ENHANCING EQUITABLE ACCESS TO VIRTUAL CARE IN CANADA:

Principle-based Recommendations for Equity

Report of the Task Team on Equitable Access to Virtual Care

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Health Canada Santé Canada

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Table of Contents

FOREWORD

The COVID-19 pandemic has forced us to innovate quickly and change how we work to adapt to new realities. It caused significant disruption to the delivery of in-person health services, and forced us to re-think the way we deliver care. The pandemic has served as a catalyst to accelerate the rapid deployment of virtual services so Canadians can safely access the care they need.

As co-Chairs of the Federal, Provincial and Territorial Virtual Care/Digital Table, we have had the opportunity to provide guidance and direction to the collaborative federal, provincial and territorial effort to adopt quality virtual care in Canada. We have learned that while virtual care holds the promise of more accessible, integrated, and convenient patient care, to do so it must be intentionally designed to enhance equity and ensure that all Canadians can benefit from this modality of care. The Equity Task Team was created to apply an equity lens to the design and implementation of virtual care and develop principle-based recommendations for a collaborative approach to equitable virtual care across stakeholders and jurisdictions.

As we look beyond the pandemic and reimagine health service with integrated virtual care the work of the Equity Task Team can serve as a guide to co-design and deploy deliberate, principle-based virtual care that enhances equity in health care.

As co-Chairs of the FPT Virtual Care and Digital Health Table, we would like to commend Dr. Affleck and the Equity Task Team for the clear and robust quality of this report.

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Message from the Chair

As Chair of the Task Team on Equitable Access to Virtual Care, I would like to express my gratitude to the members of the team for their invaluable contribution to this report. Their collective expertise and wisdom have contributed immeasurably to the development of principle-based recommendations that if pursued will promote digital health equity in the publicly funded Canadian health service.

Listed below are the names of Equity Task Team members.

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EXECUTIVE SUMMARY

Virtual Care in Canada: The Current Context

The COVID-19 pandemic resulted in provincial and territorial governments rapidly accelerating the deployment of virtual care across Canada so that Canadians were able to effectively access publicly-funded health care services in a safe, physically distanced manner. However, the rapid deployment of virtual care impaired the capacity to constructively apply the appropriate design features required to promote quality of care, and specifically equitable health services. It is recognized that virtual care, if not designed thoughtfully, has the potential to exacerbate the digital divide, and compromise health equity.

To promote collaboration, the Federal, Provincial, Territorial (FPT) Virtual Care/Digital Table was struck in March 2020 with a mandate to consider and develop a proposed plan for accelerating the deployment of virtual care in Canada both during COVID and for the longer-term. In addition, the Virtual Care Expert Working Group ("Expert Working Group") was struck to provide advice and guidance on FPT work on virtual care. As part of this work, equity emerged as a critical issue, and there was interest from FPT governments to examine how best to ensure equitable access to virtual care within the publicly-funded health care system.

> **Equity in virtual care, a subset of digital health equity, is defined by the Equity Task Team as:**
>
> *"The provision of remote health services using any form of communication or information technology to facilitate or maximize the quality of patient care by joining patients and/or members of their circle of care in a manner that ensures an absence of avoidable or remediable differences among groups of people based on digital or social determinants of health."*

Our Mandate

The Task Team on Equitable Access to Virtual Care (Equity Task Team) was created under the Virtual Care Expert Working Group with a mandate to develop a principle-based framework for equitable access to virtual care and provide guidance and recommendations on the concrete actions that FPT governments can take to ensure that virtual care promotes equity as a critical dimension of quality care. The Equity Task Team took a pan-Canadian approach to examining equity in virtual care, with work focused on four stepwise thematic exercises, including: defining equity in virtual care and identifying barriers to equitable access; identifying domestic and international best practices aimed at enhancing equitable access to virtual care; developing high-level principles for the design of virtual care; and, developing recommendations based on the established design principles.

