

Expanding Virtual Care Capacity in Canada's Northern Regions

Proposed Approach for a Rapid Deployment

May 2020

**Report of the Task Group on Expanding Virtual Care Capacity and Tools in
the North**

Preface

This report draws upon some of the information and findings summarized in the February 2020 *Virtual Care Task Force Report*¹ outlining the actions required to promote excellence in virtual care from a pan-Canadian approach.

ACKNOWLEDGEMENT

The members of the Task Group on Expanding Virtual Care Capacity and Tools in the North would like to acknowledge the expertise of Dr. Ewan Affleck and thank him for his important contributions to this report.

¹ <https://www.cma.ca/sites/default/files/pdf/virtual-care/ReportoftheVirtualCareTaskForce.pdf>

Executive Summary

The COVID-19 pandemic and public health restriction measures have heightened and accelerated the need to access health care by virtual means. This is of particular importance for remote and isolated communities, a common feature of northern regions in Canada. Early in the pandemic, the COVID-19 Public Health Working Group on Remote and Isolated Communities identified the need to have focused discussions in this area and set up a Task Group on Expanding Virtual Care Capacity and Tools in the North (Virtual Care Task Group).

The Virtual Care Task Group Mandate

The mandate of the Virtual Care Task Group is to provide guidance and recommendations on expanding the virtual care health response and delivery of services in remote and isolated communities during a pandemic such as COVID-19.

The COVID-19 pandemic has exposed critical shortfalls in virtual care capacity throughout northern regions in Canada. There are significant geographic, logistical, infrastructure and resource challenges to the provision of quality virtual health care characterized by timeliness, safety, equity and efficiency of care in the north.

Based on the following key virtual care design and deployment principles (refer to appendix A for complete list of principles), ten recommendations are identified by the Virtual Care Task Group to facilitate the effective development of virtual care in Canada's northern regions.

Key Virtual Care Design and Deployment Principles

Except for emergency services, health services delivered through virtual means are best delivered in the context of an established relationship between a patient and a provider and/or primary care or specialty-based team in a manner that:

- promotes continuity of care;
- promotes care closer to home; and
- discourages virtual walk-in clinics, particularly where they may fragment care for attached patients.

In a quality virtual care ecosystem, the sum-total of a person's longitudinal health information should be available to their entire circle of care on a need-to-know basis, irrespective of time or location (patient centric information architecture).

There should also be effective linkages between public health and clinical health information systems when full integration is not possible.

Virtual Care

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Any interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies, with the aim of facilitating or maximizing the quality and effectiveness of patient care.

Recommendations

1. All possible efforts should be made to accelerate solutions that can improve digital bandwidth gaps to meet the needs for reliable pan-northern virtual care.
2. A Virtual Care Implementation Group should be created, involving representatives from all participating jurisdictions and a mix of clinical, public health, privacy and health information (IT/IS) leadership/expertise.
3. Virtual Care design and deployment standards should be developed collaboratively and ratified by all participating jurisdictions.
4. Gap analysis of bandwidth capacity in Canada's north should be completed as soon as possible to identify shortfalls in payload capacity that impair the delivery of virtual care.
5. The main patient clinical pathways for patients must also be carefully mapped within and across participating jurisdictions.
6. Priorities should be adjusted in each jurisdiction based on identified shortfalls in the core virtual technologies, ensuring that improvements are required over the long-term, beyond the COVID-19 pandemic period.
7. There should also be willingness to implement interim solutions to allow rapid expansion of virtual care capacity across northern Canada. In the context of COVID-19 outbreaks, there is some urgency to remove policy barriers, at least temporarily, to afford clinicians the option of using more readily available messaging and videoconferencing apps that allow direct provider to patient communications even while enterprise solutions are being explored and implemented.
8. Enterprise jurisdictional or inter-jurisdictional solutions should encompass and integrate all core elements of the virtual care ecosystem, namely:
 - a. Phone communications, where they are still lacking or unreliable;
 - b. Secure messaging and file transfer;
 - c. Video conferencing;
 - d. Enterprise charting systems, and;
 - e. Inter-jurisdictional health information exchange.
9. Clear Roles-Based Access Control (RBAC) processes must be established that balance competing obligations to share information for the purposes of quality care, and protect information for the purposes of privacy.
10. Ensure that appropriate resource levels are made available to adequately deploy solutions in terms of both Human and Financial resources, including that required for training.

