Making Health Services Accessible for Remote and Isolated First Nations in Ontario’s Far North

KO eHealth Telemedicine Services Annual Report, 2014-15

September 2015
KOeHealth Telemedicine Services (KOeTS) works in partnership with affiliated First Nations, the Ontario Telemedicine Network, First Nations and Inuit Health and other stakeholders to manage delivery of videoconference-enabled clinical encounters, health education and administrative events and virtual health services.

Each First Nation point-of-care is supported by a Community Telemedicine Coordinator – many of whom are featured in this year’s report – and by the KOeTS Hub Services Team who provides scheduling, CTC supervision, clinical service development, logistics, planning and delivery, decision support and program management services.

Front Page Images
1. Former KI Chief Donny Morris (centre) receives a provincial Telemedicine Champion Award (see page 7)
2. Confederation College Dental Hygiene Program students who are delivering First Nation dental education programming by videoconference (see also page 5)
3. Jeannie Simon (right), Aboriginal Cancer Care Navigator in Thunder Bay. To learn more you can ask your provider or contact Jeannie toll free at 1-877-696-7223 ext. 4324 or email supportivecare@tbh.net
4. KOeTS-affiliated First Nations points of care
Not long ago I was asked how KO eHealth Telemedicine Services (KOeTS) grew from a pilot project in 1998 to its position as Canada’s largest and busiest First Nations Telemedicine network. While there is no simple answer, I can point to three aspects of our service model that have helped us grow and sustain our work.

The first and most important process has been to follow the lead of our affiliated Treaty 9 and Treaty 3 First Nations. From Day 1 forward we have regularly engaged community leadership, health staff, and members to understand what services are needed and to work with communities to support local use and acceptance of telemedicine.

Secondly, we’ve established long-term and mutually beneficial federal and provincial partnerships. Among these relationships our links with the Ontario Telemedicine Network and First Nation and Inuit Health are worth noting. These agencies have helped us pull back cross-jurisdictional barriers to enable integrated access to the right provider, at the right time, in the right place.

The third factor is our organizational commitment to capacity development. While exponential growth is exciting, our incremental approach to community and service development has proven to be less disruptive and a more effective use of scarce health and human resources. Taking many baby steps has produced meaningful and long-lasting service innovations that meet multiple value propositions.

And in 2014-15 all of these elements were in play. I’m proud to say we had an exciting, busy, and productive year. Armed with a newly minted three-year Service Plan, KOeTS worked with stakeholders to design and implement new services. This March we welcomed the Kenora Chiefs to our network. Staff also enabled virtual health, secured funding to replace telemedicine equipment at all affiliated First Nations, piloted children’s oral health assessment services, supported a prescription drug abuse alternative point-of-care project, and began rolling out OTN’s TeleDerm SF.

Growth-wise, it was another record year for KOeTS. Overall, almost 2,800 First Nations patients – more than 10% of the total Sioux Lookout Zone population - accessed a clinical service at a KOeTS-affiliated point-of-care and about 2,000 community-based health staff and professionals participated in a health education or training event. What do these numbers tell us? There’s plenty to do and we’ve got the team to get it done! Miikwehc.

Orpha McKenzie, September 2015
Making Progress On Service Plan Priorities

In October 2013 Meno-Ya-Win Health Centre hosted the KOeTS Virtual Care Retreat. During the two-day event First Nations, provincial and federal stakeholders discussed service gaps and successes and identified priority actions over the next three years. The end result was a 2014-15/2016-17 Service Plan that highlights accelerated access to virtual care and advancing the scalability & sustainability of KOeTS services. Here’s how we’re doing so far.

### Action Theme: Accelerated Access to Virtual Care

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<thead>
<tr>
<th>Activities</th>
<th>2014-15 Outcomes</th>
<th>Status</th>
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<tbody>
<tr>
<td>Initiate Virtual Mental Health Working Group Process</td>
<td>Virtual Maternal Addictions Aftercare Project developed with Shibogama FNs</td>
<td>On-going</td>
</tr>
<tr>
<td>Migrate Tele-Derm Store-Forward to all endpoints</td>
<td>Develop roll-out plan to implement services at all endpoints by Dec 2015</td>
<td>Complete</td>
</tr>
<tr>
<td>Launch Oral Health Pilot Project with FNIH-OR</td>
<td>Clinical delivery in 2 First Nations, education programming live province-wide</td>
<td>On-going</td>
</tr>
<tr>
<td>Improve access to mental health services for SLZ FNs</td>
<td>Access to mental health &amp; addictions services increased by 16% since 2012-13</td>
<td>On-going</td>
</tr>
<tr>
<td>Deliver virtual services at alternative points-of-care</td>
<td>Support for Physician/PDA client follow-up pilot in Sandy Lake First Nation</td>
<td>Complete</td>
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### Action Theme 2: Advancing Service Scalability & Sustainability