What We Found

Among the key findings was that Canada lacks a defined pan-Canadian approach to, or vision for, equity in virtual care services, in the same way that it lacks a pan-Canadian approach to health equity in care delivery. This absence of vision and design principles to guide the equitable deployment of virtual care contributes to and potentially exacerbates underlying inequities in the provision of high-quality digital care.

A lack of health data related to equity makes it difficult to understand the scope of the problem in Canada, as well as to determine the differential impact for underserved populations. In particular, a dearth of disaggregated data is of significant concern in designing virtual care services in an equitable manner.

The Equity Task Team suggests that it is critical to examine both social and digital determinants of health in examining barriers to equity in access to virtual care. In the literature, there is a general tendency to focus on the social determinants in studying inequity in health, which in the context of digital health leads to the exclusion of important, uniquely digital factors that can promote inequity in virtual care.

- **Social determinants:**
  Socioeconomic, linguistic and cultural factors such as age, gender, race/ethnicity, geography, income, and other factors have an impact on an individual's ability to take advantage of virtual care services. An individual's socioeconomic status has implications for a range of issues, including digital health literacy, access to a safe place to have virtual consults, or access to high-quality broadband and technologies.

- **Digital determinants:**
  Structural (e.g., governance, policies, regulations) and technical (e.g., interoperability, connectivity) factors have implications for equity, and have the tendency to be additive, or amplify inequities born out of social determinants of health.

In addition, we recognize that the widespread deployment of virtual care should not exacerbate pre-existing inequities in the broader health system. In particular, there is a need to ensure that virtual care is embedded in health care systems in such a way that is integrated and supports publicly-funded health care.

In exploring domestic and international best practices, we found that the development of an overarching vision and governance for virtual care, and shifting to patient- and caregiver-centred design of care to be critical enablers of equity. Other critical enablers include having access to high-quality data and evidence to support equitable design of virtual care, interoperability and a commitment to the promotion of continuity of care.

Moving Forward: Our Recommendations for a Principle-based Framework

Based on the examination of barriers to equitable virtual care access and best practices, the Equity Task Team suggests that equity should be a critical foundational element for the design of virtual care. To this end, a Principle-based vision for equitable virtual care is proposed that can serve as a unifying framework for system design. The vision is arranged in five core domains:

1. There is a shared and agreed upon *pan-Canadian vision* for digital health equity.

2. All residents of Canada, irrespective of age, race, ethnicity, gender, sexual orientation, location, income, housing, education, disability, faith, health status, citizenship, culture, stigmatizing conditions, and other socio-demographic characteristics will benefit from *patient- and caregiver-centered* virtual care design.

3. Health care providers will be *competent* to deliver equitable virtual care.

4. Supporting infrastructure and virtual care *technology* will foster digital health equity.

5. The collection and sharing of data to *monitor and evaluate* virtual care for indices of digital health equity will support transparency, accountability and continuous quality improvement*.*

Based on the proposed Design Principles, the Equity Task Team recommends that FPT governments in collaboration with a broad range of stakeholders, including patients, providers, and Indigenous groups establish a *pan-Canadian Digital Health Equity Working Group*, with a mandate to align jurisdictions around a common effort to drive progress on enhancing equitable access to virtual care. This Working Group will be tasked with coordinating efforts and working with relevant partners at a pan-Canadian level to implement the specific recommendations under each of the five Design Principles. The pan-Canadian Digital Health Equity Working Group would report to the FPT Virtual Care/Digital Table to ensure alignment with the broader virtual care agenda.

The COVID-19 pandemic has created a policy window for accelerating health care reform. As governments look to embed virtual care as a permanent feature of publicly funded health systems, the Equity Task Team urges jurisdictions to deliberately design and implement virtual care in a way that enhances equity and more broadly supports a more equitable, publicly funded health care system. A central feature of this approach is policy alignment across jurisdictions around an evidenced-based vision, which will promote regional consistency of service, economies of scale and support patient-centric quality care.