Forward

The Task Group on Expanding Virtual Care Capacity and Tools in the North (Virtual Care Task Group) was assembled to provide insight and recommendations on the challenges to the provision of quality virtual care in northern regions in Canada at a time when it is needed most.

As the Co-chairs of the COVID-19 Public Health Working Group on Remote and Isolated Communities, we would like to express our gratitude to the members of the Task Group for their efforts and for producing this final report. These dedicated people volunteered their time and expertise during the COVID-19 pandemic that has already put an extraordinary pressure on those involved with the health care system. Below are the Public Health Working Group on Remote and Isolated Communities member organizations, health authorities and government partners who extend their thanks to the Virtual Care Task Group and have approved the recommendations and principles put forward in this report.

<i>Assembly of First Nations</i>	<i>Government of Yukon</i>
<i>Council of Yukon First Nations</i>	<i>Indigenous Services Canada</i>
<i>Dene Nation</i>	<i>Inuit Tapiriit Kanatami</i>
<i>Department of National Defence</i>	<i>Métis National Council</i>
<i>First Nations Health Authority</i>	<i>National Collaborating Centre for Indigenous Health</i>
<i>Government of Newfoundland and Labrador</i>	<i>Northwest Territory Métis Nation</i>
<i>Government of Northwest Territories</i>	<i>Nunavik Regional Board of Health and Social Services</i>
<i>Government of Nunavut</i>	<i>Public Health Agency of Canada</i>

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Introduction

The Task Group on Expanding Virtual Care Capacity and Tools in the North (Virtual Care Task Group) was set up by the COVID-19 Public Health Working Group on Remote and Isolated Communities for the purpose of drafting recommendations for more rapid deployment and expansion of virtual care in these communities. The Task Group members (listed in appendix B) hoped that these recommendations may be of use by the Working Group in their respective spheres of influence to promote and implement required improvements to offer a full range of virtual health care services and in the process improve both quality of care and health outcomes for patients.

Travel restrictions and other public health restriction measures have limited opportunities for face-to-face encounters between health care providers and patients in the context of the COVID-19 pandemic. This has heightened the need and accelerated uptake of virtual means of providing health care services. However, Remote and Isolated communities, a common feature of Canada's northern regions, remain at a significant disadvantage in being able to make full use of these newer technologies, having significant deficits with regard to supportive info structures. The COVID-19 pandemic necessitates the rapid uptake of virtual care services to:

- Reduce unnecessary patient and health care staff travel;
- Reduce unnecessary presentations to health facilities;
- Minimize transmission risks within and between communities; and,
- Enable the broadest possible range of remote health service to patients.

For the purposes of this document, *virtual care* is defined as:

Any interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies, with the aim of facilitating or maximizing the quality and effectiveness of patient care.

The use of virtual care should be optimized through a standardized approach to design and deployment that also encompasses the broadest possible if not entire scope of health services. The foundational components of a mature virtual health care ecosystem should include each of the following elements, supported by adequate and reliable connectivity/broadband capacity:

- Enterprise digital charting;
- Phone communication;
- Secure messaging and file transfer;
- Video conferencing; and,
- Barrier-free inter-jurisdictional health information exchange.

Problem Definition

Canada's north poses significant geographic, logistical, infrastructure and resource challenges to the provision of quality virtual health care characterized by timeliness, safety, equity and efficiency of care. More than thirty years after the advent the World Wide Web - although there are instances of excellence - uptake of virtual care in Canada's north has been slow and remains significantly underdeveloped. The COVID-19 pandemic has exposed critical shortfalls in virtual care capacity in all core elements save perhaps phone communications.

