Making Telemedicine Policy for Ontario First Nations

A KO Telemedicine Proposal to Initiate Ontario-wide Collaboration on a Strategy for Integrating First Nation Telehealth/Telemedicine with the Ontario Telemedicine Network

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Executive Summary

Ontario First Nations have demonstrated national leadership in the delivery of comprehensive on-reserve Telehealth/Telemedicine services. For 25 remote and northern First Nations, KO Telemedicine (KOTM), the pioneer First Nations Telemedicine integrator in northwestern Ontario, has created a community-based videoconference and store-forward point-of-entry to clinicians, health educators, administrators and trainers. This service demonstrably improves on-reserve access to federal and provincial health services.

KOTM provides an integrated approach to health human resource development and anticipates First Nation capacity to take advantage of improvements in the Canadian health system, such as the electronic health record. These issues are foregrounded in two sections. The first section surveys federal and provincial health policy and highlights Telemedicine capacities to meet longstanding First Nations access, ownership and resourcing objectives. The latter section describes the development of First Nations Telehealth/Telemedicine in Ontario and identifies service model requirements and options moving forward. Recommendations for collaborative development of a strategy for integrating First Nation Telehealth/Telemedicine with the Ontario Telemedicine Network are included at the end of this section.

Telehealth/Telemedicine Investment in First Nations

During the past five years, the development of First Nations Telehealth/Telemedicine in Ontario has demonstrated a collaborative approach to meeting health needs without unnecessary duplication or creation of parallel health care systems. Its growth has been facilitated by strong relationships with member First Nations and among KOTM, the Ontario Telemedicine Network (OTN), the Ministry of Health and Long-term Care (MOHLTC) and First Nation and Inuit Health (FNIH). The net result has been the establishment and maintenance of a high quality and cost-effective Telehealth/Telemedicine service for Ontario’s most isolated communities. The service model is rooted in First Nations requirements, directed by community leadership and focused on First Nation health and wellness priorities. The use of information and communications technology supports a wide range of health, social and economic development needs and anticipates First Nations development of complementary health initiatives such as clinical information systems and their use in population health and pandemic planning.

KOTM contributes to improved health outcomes for on-reserve populations. It provides a contemporary counterpoint to the historic failure of federal and provincial health policy and programs to close chronic health service access gaps for remote First Nations communities. First Nations Telehealth/Telemedicine in Ontario has substantively improved community-based choice of health service providers and frequency and proximity of health service access. It has also demonstrated how culturally safe and competent health services can be delivered across large geographic and culturally diverse territories by First Nations. In this manner communities’ capacities are being built and strengthened while providing health workers with the resources they need to do their jobs effectively. Still First Nations telehealth/telemedicine development in Ontario is uneven. First Nations that are not served by KOTM neither have access to provincial

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1 Telehealth is a general term that describes a number of services such as tele-learning, tele-homecare, tele-triage (phone help lines). Telemedicine refers directly to technology-enabled clinical services via videoconferencing and store-forward (digital imaging) platforms. These terms are complementary and have distinct human resource, network, and integration requirements. Generally, federal (FNIH) investments are focused on non-clinical Telehealth and provincial agencies deliver Telemedicine.
common services and medical/allied health professional resources on-reserve, nor are they able to engage local site coordinators to support community uptake and health professional acceptance.

**Addressing Challenges/Engaging Opportunities**
First Nations-driven Telehealth/Telemedicine in Ontario, while successful, is at a crossroads. Growth of First Nations Telehealth/Telemedicine in Northeastern, Central and Southern Ontario has ceased as a result of jurisdictional uncertainty and misalignment of federal and provincial policy and program priorities. This important tool for equalizing First Nations access to health and wellness resources, faces pressures from many sides. Looking ahead, the development of a successful First Nations Telehealth/Telemedicine service in Ontario proposes several important requirements. These include:

- Existing services must continue to respond to community health and wellness needs and contribute to the well-being of First Nations through the provision of high quality, comprehensive Telehealth/Telemedicine services.
- FNHIH must work with mandated First Nations Health organizations to develop a First Nations Telehealth/Telemedicine policy that enumerates the *business*- and the *value-case* for First Nations services and establishes a program base that will make these services available in all Ontario First Nations.
- Service delivery must be planned, implemented and managed by First Nations.
- First Nations Telehealth/Telemedicine must continue to grow. Priority must be given to geographically remote First Nations.
- A service model must be developed to address the needs of First Nations in rural, southern and more urbanized settings.
- Governance of First Nations Telehealth/Telemedicine must be collaborative, reflect the geographic and cultural diversity of Ontario First Nations and respect pre-existing alliances, partnerships and operational structures and synergies.

