Overview of Telemedicine in Ontario

**OTN: linking the Ontario health community through telemedicine since 1998.**

Telemedicine, the provision of health care by means of telecommunications and information technology, is a fact in Ontario. In the fiscal year 2011-12, more than 200,000 patients received care through telemedicine, and a 50% increase is expected in 2012-13.

From April 1998, when Ontario’s first telemedicine sites were launched at Sunnybrook Health Sciences Centre, Timmins, Kirkland Lake and Cochrane, OTN has grown to 2600 systems across the province. Geography and a lack of health care providers are no longer barriers to patient care in Ontario.

**Telemedicine is not a service. It is an experience.**

When telemedicine practitioners shared their clinical experiences with Dr. Williams, he realized that “telemedicine is not a service. It is an experience.” Practitioners need to experience it first hand to truly understand how it works and the benefits to them and their patients. He recalled some stories for this paper.

Prior to adopting telemedicine, many frail and ill cancer patients from Northeastern Ontario travelled to Sudbury for care. The Northeast Cancer Centre (NCC) oncologists also traveled through the region, primarily providing follow-up care. Travelling stressed the patients and when visiting distant sites, the oncologists had little time to see new patients. Telemedicine improved the patient experience and enabled oncologists to spend more time with the right patients while travelling.

Telemedicine at the NCC began with a single oncologist. Now, all the Centre’s oncologists use telemedicine. The outpatient clinic has three fully functional studios alongside their examining rooms and oncologists see virtual and in-person patients during the same clinic. To maximize the benefits of telemedicine for patients, OTN worked with NCC to redesign their triage system. Based on specific criteria, three categories of patients were identified:

1. Local patients visiting the Cancer Centre for their in-person appointments.
2. Patients from outside Sudbury requiring follow-up care by videoconference.
3. Patients from outside Sudbury requiring in-person care either in their home community or in Sudbury.

All patients in category 2 are offered telemedicine appointments.

**Telemedicine consults can provide superior care in one-on-one situations.**

**Neurotrauma follow-up:** Prior to the introduction of telemedicine, a patient in a remote community with post-injury epilepsy,
cognitive impairments and mobility issues travelled alone every few months to Toronto for follow-up consultations with a neurologist. Anxiety related to travel and the disruption of the patient’s routine interfered with the progress and success of his recovery. When his follow-up appointments with the Toronto-based specialist became telemedicine consultations, his clinical experience was improved, he was more relaxed and travel stress was eliminated. As well, the cost of the Northern Health Travel Grant was eliminated.

**Psychiatric or mental health consultations:** Quantitative data are not in yet, but anecdotal data indicate that in cases of abuse, patients are more comfortable sharing their circumstances over a video screen with a specialist many miles away. A sense of safety develops when patients know that they will not encounter the psychiatrist at a local hockey game or grocery store.

**Cardiac rehab follow-up:** Patient education and encouragement are central to post-surgical and post-heart attack rehabilitation. In Ontario, cardiac rehabilitation specialists are only available in large centres. The Thunder Bay Regional Health Sciences Centre uses telemedicine to educate and support cardiac patients in remote northwestern communities, eliminating costly travel time and expenses.

**Telemedicine for the General Practitioner**

Telemedicine delivers significant benefits for GPs. For example, Otn.teledermSF is a service that enables a referring doctor to consult quickly with a dermatologist anywhere in Ontario. A photograph of a patient’s skin condition, plus pertinent health information, is sent for review by the specialist. Wait time is shortened, costs are reduced and inconvenience is lessened.

Telehomecare equipment can be used to monitor homebound patients who have chronic disease and have difficulty attending in-person clinics. Patient education is improved, enabling the patient to manage his or her own health and chronic illness, “which years of preaching in the office had not achieved previously,” according to one family doctor in the pilot project.

Patients who require lifestyle changes as part of their recovery process are more successful when Telehomecare is part of their care. A Telehomecare nurse observed that over time her patients learned the right behaviours. She cited the example of a patient with a history of heart failure. The nurse called in response to fluctuations she noted in the patient’s weight during a routine monitoring session. The patient expected the call, because she knew the foods she had eaten at an event the night before would cause the fluctuations.

Continuing education is easier to complete and more convenient for busy GPs, especially with the introduction of Personal Videoconferencing, the next generation of telemedicine. GPs can participate from the comfort of their home or office.

