage and collaborate with physicians, nurses, and allied health to meet their practice needs with tools that deliver an integrated and truly patient-centric experience.



Healthcare system — Collaborate with government and healthcare delivery organizations to find the best technology-enabled solutions to healthcare challenges, and integrate and scale these seamlessly into everyday care delivery province wide.



Innovators — Play a pivotal role in supporting innovation and developing and promoting virtual solutions that make a difference and are easily accessible and acquirable, addressing patient needs now and in the future.

Strategic goals

Work with our partners to improve and sustain our public healthcare system to:

- Modernize the way consumers access healthcare.
- Improve chronic disease self-management.
- Shift care out of the hospital and into the home.
- Reduce the cost of healthcare delivery.
- Reduce wait times for care.
- Entrench healthcare transformation into policy.
- Support the integration of digitally enabled clinical models of care and best-of-breed technology and programs.

What we strive for

- · Organizational excellence.
- Quality, innovative solution seeking to meet healthcare challenges.
- Satisfied, inspired, and supported healthcare provider members and collaborators.
- Empowered healthcare consumers having optimized care delivery experiences.
- A robust and prepared healthcare system delivering exceptional care.

Key initiatives 2018-19

- Access to healthcare providers: eVisit secure videoconference to telemedicine studios and direct to the patient's device, for all Ontarians.
- Access to mental health support: Big White Wall online peer support community Big White Wall available through OTN free to all Ontarians to cope with mild or moderate anxiety and /or depression.
- Access to primary care: eVisit Primary Care connecting the
 patient to their family physician through dedicated platforms by
 way of secure audio, video or messaging.
- Access to specialist advice: eConsult online access for primary care providers to specialist input within a few days, reducing wait times.
- Access to virtual solutions: OTN's Innovation Centre validated vendor solutions available through provincial Vendor of Record arrangements.
- Access to chronic disease support: Telehomecare intensive coaching and remote monitoring program for patients with chronic lung disease and heart failure.
- Access to life-saving health care: Telestroke expert stroke neurologist support 24/7 to hospital emergency departments.
- Access to care for Indigenous populations with KO eHealth, serving 120 communities.

2017-18 by the numbers



896,529

patient consultations



\$71.9 M

saved in Northern Health Travel Grants



270 M KM

in patient travel avoided



33,643

eConsults conducted (including Telederm and Teleophthalmology) resulting in



78%

referral avoidance















21,498

Video visits served to a patient's home



60-80%

hospital admissions avoided through Telehomecare



9,628

Indigenous patient events



\$2.8 M

saved to date via Virtual Critical Care







41

hospitals actively running Virtual Critical Care programs



120

Indigenous telemedicine sites



Access to care

eVisit (secure videoconferencing)

Care closer to home – or at home – can make all the difference to a patient. It helps avoid significant travel, time off work and time away from loved ones, not to mention delays in accessing care and the associated stress of travel.

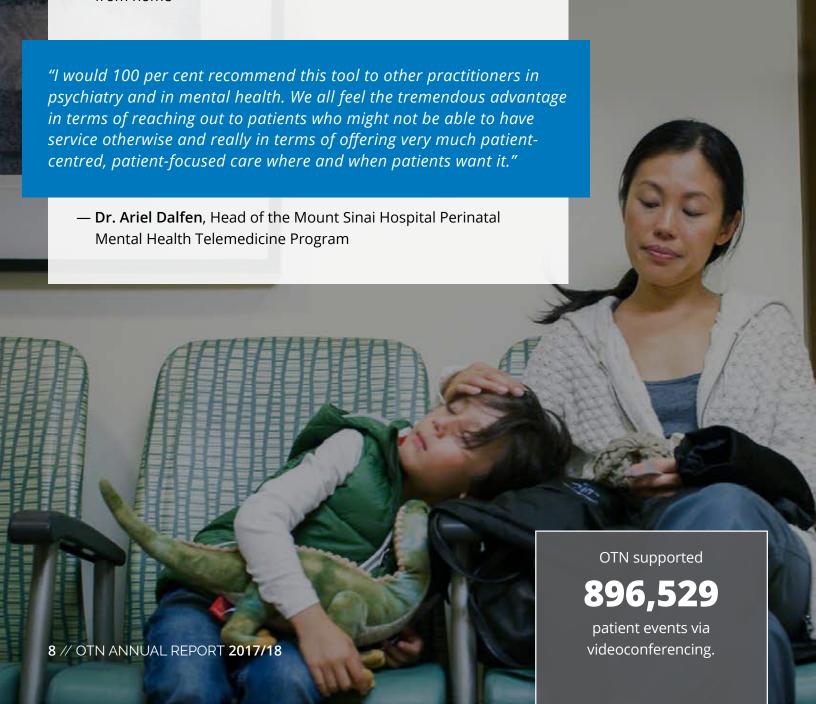
Through our core eVisit (secure videoconferencing) service, OTN connects healthcare providers with patients by video in nearly every specialty area and across the entire breadth of the province. OTN supports clinical program development, and provides the technology infrastructure as well as online tools and call centre support to help providers organize their care.