**Assumptions and Principles**
This paper highlights three lessons learned from five years of KOTM operational experience. First, Telehealth/Telemedicine is empowered by First Nations decision-making and ownership. This assumption situates community-based health needs at the centre of the network and provides a way to ensure long-term acceptance and growth of Telehealth/Telemedicine services among highly diverse and geographically disparate First Nations. Second, investments in First Nations Telehealth/Telemedicine must accommodate the needs of each individual First Nation. Broad-based investments in Telehealth/Telemedicine need to be made in a systematic way that acknowledges resource gaps within communities and accommodates these gaps by ensuring that all First Nations have access to the same positive and sustainable outcomes. Finally, telemedicine systems must be scalable to all First Nations contexts. Improvements made in infrastructures – such as access to telecommunications – must demonstrably improve the opportunities for large, small, remote and urban communities to meaningfully participate in First Nations Telehealth/Telemedicine services.

**Options Moving Forward**
Ontario First Nations are leading the way in the development of a comprehensive Telehealth/Telemedicine system that contributes to community well-being and enhances local access to health and wellness services. In moving forward, three change themes inform how First Nations Telehealth/Telemedicine will develop in Ontario:
1. the type of service model(s) that will be conceived and adopted in Ontario First Nations;

2. the capacity of the First Nations, federal and provincial health systems to adequately resource and sustain First Nations Telehealth/Telemedicine, and;

3. the ways and means by which these services will be delivered, supported and governed.

Each of these themes proposes specific challenges and will require focused time and money resources. Each is described in the section below.

**SERVICE MODEL**

<table>
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<tr>
<th>Service Model Requirements</th>
<th>Comprehensive and Clinical Telehealth/Telemedicine</th>
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<tbody>
<tr>
<td>▪ Community Requirements</td>
<td>local coordination: enhances cultural interoperability, builds local capacity, ensures local ability to set service priorities, enables community development, ensures the broadest range of potential uses (medical, wellness, education, training, health administrative meetings), supports community uptake and service provider acceptance</td>
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<tr>
<td>▪ Operational Requirements</td>
<td>shared common services: promotes ease-of-use, captures economies of scale, supports service quality and continuous improvement, enables cultural, technical, clinical and organizational interoperability, ensures network security and privacy, facilitates capacity building and introduction of new 2nd and 3rd generation telehealth/EHR services</td>
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<tr>
<td>▪ Strategic Requirements</td>
<td>partnerships; with federal, provincial and private sectors support multiple levels of sustainability, facilitates broad base of health program participation, enables seamless integration with the provincial Telehealth/Telemedicine network, and leverages access to allied agencies</td>
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<th>Health Videoconferencing</th>
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<tr>
<td>▪ Community Requirements</td>
<td>Limited local training primarily supports technology end of the service (turning units off/on), supports health worker access to health education/training and health administrative meetings</td>
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<tr>
<td>▪ Operational Requirements</td>
<td>Outsourced managed services (scheduling, bridging) or small in-house staff.</td>
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<tr>
<td>▪ Strategic Requirements</td>
<td>strong relationship with one lead funder and ongoing links with local health leadership</td>
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**SUSTAINABILITY**

Sustainability of distributed systems requires strategic and broadly based partnerships that are linked to policy objectives and program outcomes. Regardless of the service model that is adopted, a First Nations Telehealth/Telemedicine program ultimately must be led by First Nations, be accountable to community- and health service provider needs and take a system-wide approach to change management, service development and continuous improvement. The two models presented represent a service continuum. The health videoconferencing model is sometimes a transitional stage in achieving comprehensive Telemedicine services.

**Comprehensive Service Model**

The comprehensive Telemedicine service model is a complex system. It is horizontally and vertically linked with federal/provincial health systems and has the potential to support many
outcomes and mandates. The community-based orientation of the comprehensive service model secures a central role for First Nations in setting the service agenda and achieving a wide range of highly localized objectives. Essentially, this model enables on-reserve access to more than a hundred medical specialties, sub-specialties and allied health professionals, delivery of laddered educational programming, provision of focused and on-going training opportunities and support for intra- and inter-regional health administrative collaboration.