Capacity limitations across multiple domains - technical, human resource and clinical - impact the deployment and sustainability of virtual care in Canada's north. Bandwidth shortfalls limit digital payload capacity, expertise is often lacking in information system design and deployment, and limitations in specialized services requires travel to southern Canada for care necessitating inter-jurisdictional transmission of health information to support care. To be effective, comprehensive virtual care in Canada's north must cross provincial/territorial boundaries.

A further barrier to virtual care uptake is that solutions are often sought in technology alone, yet the obstacle to the deployment of successful virtual care often lies in shortfalls related to governance, policy, human resource constraints and financial shortfalls. The effective deployment of virtual care in Canada's north requires enterprise solutions, policy modification, resource investment and inter-jurisdictional collaboration in parallel with technology deployment and adequate user training.

A thoughtful and nuanced balance is required between tight privacy policies and the appropriate and timely sharing of patient information that is also necessary to support quality care; over-emphasis of one over the other can lead to compromise of personal information or patient health.

Principles of Virtual Care

Virtual care is not a panacea; depending how it is deployed it can either support or detract from quality care. An optimized virtual care environment supports a full suite of integrated technologies that easily allow a provider to choose the avenue of virtual communication that best assures a quality patient outcome. All care providers must be enabled to determine when virtual care is appropriate and to arrange an in-person encounter whenever it is clinically required.

Sound principles of virtual care are required to guide a strategic approach to design and deployment that will support and enable quality care. These principles are centered upon three key features:

1. Except for emergency services, health services delivered through virtual means are best delivered in the context of an established relationship between a patient and a provider and/or primary care or specialty-based team in a manner that:
 - promotes continuity of care;
 - promotes care closer to home; and
 - discourages virtual walk-in clinics, particularly where they may fragment care for attached patients.
2. In a quality virtual care ecosystem, the sum-total of a person's longitudinal health information should be available to their entire circle of care on a need-to-know basis, irrespective of time or location (patient centric information architecture).
3. There should also be effective linkages between public health and clinical health information systems when full integration is not possible.

For a complete list of virtual care design and deployment principles see **Appendix A**.

Recommendations

The following recommendations are made to facilitate the effective deployment of virtual care in Canada's north:

1. All possible efforts should be made to accelerate solutions that can improve digital bandwidth gaps to meet the needs for reliable pan-northern virtual care.
2. A Virtual Care Implementation Group should be created, involving representatives from all participating jurisdictions and a mix of clinical, public health, privacy and health information (IT/IS) leadership/expertise.
3. Virtual Care design and deployment standards should be developed collaboratively and ratified by all participating jurisdictions.
4. Where not done already, gap analysis of bandwidth capacity in Canada's north should be completed as soon as possible to identify shortfalls in payload capacity that impair the delivery of virtual care. (see: https://www.ic.gc.ca/eic/site/139.nsf/eng/h_00002.html)
5. The main patient clinical pathways for patients must also be carefully mapped within and across participating jurisdictions. Examples would be:
 - Nunavik – Montreal
 - Labrador – St. John's
 - Kivalliq (Nunavut) – Winnipeg
 - Iqaluit – Ottawa
 - Northwest Territories – Edmonton
 - Yukon – Vancouver
6. Priorities should be adjusted in each jurisdiction based on identified shortfalls in the core virtual technologies, ensuring that improvements are required over the long-term, beyond the COVID-19 pandemic period.
7. However, there should also be willingness to implement interim solutions to allow rapid expansion of virtual care capacity across northern Canada. In the context of COVID-19 outbreaks, there is some urgency to remove policy barriers, at least temporarily, to afford clinicians the option of using more readily available messaging and videoconferencing apps that allow direct provider to patient communications even while enterprise solutions are being explored and implemented.
8. Enterprise jurisdictional or inter-jurisdictional solutions should encompass and integrate all core elements of the virtual care ecosystem, namely:

- Phone communications, where they are still lacking or unreliable;
 - Secure messaging and file transfer;
 - Video conferencing;
 - Enterprise charting systems, and;
 - Inter-jurisdictional health information exchange.
9. Clear Roles-Based Access Control (RBAC) processes must be established that balance competing obligations to share information for the purposes of quality care, and protect information for the purposes of privacy.
10. Ensure that appropriate resource levels are made available to adequately deploy solutions in terms of both Human and Financial resources, including that required for training.