**Improving Practice**

**Superior continuity of care and transfer of knowledge**

A Northern Ontario burn victim, about to be sent home from Toronto Rehab-UHN, experienced superior continuity of care through telemedicine. During a telemedicine consultation the Toronto Rehab-UHN nurse demonstrated, to the patient’s northern care team, how to change bandages and provide care. The patient returned home confident that he would receive the same care at home as he had in Toronto: The northern care team benefited from the additional training.

**Telemedicine will not replace all in-person consultations.**

Nonetheless, the breadth of care currently available is surprising. Peripherals - like electronic cameras and stethoscopes -
designed to send sound and images across the secure OTN telemedicine network allows physicians to diagnose at a distance. The future of telemedicine is limited only by our ability to integrate technological advances.

**Personal Videoconferencing: The Next Generation of Telemedicine**

Ontario’s newest telemedicine innovation continues OTN’s leadership in the field. Finally technology has been developed that allows telemedicine to deliver from the Internet, on personal computers or laptops, sharp clear images with virtually no transmission delay!

*The benefits of studio-style telemedicine in a simple-to-use format!*

Consultations through videoconferencing rely on image quality, and real-time transmission for proper diagnosis and patient satisfaction. To deliver the necessary quality, initially, the hardware required was expensive television production-style equipment.

As of March 2013, any member of the Ontario healthcare community can apply to use OTN’s Personal Videoconferencing service. Specialists, whose expertise may be unavailable in communities across Ontario, can now provide care in real time from home or office, thereby extending the reach of their practice. Travel time for the consultant is reduced, and in some cases, eliminated.

*Personal Videoconferencing follow-up consultations help shape patient behaviour.*

Distance education for osteoporosis was introduced at Southlake Health Centre. Participants learned about common misconceptions of the disease and how to manage it as well as the importance of calcium and vitamin D in their diets. One remote participant, who, over time, had experienced many osteoporosis related injuries, credits the program for changes in her diet and exercise that she expects will improve her condition and quality of life.

A study of 813 people with CHF and COPD under the care of Telehomecare nurses was conducted with dramatic results. Hospital admissions were reduced between 64 and 66%. Visits to emergency departments were reduced 72 to 74%. Walk-in clinic visits dropped between 95 and 97%. For every $1 invested in telemedicine, five dollars in hospital costs was avoided.

**Adding the Advantages of Personal Videoconferencing to a Health Care Practice**

*Telemedicine consultations are billable to OHIP at a premium.*

Patients do not pay additional fees for telemedicine clinics. Award-winning technology enhances patient care and clinical practice.

*Award-winning technology enhances patient care and clinical practice.*

Five essential and readily obtainable technological assets are required for successful Personal Videoconferencing:

1. A personal computer or laptop.
2. A speakerphone or headset.
3. An HD camera.
4. A business grade Internet connection
5. OTN’s clinical grade software.

*Personal Videoconferencing is secure, safe and reliable.*

OTN’s Personal Videoconferencing is subject to Ontario’s Personal Health Information Act (PHIPA) and Canada’s Personal Information Protection and Electronic Documents Act (PIPEDA). The system is state-of-the-art with privacy protocols that meet or exceed provincial and federal standards.
Training and support are provided to Personal Videoconferencing adopters.

OTN is a recognized provider of health care distance education. That skill and experience are applied to all online Personal Videoconferencing training modules. Experienced OTN staff provides support to all users.

The technology is the only difference between an in-person consultation and a telemedicine consultation. An appointment must be booked, a patient file created and a record kept of diagnosis and instructions to the patient. The space in which the telemedicine consultation occurs is simply another examination room in a workspace.

Efficiencies are created when a number of telemedicine consultations occur in a single block of time. When video is available in the consultant’s office blending telemedicine consultations with face to face consultations is also efficient.

When considering adoption of telemedicine, health practitioners should identify existing patients who would benefit from telemedicine consultations such as the elderly, the disabled, out-of-towners, patients who need follow-up care to manage their condition.

Ask OTN for names of health care providers in your community who are experienced telemedicine practitioners. Learn how Personal Videoconferencing can enhance your practice and enrich the patient experience.

Rob Williams, MD
Chief Medical Officer, OTN

A rural family doctor in Timmins for over 35 years, Dr. Williams is a founding partner of NORTH Network and OTN. Prior to his work at NORTH, Dr. Williams spent 15 years as Chief of Staff at Timmins and District Hospital. He has contributed his experience to provincial and federal health organizations for three decades. Before bringing his considerable telemedicine experience to OTN, Dr. Williams served on the OMA Committee on Hospitals and CIHI’s Professional Advisory Committee. He was a Commissioner on the Health Services Restructuring Commission and a member of the Registration Committee for the College of Physicians and Surgeons of Ontario.