OTN's eVisit service was used by over 28,000 members and includes 3,400 room-based systems in hospitals and other healthcare facilities that can be booked and accessed through the OTNhub. Many telemedicine sites are resourced with nursing staff and medical peripheral devices, such as hand-held cameras and digital stethoscopes. This means that patients challenged by distance can access care closer to home at a nearby hospital or health centre.

OTN also enables healthcare providers to connect with patients directly from their device to the patient's device of choice using the OTNinvite interface. This way care is not just delivered closer to home but right to the home. Testing a billing model supported by the Ministry of Health and Long-Term Care, OTN is enabling some 500 specialists to connect with patients in the home. This 'home video visits' pilot kicked off in the Fall of 2017. Over four months, 425 physicians drove 1,406 virtual encounters, from home visits for oral chemotherapy to mental health consultations.

"I have days where I question myself and there are so many things that I want to be able to do that I'm just not able to do any more and it causes a lot of anxiety. That can be incredibly depressing. It was a major challenge for me to attend those appointments towards the end of my pregnancy. It became virtually impossible. I was having a hard time controlling pain. The doctor said to me: 'you're the perfect candidate for telemedicine and you could be comfortable and located wherever you like.' ... You just show up for the appointment, the same as you would in an office. It's really convenient."

 Yanekah Jacobs, who was struggling with lifelong chronic pain, plus stress and anxiety during pregnancy, accessed her provider from home



eConsult

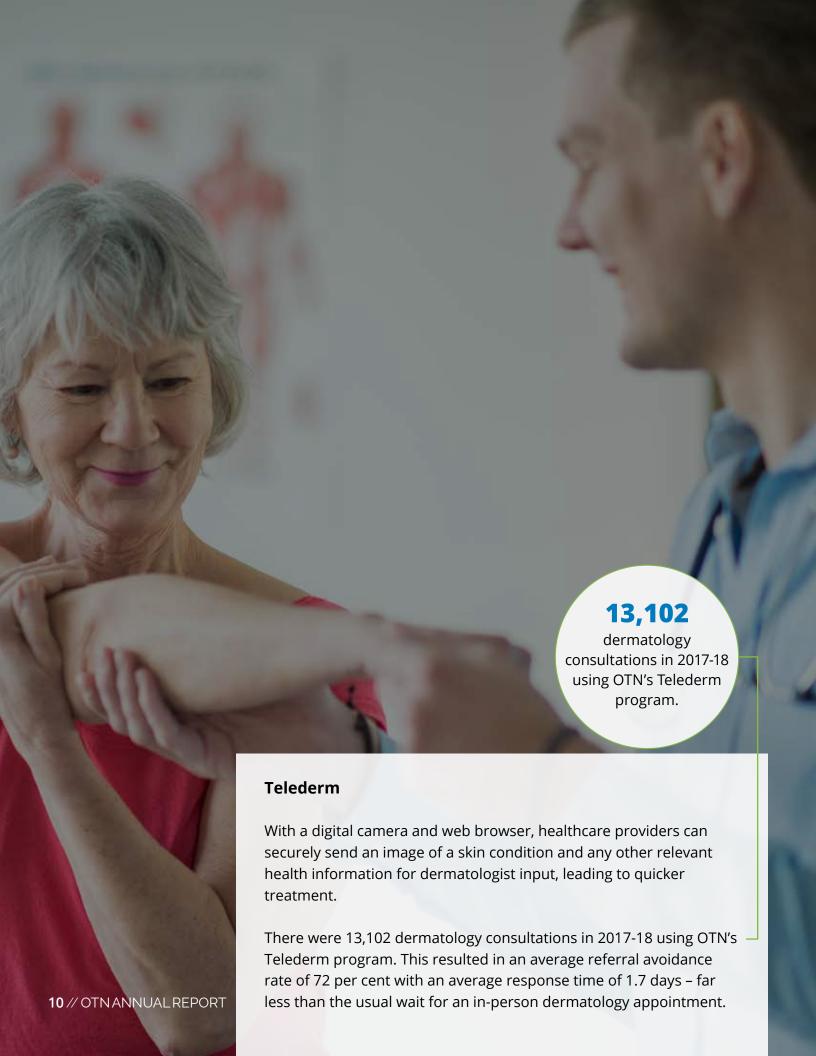
eConsult provides online access to specialist advice in an average of two days. Available to primary care physicians and nurse practitioners, as well as specialist to specialist, eConsult provides the opportunity to inform clinical decision making when an in-person patient visit to see a specialist may not be necessary.

The service, including requests through OTN's Teledermatology program, finished fiscal 2017-18 year at 31,644 events.

Collaboration with delivery partners Champlain BASE™ and OntarioMD continues in order to support the transition of eConsult to a provincial program, targeted for mid-2018. This effort will blend the OTN direct-to-specialist model with the BASE managed service model, available through the secure and private OTNhub.

9 // OTN ANNUAL REPORT 2017/18

Province-wide, primary care providers enrolled: 7,959, specialists: 1,177
eConsults sent: 31,644
eConsult average response time: 2 days
Referrals avoided: 78%



eVisit Primary Care

Consumers are increasingly seeking convenient and effective ways to engage in their care delivery, including the opportunity to connect with their primary care providers for simple health requests. eVisit Primary Care, launched in 2017, is a pilot that enables patients to initiate eVisits with their primary care providers through dedicated platforms that offer secure messaging, audio, and video.