<table>
<thead>
<tr>
<th>Activities</th>
<th>2014-15 Outcomes</th>
<th>Status</th>
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<tbody>
<tr>
<td>Reduce cancellations in high volume services</td>
<td>Number of patient No Shows for Diabetes appts reduced by 14% in 2014-15</td>
<td>On-going</td>
</tr>
<tr>
<td>Increase service volumes by 5 to 7 percent each year</td>
<td>6.5% increase: 3,356 clinical/educ/admin in 2014-15 vs 3,152 in 2013-14</td>
<td>On-going</td>
</tr>
<tr>
<td>Identify one or more new First Nations point-of-care</td>
<td>Kenora Chiefs Office added as a KOeTS affiliated point-of-care</td>
<td>Complete</td>
</tr>
<tr>
<td>Replace legacy videoconferencing @ FN endpoints</td>
<td>Health Canada partnership supports procurement of 25 new workstations</td>
<td>Complete</td>
</tr>
<tr>
<td>Engage fed/prov agencies and demonstrate value</td>
<td>Activity deferred to 2015-2016 fiscal year</td>
<td>Pending</td>
</tr>
</tbody>
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KOeTS works with affiliated First Nations to ensure that the delivery of clinical encounters, and health education and administrative programs are supported by high quality equipment and networks.

Two years ago KOeTS noted that equipment in many of its affiliated First Nations was getting quite old. Aging equipment meant that minor problems began to occur more frequently than expected, that services were sometimes interrupted and, in more than one First Nation, that all Telemedicine services were unavailable for a long period of time.

KOeTS was able to address this infrastructure problem through its partnership with the Ontario Region of Health Canada's First Nation and Inuit Health. Working on behalf of affiliated First Nations we secured more than $1.1M last year to replace all diagnostic peripheral devices (otoscopes, illumination systems, exam cameras) and clinical and educational videoconferencing at affiliated First Nations points-of-care.

The new equipment will deliver the same level of secure, private services that KOeTS clients are used to with much improved reliability and image quality.

1. Top left – Telemedicine workstations are crated in Toronto, shipped north and then flown or trucked, where possible, to First Nations points-of-care
2. Top right – A KNet Technician unloads, uncrates, and installs a new telemedicine workstation (iDOC) in the Slate Falls First Nation
3. Middle right: A KNet Technician and OTN Engineer test workstation & diagnostic devices from Sioux Lookout and Toronto
4. Bottom right - Kingfisher CTC Cepra Sugarhead with her newly installed high definition iDOC
Pilot Projects

Pilot projects are an effective way to develop new services in the North one step at a time. This past year KOeTS has been involved in a number of initiatives. Three promising projects are the Tele-Oral Health Initiative (TOHI), the Alternative Points-of-Care Project (APCP), and the Virtual Mental Health and Addictions Working Group.

The Tele-Oral Health Pilot was developed as a way to ensure that every First Nation child, aged 0 to 7 years of age, receives a dental screening every year.

Here’s how it works: a Dental Hygienist in Sioux Lookout works with the Community Telemedicine Coordinator (CTC) to schedule children who missed their appointment when the Hygienist last visited the First Nation.

Using a pen-like (intra-oral) camera, the CTC shows the Hygienist different aspects of the child’s mouth, gums and teeth and the Hygienist identifies oral health & prevention/treatment needs such as interim stabilization therapy, sealants, fluoride, and dental referrals.

Last year 37 kids were seen in two First Nations communities: 14 of 37 were referred to a dentist. In 2015-16, the pilot service will continue and introduce a new high definition camera.