1. A shared pan-Canadian vision for digital health equity.

- Establish a model for oversight and accountability.
- Establish a national of Digital Health Equity Accord.
- Set a common definition of digital health equity.
- Establish a pragmatic framework for alignment of healthcare legislation, regulations, standards, and policy to support digital health equity.
- Build a business case for a fully equitable virtual care system in Canada.
- Reports to the FPT Virtual Care/Digital Table.

2. All residents of Canada will benefit from patient and caregiver-centered virtual care design.

- Include meaningful representation from individuals from traditionally underserved groups.
- Design virtual care to benefit all residents of Canada including those traditionally underserved.
- Work with provincial and territorial governments, industry partners, patients, providers, and other stakeholders to:
  - Promote patient virtual care literacy through the creation of training and knowledge resources
  - Promote standards of virtual care design that enshrine patient ownership and timely access to their health information, patient-centric health information integration, and team-based virtual care

3. Health care providers will be competent to deliver equitable virtual care.

- Develop core competencies for equitable virtual care to be promoted to all health professional educational faculties and certifying bodies, and a resource guide that can inform curriculum development for undergraduate, postgraduate and continuing professional development
- Leverage best practice in digital age education from other countries.
- Partner with professional colleges and education groups to promote virtual care literacy curricula and programing for providers.
- Develop a framework for inter-professional teamwork
- Work with accreditation bodies, sector specific associations and organizations to promote staff competency in virtual care equity.

4. Supporting infrastructure and virtual care technology will foster digital health equity.

- Leverage and work with ISED to ensure that Canadians have access to reliable high-speed internet by 2030
- Conduct a review and set recommendations for equitable affordable high-speed internet for all people living in Canada.
- Foster technology interfaces that promote accessible design for those with unique needs
- Establish a plan to promote universal access to virtual care for those with insufficient access to the technology, broadband, digital literacy skills, or other factors
- Identify and promote procurement standards that support equity in virtual care service.
- Promote the pan-Canadian integration of technology to support equitable care.

5. The collection and sharing of data to monitor and evaluate virtual care for digital health equity.

- Collaborate with pan-Canadian health organizations and others to collect comparable data to measure and evaluate the equity of virtual care using core indicators according to set principles of patient and community control, including Indigenous data governance principles.
- Partner with CIHI in collaboration with the provinces and territories to report regularly on equity in virtual care
- Partner with Statistics Canada to collect statistics on digital health equity and virtual care, through its Canadian Community Health Survey.
- Identify and seek to address data gaps in virtual care equity for certain populations including but not limited to Indigenous people.
- Seek to identify legislative and policy barriers that impair the sharing of data around virtual care equity.
- Promote the use of standardized metrics and benchmarks for collecting equity based virtual care stratifiers across Canada.

Figure 1 - Recommendations for a Principle-based Framework

DEFINITIONS AND TAXONOMY

In Canada, a lack of definitional rigour and consensus on the meaning of terms used in digital health may have implications for how programs and policy are developed, measured, and evaluated. As such, the Equity Task Team set out to clearly define both the terms used in this report, as well as the inter-relationship of the domains discussed. It is hoped that the definitions and relationships help move the Canadian digital health industry toward a standardized and uniform lexicon and taxonomy.

The Equity Task Team worked collaboratively with the *Alberta Virtual Care Working Group* to establish the definitions and taxonomy used in this report.

The Equity Task Team adopted Canada Health Infoway's definition of **digital health**[1], which is defined as:

> *"The use of information technology/electronic communication tools, services and processes to deliver health care services or to facilitate better health."*

For the purpose of this report, **equity**[2] is defined as:

> "*The notion of being fair and impartial as an individual engages with an organization or system*."

The Equity Task Team broadly defines **digital health equity** as:

> *"The provision of equitable health service using digital communication or information tools for the collection, exchange and use of health-related information for purposes of promoting quality care."*

Equity in virtual care, a subset of **digital health equity**, is defined by the Equity Task Team as:

> *"The provision of remote health services using any form of communication or information technology to facilitate or maximize the quality of patient care by joining patients and/or members of their circle of care in a manner that ensures an absence of avoidable or remediable differences among groups of people based on digital or social determinants of health."*

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[1] Canada Health Infoway. What is Digital Health. https://www.infoway-inforoute.ca/en/what-we-do/benefits-of-digital-health/what-is-digital-health

[2] Morton, B. and Fasching-Varner, K. 2015. Equity. Encyclopedia of Diversity and Social Justice. Vol. 1. (Ed. S. Thompson). Lanham, MD: Rowman & Littlefield. 303-4.