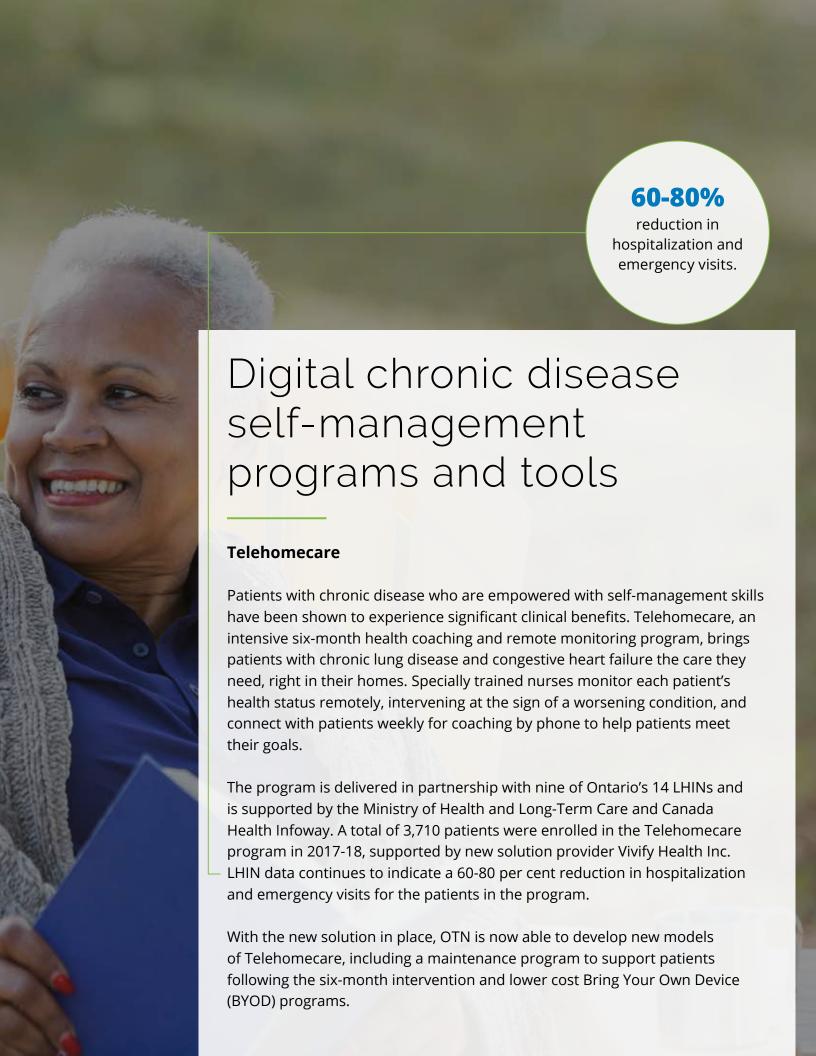
The first proof of concept project was initiated in the Central West LHIN, using a platform created by Novari Health. A second proof of concept launched in Waterloo Wellington LHIN, supported by the eHealth Centre of Excellence in March 2018, using a platform developed by Think Research.

OTN used an innovative procurement process to acquire the platforms and ensure they were secure and fit for purpose in the Ontario environment, and is working directly with partners and primary care providers to support change management. The program is being evaluated by the Women's College Hospital Institute for Health System Solutions and Virtual Care (WIHV), and next steps will focus on further expansion across additional LHINs.

At fiscal year end, 43 physicians were enrolled in the Central West LHIN project, 855 patients had been invited, and 189 eVisits were completed.

"This solution has been able to help my patients who have difficulty getting to the office and for some of my patients who recognize recurring symptoms that I can address immediately with them. I love it!"

Dr. Nihal El Khouly, Central West LHIN Sub-Region
 Clinical Lead





Online mental health/Big White Wall

One in five Canadians will struggle with mental health in any given year. Mental health resources are limited and stigma continues to be a barrier to accessing help. To address this need, OTN has introduced Big White Wall (BWW), an innovative online peer support community for those struggling with mild to moderate anxiety and/or depression and other related mental health issues.

Following successful pilot testing and evaluation completed in 2017, Big White Wall will be made provincially available in early to mid 2018, thanks to funding from the Ontario government and following a rigorous OTN procurement process.

Big White Wall users can talk anonymously with other members of the community who can relate to their feelings. The site is staffed by trained Wall Guides who make sure that the community is safe and supportive. Users also have access to online guided support courses on topics such as depression, anxiety, weight management, and smoking cessation.

Ontarians can register directly for BWW, which is immediately available and at no charge. Big White Wall, which is based in the UK where it is widely used, was adapted through the procurement process to meet the needs of Canadian users in terms of privacy and Canadian data hosting requirements. BWW is available through OTN's webpage myvirtualhealth.ca and directly through bigwhitewall.ca.

The service is being promoted in conjunction with BounceBack, a service of the Canadian Mental Health Association, through a campaign to showcase support options funded by the provincial government directly available to patients and that primary care providers can recommend.

OTN mental health and adoption leads continue to raise awareness among service providers, as well as college and university students, that this free and effective tool is available to all in Ontario.