TOHI also has two learning components. Parents who attend appointments see how decay impacts their children and learn how self-care prevents decay. Otherwise, Confederation College DH students provide videoconference education sessions on First nations dental health topics.
Sandy Lake First Nation - Alternative Points-of-Care Access Project: Dr. Lisa Letkemann & Prescription Drug Abuse (PDA) Coordinator, Starsky Goodman

Sandy Lake First Nation Community Physician Lisa Letkemann wanted to follow-up with patients of hers who were enrolled in the local PDA program. The Problem? The Doctor’s clinics in the community are always very busy. In addition, coordinating schedules with the nursing station telemedicine unit, doctor, and PDA staff was a challenge and many of the PDA program participants feel most comfortable at the program building.

The Solution? KOeTS and OTN staff set her up with personal videoconferencing and a custom scheduling process. The PDA program installed a laptop and camera. Now Dr. Lisa sees patients when she’s not in Sandy Lake. Her local champion is Starsky Goodman, the PDA Coordinator. Dr. Letkemann works with Starsky to identify participants. On the day of their appointment they’re reminded. “It’s about 95% effective,” he says, “people show-up, it’s all good.”

The Virtual Mental Health and Addictions Working Group (VMHAWG) met for the first time in July 2014. By October it had hammered out a Phase 0 Charter and in February 2015 members agreed on a value proposition. VMHAWG’s objective is to develop a collaborative approach to virtual mental health and addictions services and to pilot the service model in two to four remote First Nations.

Last March Working Group members agreed that maternal addictions and mental health programming provided a good focus for service development and that aftercare gaps identified by the Shibogama Health Service Integration Fund project provided the right framework. Service development continues in 2015-16.

Wunnumin Lake, Wapekeka, Kingfisher Lake, and Kasabonika First Nations with Shibogama Health Authority, Meno-Ya-Win Health Centre, Sioux Lookout First Nations Health Authority, St. Joseph’s Care Group, Canadian Mental Health Association Kenora, the Ontario Telemedicine Network, and KOeHealth Telemedicine Services
During this February’s COO Health Forum, KOeTS Director, Orpah McKenzie, and OTN CEO, Dr. Ed Brown presented former Kitchenuhmaykoosib Inninuwug Chief Donny Morris with a Champion of Telemedicine Award.

The award recognized Chief Morris’s long-time support for telemedicine as a way for community members to access specialist care.

Pictured with Chief Morris (centre) is Grand Chief Patrick Madahbee, Union of Ontario Indians (left) and Ontario Regional Chief, Stan Beardy (right).

Health Canada’s national look at how human factors relate to eHealth adoption in isolated First Nations singled out KOeTS and its federal-provincial partnership model.

Researchers at University Health Network and the University of British Columbia concluded that “The collaborative efforts of KOeTS, OTN, FNIH and NIHB....has had a clear impact on the daily operations of the nursing stations visited...”

“Community Telehealth Coordinators [CTCs], who are allocated time for scheduling telehealth appointments and otherwise facilitating operations, are a key element of the KOeTS infrastructure. They are generally perceived as enormously helpful in making telehealth services sustainable and efficient.”
What You’re Telling Us About Telemedicine Services

Every year KOeTS connects with the people who use our service. Your survey responses show us where we’re doing well and where services can be improved. Among those persons who received a clinical service last year, 94% said they liked seeing their clinician by telemedicine, 50% said they were satisfied and 44% very satisfied with the services they received.

This year we also asked about the relationship between access to telemedicine and improvements in personal health. About a third of respondents (34%) said the telemedicine appointment increased their health knowledge and understanding or it increased self-management of their disease. A further 11% of respondents felt that telemedicine reduced their wait time and improved access to the health system. Otherwise, 52% of people answering the survey did not identify a specific health improvement and noted that using telemedicine was a good experience.
Expanding Virtual – Store and Forward - Services

KOeTS has been working with physicians, nurses and OTN staff for more than a decade to make virtual retinal and dermatology exams available in the North. During the start-up phase in 2001 KOeTS partnered with Sandy Lake to introduce tele-ophthalmology and in 2003 we developed a tele-dermatology pilot project with Poplar Hill. Last year, under the guidance of KOeTS eHealth Nurse, Jenny Srichaikul, both services gained a foothold in the Sioux Lookout Zone. Jenny is scheduling Virtual retinal exam clinics – like the one pictured below – in Sioux Lookout Zone First Nations. Last year retinal screening identified eye disease in 17 of the 42 people screened. Of that number 5 individuals or about 30% showed signs of retinopathy – a gradual and difficult to notice complication of diabetes that, if left untreated, leads to blindness.