Appendix A – Virtual Care Design and Deployment Principles

1. Health services delivered through virtual means should be delivered in the context of an established relationship between a patient and a provider and/or primary care or specialty-based team in a manner that:
 - promotes continuity of care;
 - promotes care closer to home; and
 - discourages virtual walk-in clinics, particularly where they may fragment care for attached patients.
2. In a virtual care ecosystem, the sum-total of a person’s longitudinal health information should be available to their entire circle of care on a need-to-know basis, irrespective of location (patient centric information architecture).
3. There should also be effective linkages between public health and clinical health information systems when full integration is not possible.
4. Virtual care services must uphold at all times the provision of quality care and be held to the same standards of clinical performance as in-person care, including but not limited to the following processes:
 - referral and consultation;
 - patient follow-up;
 - charting and documentation; and
 - laboratory and diagnostic services.
5. In a virtual care ecosystem, patients and family should have digital access to their entire suite of health information (health and social services) according to managed protocols that uphold ownership, custodianship, autonomy, security, privacy, data integrity and quality care.
6. In a virtual care ecosystem, fully integrated real-time case-based communication between providers, staff and patients and family using a suite of communication technology options across the spectrum of care should be supported, irrespective of location and discipline, thereby enabling fluid distributed multidisciplinary health care teams based on patient-centric circles of care.
7. Virtual care services should be supported whenever possible by the same functional resources as in-person care.
8. Virtual care technologies and workflow should be configured to ensure user acceptability by both patients and providers.
9. Virtual care services should in no way be seen as a replacement for, detract from, or compromise the provision of established core health services.

10. Clinical decision-making in virtual care should be anchored in the foundational and ethical principles of medical practice. Appropriate virtual care modalities should be chosen on the basis of clinical circumstances, the likelihood of a quality outcome and informed discourse with the patient.
11. Virtual care technologies and system implementations must be evaluated for their safety, and compliance to standards of quality care.
12. The unique linguistic, cultural and functional needs and requirements of virtual care provision to Indigenous people living in Canada require special consideration.
13. A virtual care ecosystem should be supported by a robust privacy policy suite designed to protect the privacy and security of all patient health information in a manner that delimits access to a person's information on a need-to-know basis to provide quality care and service based on the will of the information owner.
14. A virtual care ecosystem should aspire to excellence in enterprise information technology and manage it in a cost effective, efficient and sustainable manner, without compromising parameters of quality care. To this end the following aspirational goals are encouraged:
 - Standardize health information architecture across the system.
 - Limit the number of applications and solutions supported where possible.
 - Standardize health information exchange across the system.
 - Standardize application support across the system.
 - Standardize technology across the system.
 - Adopt a universal data format standard.
 - Promote intra-operability and federated solutions.
 - Provide health information on technology-neutral platforms that deliver the right information to the right person.
15. Virtual care should be supported by:
 - an enterprise patient-registry that assigns each person a unique identifier; and
 - an enterprise provider-registry that assigns each provider a unique identifier.
16. The removal of unnecessary licensure barriers to the provision of appropriate virtual care, including a consideration of constitutional barriers, must involve a collective and collaborative effort on the part of governments, health profession regulators and other stakeholders.
17. As alternate payment models such as capitation, salary, block funding and bundled payments present no barriers to virtual care, they should be considered as preferred payment models in virtual care environments.

18. Virtual care services should be considered as insured services and compensated at similar value to in-person services. Virtual medical services paid under a fee-for-service (FFS) system should meet the same standards for payment that are currently applicable to face-to-face encounters.
19. A virtual care ecosystem should be supported by an enterprise governance structure, strategic plan, road map and policy suite that protects and promotes quality care, risk mitigation, business continuity, privacy and security.

Appendix B – Members of the Task Group on Expanding Virtual Care Capacity and Tools in the North

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