2,207 patients were treated through the program;24% received emergency "clot-busting" therapy.

Provincial programs

Telestroke

People who suffer strokes who don't live in major urban centres may not be able to access the life-saving treatments they require. The Ontario Telestroke Program enables 28 hospital emergency departments to bring emergency expert stroke care directly to the bedside.

The program, which is supported by a collaborative partnership between CorHealth Ontario (previously the Ontario Stroke Network), CritiCall Ontario, and OTN, facilitates access to time-sensitive treatment for patients with hyper-acute stroke by providing immediate neurology expert consultations for emergency physicians who do not have local expert resources available.

This 24/7 expert stroke neurologist support assists with time-critical, life-saving decisions regarding treatment with clot-busting drugs (e.g. TPA) or emergency endovascular thrombectomy (EVT). The program leverages OTN's eVisit service and adds CritiCall as the real-time facilitator that pages the neurologist on-call when activated. OTN maintains the on-call roster, daily schedule, and training of emergency department staff.

"Because of Telestroke, once you're in the ER, it's 10 minutes until a card-carrying stroke neurologist is giving advice to the doctor and talking to the patient and family."

– **Dr. Frank Silver**, co-founder, Telestroke, and Medical Director, University Health Network Stroke Program.

Teleophthalmology

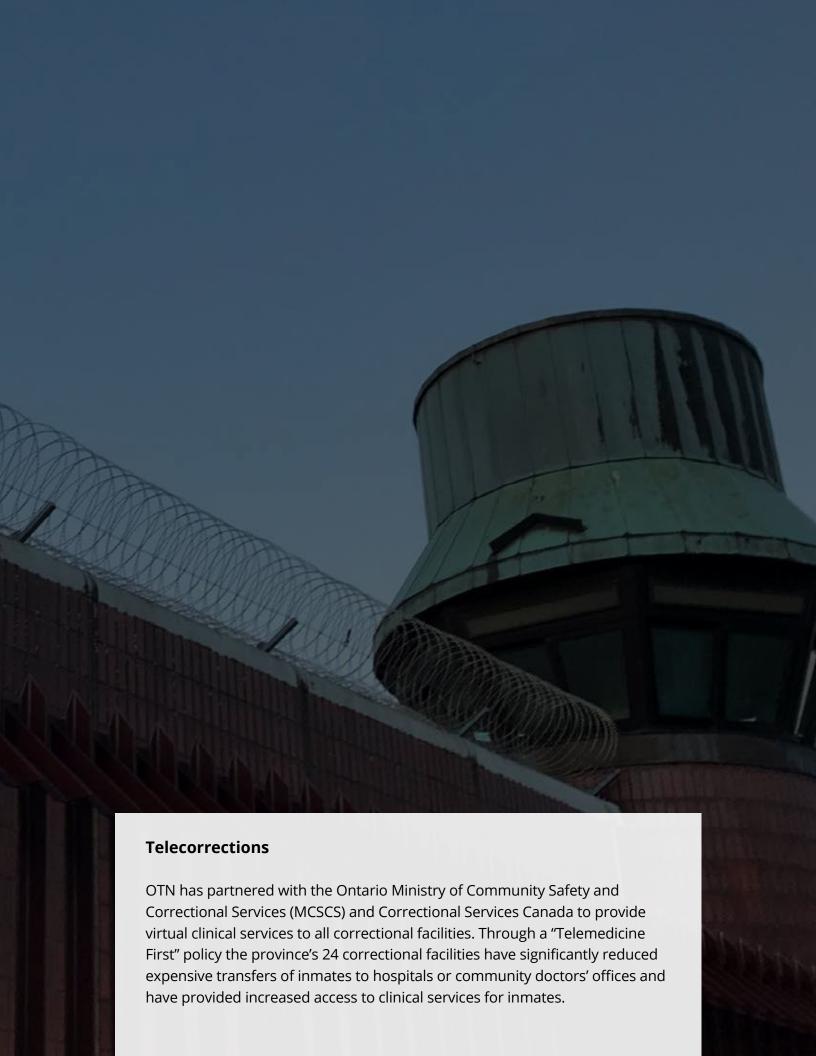
Diabetes is the leading cause of vision loss and blindness in Ontario but early detection of retinal damage can greatly reduce the impact. However, a significant portion of people – some 400,000 Ontarians – are living with diabetes yet are not regularly screened for eye disease.