Higher capital investment is required to provide clinical services on-reserve. This model requires that interoperable network security devices, enhanced videoconference units and on-board medical/diagnostic peripherals are procured to meet community-based demand for improved access and health outcomes. Accordingly, comprehensive services also require strategic alliances and the development of service level agreements with provincial systems to ensure end-to-end integrated access to all Telemedical points-of-care. In additional, this model requires an integrated First Nations common service capacity (help desk, training, bridging, installation) to make more effective use of existing health human resources, provide on-demand troubleshooting and encourage community uptake and health professional acceptance.

**Health Education and Videoconferencing Model**

The health videoconferencing model primarily requires a strong relationship with a single funder and with communities receiving the health education, training and administrative meeting services. Because dedicated Telehealth staff is not required, this model has significantly lower operating costs and capacities. This model also provides a great deal of flexibility to participating First Nations. They are able to develop independent and autonomous networks (that reflect cultural or regional affiliations) without negotiating access and service level agreements or adopting service standards or interoperability requirements with provincial or federal agencies.

Implementing this network requires investments in mostly low-cost videoconference technology and investment in shared services. This model does not support the clinical component of health care delivery or build community capacity to deliver Telehealth/Telemedicine services. Because investments in creating a dedicated service desk would be significant, the health videoconferencing model would likely outsource key shared service (help desk, scheduling, videobridging, service installation) functions. Similarly, the network model requires less expensive/lower bandwidth connections.

**Connectivity**

Significant investments already have been made to ensure community-based access to province-wide network service. Smart Systems for Health (SSHA), a provincial agency mandated to connect Ontario health facilities is required to provide secure broadband connectivity for all health services across the province. To reach rural and remote First Nation health centres there is a need to make these connections by working in partnership with K-Net. Keewaytinook Okimakanak (K-Net Services) negotiated a Service Level Agreement with Ontario's Smart Systems for Health Agency (SSHA) in 2006. The three-year agreement appoints K-Net to be the connectivity provider for all Aboriginal facilities that deliver health care services for Aboriginal people across Ontario.

**Governance**

**First Nation Telehealth/Telemedicine Governance**

A model of governance that respects the unique realities of First Nations within Ontario is required for developing and sustaining First Nation Telehealth/Telemedicine services. The
development of a governance model for First Nations Telehealth/Telemedicine services should provide direction and ensure accountability to mandated First Nations Health Organizations, First Nations members and system partners. It should also interface with the operational entity that will operate the service and coordinate community-based access to different service providers. The governance model must respect the inherent jurisdiction, authorities and roles of First Nation governments in the delivery of health services to their membership. Service governance must be based on the following characteristics:

- **Collaboration:** the model respects and balances the jurisdictional authorities of First Nations, the province and the federal government.
- **Interoperability and scalability:** provides the basis for an integrated and comprehensive service, and is able to link with existing and mature networks such as the Ontario Telemedicine Network and Manitoba Telehealth.
- **Effectiveness:** delivers services closer-to-home based on regional needs and captures efficiencies and economies of scale in the delivery of Telehealth/Telemedicine programming.
- **Community-directed:** regionally based service delivery that respects geographic and cultural diversity and service requirements of community members.

Expansion of First Nation Telehealth/Telemedicine services requires that member communities endorse a governance structure.

**Telehealth/Telemedicine Benefits Summary**

A sustainable Telehealth/Telemedicine program must be responsive to community-based health and wellness needs and priorities and ultimately must provide a direct and seamless link to the provincial and federal health systems. Similarly, it must secure on-going resources to meet these needs. A successful First Nations Telehealth/Telemedicine program will be guided by a business- and a value-case. Features of these cases include:

- Removes geographic barriers to accessing essential health care services;
- Facilitates the integration of local, provincial and federal health services and programs based on First Nations health needs;
- Supports full integration with the largest Telehealth/Telemedicine network in Canada (the Ontario Telehealth/Telemedicine Network offers access to over 700 hospitals and health centres in Ontario);
- Reduces patient and system travel burden – particularly for the elderly and for parents with young children who have to travel long distances for access to specialized medical services.
- Improved community-based health service training and education capacity;
- Enhanced scope of regional health professional retention and recruitment strategies;
- Enhanced community capacity to coordinate and deliver services through certified Site Coordinators;
- Supports technological advancements in health (i.e., Digital imaging, store-forward, electronic health record/public health surveillance);
- Access to clinical and educational sessions benefiting individuals and community health workers;
Recommendations Moving Forward