Virtual Dermatology Services

When Betsy found a strange mark on her baby Connie’s chest she went to the Health Station right away. After the community physician examined the three-month old he wanted a specialist to have a look and requested an urgent tele-derm assessment. CTC Doreen Kakegamick retrieved the camera and by 5:00 pm the images were submitted to OTN’s secure TeleDerm service. By the next morning, Connie had been referred to a pediatric dermatologist. A process that used to take weeks or even months had been completed in less than 24 hours! Connie, we’re happy to say, is fine and Mom and the community physician were saved much anxiety because they had access to virtual dermatology services. Look for this service in your community in 2016.
Service Delivery

More people are using telemedicine more often in Canada. The Canadian Telehealth Forum reported that last year almost 475,000 Canadians attended a telemedicine-enabled clinical encounter. And telemedicine is growing even faster in KOeTS affiliated First Nations. Between 2011-12 and 2014-15 KOeTS served 8,702 patients and clinical service volumes grew by 115% or almost 30% each year. And in 2014-15, access to health education and administrative programming increased by 52% and 21% respectively over the previous year.

![First Nations Patients Served by KO eHealth Telemedicine 2011/12 to 2014-15](image-url)
Therapeutic Areas of Care Delivered

Use of telemedicine by KOeTS affiliated First Nations is changing over time. Two years ago, a third of all appointments were for diabetes-related conditions and 15% of all clinical services addressed mental health and addictions.

Since then, KOeTS has worked with communities and providers to increase availability to mental health and addictions services (MH&A) and reduce cancellations. Last year, 31% of the total clinical volume was for a MH&A service and cancellations had been reduced by five percent.
Improving First Nations Access to Health Services

Healthcare innovation is new or better ways of doing valued things: activities that generate value in terms of quality and safety of care, administrative efficiency, the patient experience, and patient outcomes. For nearly 15 years KOeTS has applied innovations that improve community-based access to medically necessary health services. The organization’s emphasis has been on empowering patients and making integrated healthcare and social services available for affiliated First Nations.

First Nation and Inuit Health’s Non-Insured Health Branch (NIHB) has been measuring the impact of virtual health innovations since 2007-2008. Their annual analysis of KOeHealth Telemedicine Services focuses on two aspects of service delivery. It measures the organization's ability to make more effective use of existing medical transportation resources and how KOeTS increases local access to distant family members and non-medical providers such as stroke prevention specialists, dieticians, social workers, speech-language-physio- and occupational therapists, and so forth.

Over the past seven years Health Canada’s analysis shows that KOeHealth Telemedicine Services has, on average, annually provided an additional $1.3M of equivalent medically necessary transportation services in its affiliated First Nations. NIHB’s virtual medical transportation measure calculates the value of telemedicine for the 24 remote and isolated First Nations in the Sioux Lookout Zone. In 2007-2008 the analysis showed a benefit of about $36,000 per community. By 2013-2014, per community benefit increased by 159% to $93,116 (see next page).

In addition to making more effective use of medical transportation resources, NIHB’s analysis also demonstrates how KOeTS is re-balancing community access to integrated provincial/federal wellness programming: making prevention initiatives available, enabling chronic care providers, and engaging family-based decision-making. Each year, KOeTS clinical events are designated as either medically necessary (those that would normally be eligible for NIHB medical transportation benefits) or medically unnecessary (those that would be ineligible for NIHB medical transportation benefits). In all but one of the past seven years NIHB has determined that the majority of clinical events do not meet medical necessity criteria: in an average year NIHB considers 64% of all KOeTS clinical activity ineligible for medical transportation (see next page). Why is this important? Because these appointments demonstrate how telemedicine makes a wide variety of integrated federal/provincial providers available in remote First Nations. Without KOeTS parents would not have access to pre-natal public health educators, diabetics to Nurse Clinicians, persons with addictions to opioid dependency specialists, and those faced with end-of-life decisions to social workers and family members. In this way telemedicine helps round out the local circle of care.
Telemedicine Value Added to Existing Sioux Lookout Zone Medical Transportation Resources – 2007-2008 to 2013-2014

NIHB MT Eligible and Ineligible Appointments Delivered by KOeHealth Telemedicine Services – 2007-2008 to 2013-2014

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<td>726</td>
<td>1413</td>
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<td>Percentage of Ineligible consults</td>
<td>50%</td>
<td>58%</td>
<td>53%</td>
<td>74%</td>
<td>66%</td>
<td>76%</td>
<td>73%</td>
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