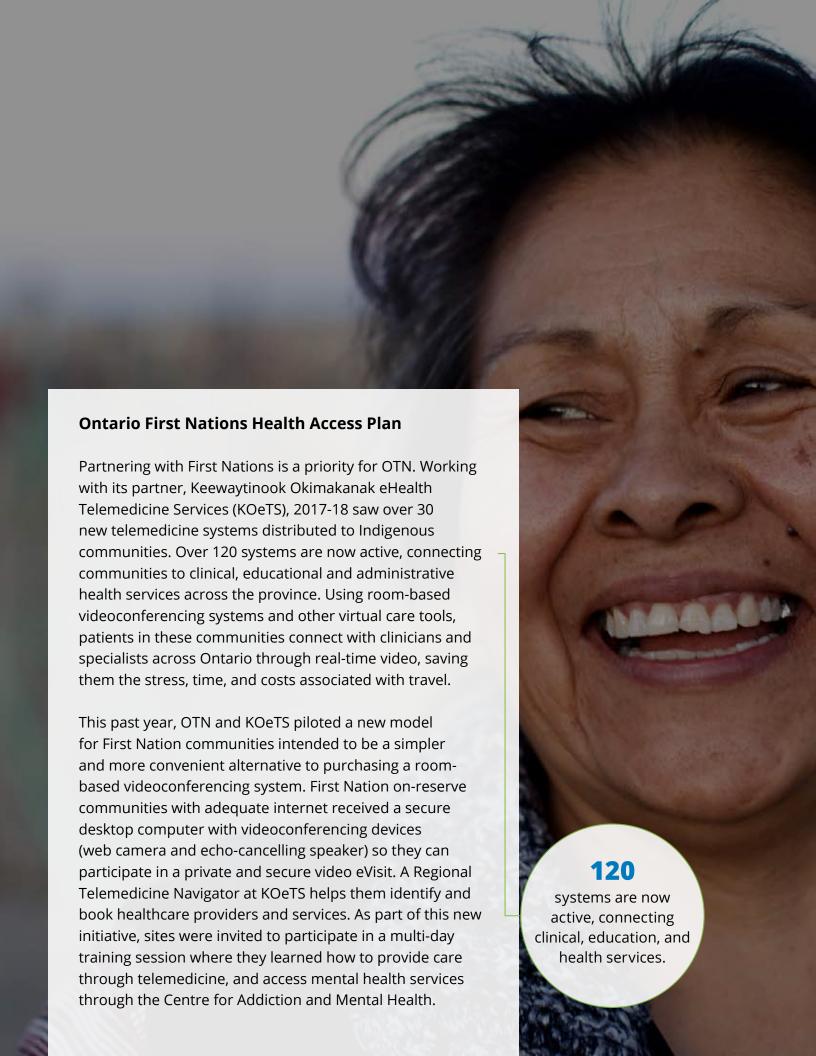
OTN's Teleophthalmology Program supports timely access to care by providing distance retinal screening for people living with diabetes, with 69 fixed and mobile screening sites in seven LHINs. Early detection has a significant impact on disease trajectory, and patient experience, and also results in 1/20th of the cost of delayed treatment. The program has served some 11,000 patients since its 2009 launch.

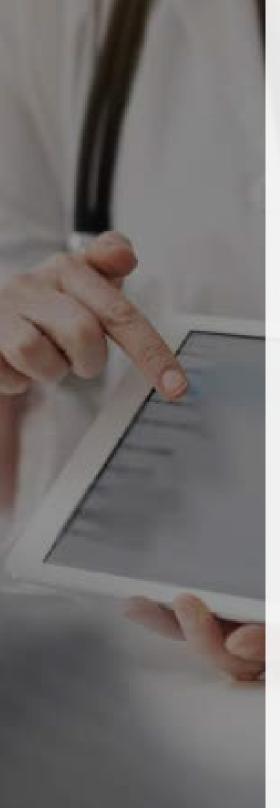
Over the past year, efforts have continued to focus on scaling up retinal screening across the province. OTN is part of a consortium that has developed a business case for population-wide retinal screening, that would send letters to people with diabetes, reminding them to be screened and offering them the choice of going to a local screening centre for the screening. Led by the University Health Network and Diabetes Action Canada, this model would leverage Ontario's repositories -- the Ontario Laboratories Information System and OHIP – data to identify unscreened patients.

The program has also been testing the use of a mobile camera at four clinical sites in hard-to-reach communities. An evaluation is being conducted to report on the outcome of the mobile camera pilot results and recommendations. As well, following the procurement of a new platform provided by Retina Labs (iVision) in 2017, the program has been leveraging access to enhanced data. The new software captures outcomes, time to referral, grading, and clinical markers. This provides a significant opportunity to quantify the impact of this intervention.

Virtual Critical Care OTN supports the videoconferencing technology used by five hub hospitals to provide urgent critical care expertise and oversight to smaller regional hospitals that manage critically ill patients but lack critical care specialists. The service is provided through a separate video "trauma tenant" to accommodate the unique workflow of the program. Virtual Critical Care (VCC) in the North East LHIN and the Regional Critical Care Response Program (RCCR) in the North West LHIN are seeing an increase in activity, with a total of 41 hospitals involved. OTN is also working with Keewaytinook Okimakanak eHealth Telemedicine Services to support the Virtual Emergency Support Service program which connects the RCCR Program (including the Thunder Bay Intensivists) and ORNGE air ambulance Transport Medicine Physicians with remote nursing stations for critical situations. The program expanded in early 2018 to include additional remote First Nation Nursing station sites: North Caribou Lake, Wunnumin Lake, Poplar Hill and Cat Lake. OTN is also supporting smaller virtual critical care models that are in trial at hub sites in Champlain LHIN (Children's Hospital of Eastern Ontario) and Central West LHIN (William Osler Health System). Transfer avoidance stats as reported by the North East VCC and the North West RCCR teams NE VCC (LHIN 13) - Approximate cost avoidance to the Ontario healthcare system since program inception in May 2014 (North East VCC) and April 2015 (North West RCCR): **\$4.5 million** and **\$4.8 million** respectively. 17 // OTN ANNUAL REPORT 2017/18







Innovation

The Innovation Centre

As a champion of virtual care, OTN is dedicated to collaborating with partners to bring the best virtual care solutions to Ontario and sharing our learnings about effective virtual care models.