The existing KOTM First Nations service is highly valued by its 25 member nations. It is anticipated that this type of service will be similarly valued by all Ontario First Nations. A region-wide First Nations Telehealth/Telemedicine program must…

a. Contribute to on-going delivery of a useful and responsive telehealth service that addresses the needs of all NAN communities\(^2\) as a priority using the KOTM model and run by KOTM
b. Enable a federal government program that supports (a) above and meets the full integration requirements of the OTN and SSHA.
c. Provide funding to support the expansion to all northern and isolated communities
d. Utilize KOTM expertise and resources to support and accelerate First Nations Telehealth/Telemedicine development in other Ontario First Nations

1. The Chiefs of Ontario political organization will work with KOTM in addition to all other First Nations currently engaged in Telehealth activities and those wishing to participate in the development of a province wide strategy to benefit all First Nations in Ontario.

2. KOTM should continue to work with representatives from individual First Nations; mandated regional First Nations health authorities – such as the Sioux Lookout First Nations Health Authority and Weenebayko Health Ahtuskaywin; culturally-appropriate service providers, for instance, Aboriginal Health Access Centres and similar AHWS entities; and, political territorial organizations such as COO, NAN and Treaty 3 – and engage federal (FNIH, CHI) and provincial (MOHLTC, OTN, SSHA) stakeholders and service providers in the development of a province-wide Telehealth/Telemedicine Collaborative.

3. The First Nations Telehealth/Telemedicine development Collaborative should engage in a service governance dialogue as a first priority. The governance model should acknowledge the special multi-partite character and requirements of Telehealth/Telemedicine services, provide direction and ensure accountability to mandated First Nations Health Organizations, First Nations members and system partners. It should also interface with the operational entity that will deliver Telehealth/Telemedicine services and coordinate community-based access to service providers. The governance model must respect the inherent jurisdiction, authorities and roles of First Nation governments in the delivery of health services to their membership. Service partnerships and respect for all levels of government must be based on the following characteristics:

a. Collaboration: the model respects and balances the jurisdictional authorities of First Nations, the province and the federal government.
b. Interoperability and scalability: provides the basis for an integrated and comprehensive service, and is able to link with existing and mature networks such as the Ontario Telemedicine Network and MBTelehealth.

\(^2\)The position includes all of NAN, because NAN represents the bulk of the most remote and rural communities in the province and because there is a natural connection between KO and NAN (i.e. it makes some jurisdictional sense for the Deputy Grand Chief to lobby on behalf of NAN).
c. Effectiveness: delivers services closer to home based on regional needs and captures efficiencies and economies of scale in the delivery of Telehealth/Telemedicine programming.

d. Community-directed: regionally based service delivery that respects geographic and cultural diversity and service requirements of community members

4. The First Nations Telehealth/Telemedicine development Collaborative should initiate a business planning process to determine the financial and human resources required to implement a province-wide First Nations Telehealth/Telemedicine service.

5. KOTM’s extensive experience implementing, delivering and supporting First Nations Telemedicine services should be leveraged to lead the development of the business planning process.

6. Business planning for implementing a First Nations Telehealth/Telemedicine service in Ontario should...

   a. assume community-based access to comprehensive telemedicine services in all 142 First Nations, 10 Aboriginal health access centres, six healing lodges, nine women’s shelters and family healing programs
   b. anticipate the need to engage site coordinator services in each of the 142 First Nations sites
   c. provide a distributed common services solution that complements and augments existing KOTM and OTN operations and infrastructure
   d. expect that K-Net – through their service agreement with Smart Systems for Health Agency (SSHA) will deliver Telemedicine-grade circuits in each First Nation point-of-care
   e. ensure that the First Nations Telehealth/Telemedicine services respect historical referral patterns and enable community-based access to high priority health professionals and service providers
   f. ensure that the First Nations Telehealth/Telemedicine service is fully integrated with the provincial public health system.
   g. approach or reach completion within five years of its official launch.