We have developed an innovation process that can support LHINs and other health system partners to address significant health system issues amenable to digital health-enabled solutions. The process may involve program co-design, business modelling, funding acquisition, partnering, procurement, implementation, evaluation, and/or piloting.

Best-of-breed solutions are sought from the vendor community through OTN's innovative procurement process. OTN partners with innovators with existing digital self-management solutions that are appropriate to scale. These are available via OTN's Innovation Centre (otn.ca/innovationcentre). All LHINs have signed on to the procurements, so all public sector organizations in Ontario may leverage the Vendor of Record agreements that have been created.

The Innovation Centre currently features OTN programs and vendor of record arrangements in the areas of:

- surgical transitions
- wound care
- mood and anxiety
- substance abuse disorder

In 2017-18, OTN supported vendors to promote their solutions, undertook its own outreach to make the solutions visible to key audiences, and worked with interested parties to identify appropriate solutions.



Clinical pilots

OTN is engaged in a number of projects to test virtual tools and their supporting clinical delivery models, with an eye to making these validated solutions scalable and easily accessible.

Telepalliative

End-of-life care often happens with repeated ER visits that frequently result in admitting the patient to hospital. Many patients would rather die supported at home with family. Models for Telepalliative care in the community were tested in two demonstration projects funded by the Ministry of Health and Long-Term Care and Canada Health Infoway with 442 patients in Erie St. Clair and Champlain LHINs during 2018. The protocol developed for the project is available for use on the Telehomecare solution provided by Vivify Health.

Home peritoneal dialysis

When successful, home peritoneal dialysis provides a better quality of life and is approximately \$30,000 per year less expensive than hospital dialysis. This pilot tests a virtual program that supports patients at home and was implemented by five hospitals, with 89 patients. This program is led by nephrologist Dr. Arsh Jain at London Health Sciences Centre.

Telewound

Wound care consumes a significant amount of nursing resources in the community and presents a great opportunity around best practices. A model for Telewound care in the community was tested in a demonstration project with 124 patients in Central East LHIN during 2018. Three solutions are available to all LHINs and other organizations via OTN's provincial Vendor of Record arrangement.

Post-acute Telehomecare

This model – implemented in one LHIN with 234 patients – enables remote monitoring of ill COPD and heart failure patients at home post discharge, with the aim of improving care and reducing the 30-day readmission rate.

Thought leadership

Virtual care publication

OTN is launching an online publication to showcase OTN's partners' successes and the learnings we have absorbed as a key enabler of transformative care. This publication will profile the innovative ways that virtual solutions are being brought to life, and how all Ontarians are benefiting.

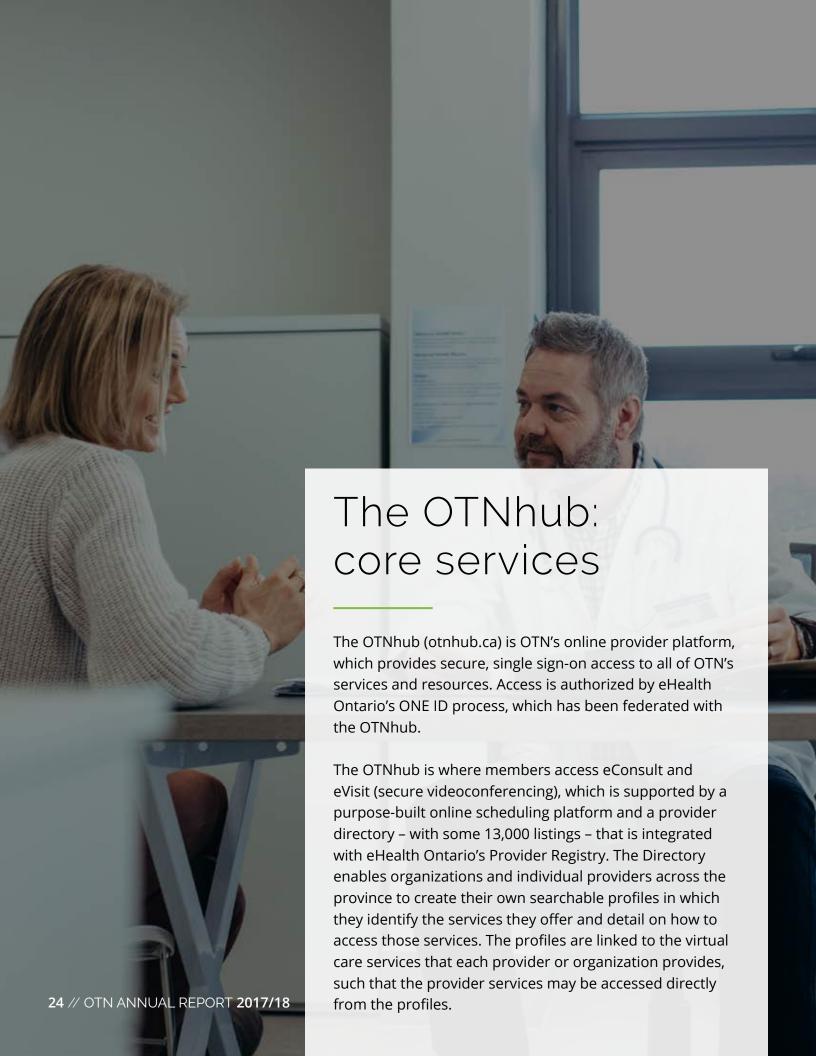
The goal is to create awareness of what is happening today in virtual health both locally and internationally and, where applicable, link to OTN and other Ontario content that supports the development of virtual models of care and use of virtual solutions. Content will include feature articles, case studies, and a blog, targeting OTN members, healthcare providers broadly, stakeholders/decision makers, and the informed public.

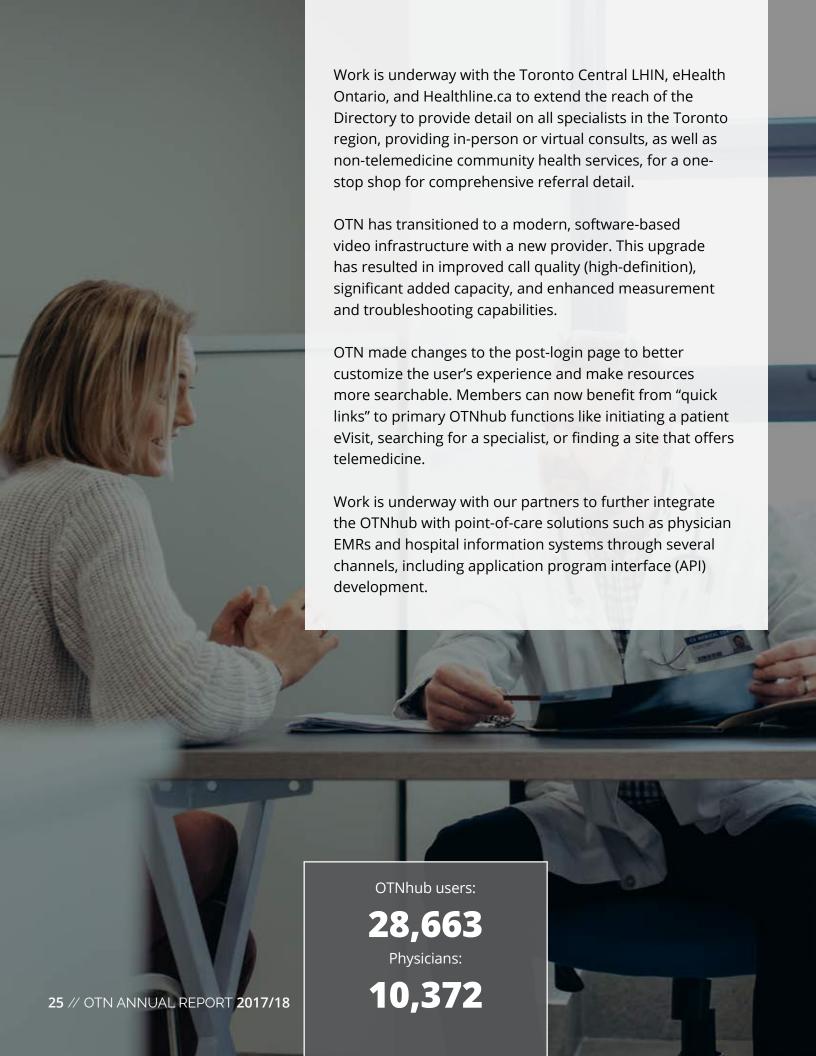
Public engagement

OTN undertook innovative direct-to-consumer strategies to raise awareness among the general public of what virtual care is and how it can make a difference in the lives of Ontarians. A video spot aired in various television markets across Ontario in March 2018. The 30-second 'The Road Less Travelled' showcased how secure videoconferencing bridges time and distance to deliver care to families. Targeted digital advertising and social outreach also showcased eVisit and Telehomecare, among other OTN initiatives.

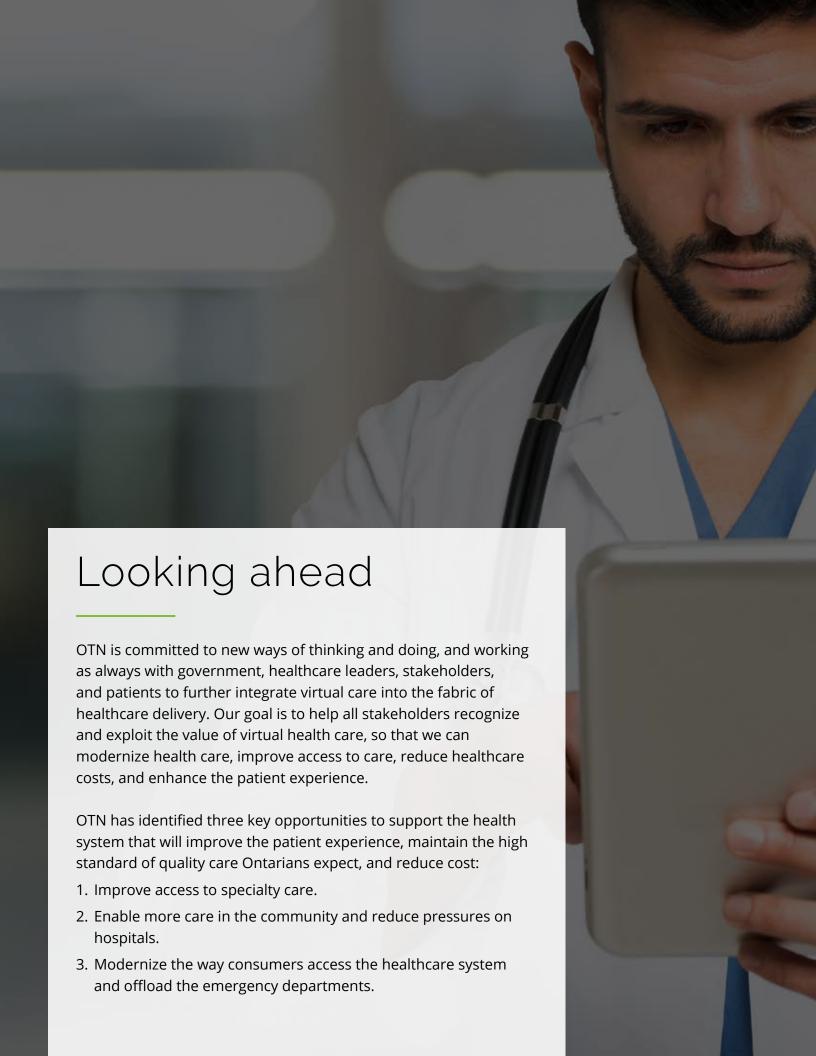
OTN staff collaborated with the Ontario Shores Centre for Mental Health Sciences to produce an engaging video featuring Marc, a neuropsychiatric patient living independently, with support from the March of Dimes, in Sudbury with specialist care from Ontario Shores, via eVisit.

Direct-to-consumer tools OTN launched a first instance of a consumer-facing platform - myvirtualhealth.ca - tied to otn.ca that showcases virtual tools available through OTN and other Ontario partner programs. These include healthcare provider-supported programs and services like Telehomecare and eVisit, as well as third-party solutions like Big White Wall and BounceBack. The goal is one easily discoverable, and constantly growing, resource where healthcare consumers can access publicly funded self-serve tools directly or find out about supported options. PracticalApps.ca OTN continues to provide leadership in virtual care through its Practical Apps initiative (practical apps.ca) in collaboration with the Women's College Hospital Institute for Health System Solutions and Virtual Care. The site offers primary care providers and patients a critical look at mobile health apps. Apps designed for common chronic conditions are reviewed by family doctors who rate the apps for clinical validity, usability, privacy and security, accessibility, safety and reliability. Consulting OTN continues to provide advisory services at no cost to larger Ontario health provider organizations and LHINs. OTN also provides fee-based consulting and other services to provincial/territorial governments in Canada and has developed business plans for the governments of other countries. 23 // OTN ANNUAL REPORT 2017/18









Virtual care solutions have the potential to literally save billions of dollars in Ontario while improving the patient experience. As such, our next year will focus on the following priority areas:

- Build OTN's reach into primary care
- Engage consumers to use and advocate for virtual care
- Grow specialist/large hospital use of eVisit
- Make it easier to use virtual solutions through OTN and enhance the member experience in the OTNhub
- Continue to collaborate with the LHINs to encourage adoption and integration of virtual health care into their plans
- Update the OTNhub to support core services, with a focus on broader integration into external systems
- Work with a broad group of stakeholders to develop a disease self-management patient engagement framework
- Foster new models of care by looking at emerging solutions such as telemedicine devices, monitoring approaches, and artificial intelligence, and evaluate or pilot as appropriate
- Enable other Ontario virtual programs, innovators, and vendors to become part of the industry/healthcare system by acting as a distribution channel into the healthcare system for the best solutions
- Support organizations that wish to use their own technology to provide access to care
- Identify and partner with existing Ontario programs and innovations that OTN can help scale across the province



Corporate governance



Marcia Visser (President and Chair)

Health Sector Trustee, Non-Profits



Stephen Sorocky (Vice Chair)

President, Exigent Innovations



Anne Brace (Treasurer)

Formerly Director, Strongco Corporation



Matthew Anderson (Director)

President and CEO, Lakeridge Health



Jonathan Bennett (Director)

CEO, Laridae Communications Inc.



Jennifer Blum (Director)

Chief Financial Officer (CFO) and Vice President of Operations Support, VHA Home HealthCare



Richard Booth (Director)

Assistant Professor, Arthur Labatt Family School of Nursing, Western University



Nancy Croitoru (Director)

Former President and Chief Executive Officer (CEO), Food and Consumer Products of Canada



Dr. Mark Guttman (Director)

Movement Disorder Neurologist, Centre for Movement Disorders



Greg Pelling (Director)

Former Senior Vice President and GM, Data Solutions, Change Healthcare Group



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