The definition of **virtual care**[3], derived from The Women's College Hospital Institute for Health System Solutions, is:

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

The Equity Task Team defines **circle of care** as:

> *"The group of healthcare providers and caregivers who have consent to access a patient's health information to benefit the patient's health and wellness."*

Secure messaging is defined by the Equity Task Team as:

> *"The asynchronous exchange of information between providers and patients, or between providers, through electronic platforms (e.g. texting, e-mail) that adhere to the standards of safety and privacy."*

The Equity Task Team adopted Organisation for Economic Co-operation and Development's (OECD) definition of **digital divide**[4], which refers to:

> *"The gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies and to their use of the Internet for a wide variety of activities."*

The extent to which one is impacted by the digital divide is often determined by both social determinants[5] and digital determinants of health**. Social determinants of health**, as defined by World Health Organization, are:

> *"Non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems."*

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[3] Shaw. J., Jamieson. T., Agarwal. P., et al. 2018. Virtual care policy recommendations for patient-centred primary care: findings of a consensus policy dialogue using a nominal group technique. J Telemed Telecare 2018;24(9):608–15.

[4] OECD. 2002. Glossary of Statistical Terms. https://stats.oecd.org/glossary/detail.asp?ID=4719

[5] World Health Organization. Social determinants of health. https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1

Although digital determinants of health are a subset of social determinants, for the purposes of this report we have chosen to focus upon them as a unique set of factors that have an explicit and discrete impact on digital health equity. Canada Health Infoway defines **digital determinants of health**[6] as:

"Critical aspects of social determinants of health that may be amplified in a digital context."

The Equity Task Team uses "**underserved populations**" as an umbrella term to reference the idea of:

"communities that are not well served by the health system[7]."

The term **"underserved"** emphasizes that systems are not designed to reflect the needs of certain populations, rather than placing the focus on the social identities of these groups[7]. Other terms that have been used to describe the same issue include **marginalized populations** and **vulnerable populations**. **Marginalized populations** are defined as:

"groups and communities that experience discrimination and exclusion (social, political and economic) because of unequal power relationships across economic, political, social and cultural dimensions[8]."

Similarly, **vulnerable populations** are defined as

"groups and communities at a higher risk for poor health as a result of the barriers they experience to social, economic, political and environmental resources, as well as limitations due to illness or disability[9]".

[6] Canada Health Infoway. 2019. Beyond the Divide: Exploring the Digital Determinants of Health. https://www.infoway-inforoute.ca/en/component/edocman/supporting-documents/partnership/3770-ipc2019-day02-1040-1110-tracie-risling-en-pdf?Itemid=101

[7] Shaw, J. et al. 2020. Digital Health Technologies for More Equitable Health Systems: A Discussion Paper. https://www.wchwihv.ca/assets/uploads/Digital_Health_and_Equity_Report__September_2020FINAL.pdf

[8] National Collaborating Centre for Determinants of Health. Resource Library. Marginalized Populations. https://nccdh.ca/glossary/entry/marginalized-populations

[9] National Collaborating Centre for Determinants of Health. Resource Library. Vulnerable Populations. https://nccdh.ca/glossary/entry/vulnerable-populations

INTRODUCTION

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 technology with the aim of facilitating or maximizing the quality of patient care[3]". Virtual care may be provided either synchronously or asynchronously through modalities such as, but not limited to, telephone, video, secure messaging, and remote monitoring. In this context, virtual care is envisioned as another modality of care within the publicly-funded health care system that complements in-person care and is used at the clinical discretion of the patient-provider dyad with the ultimate aim of providing high-quality care.

> "Virtual care should become a central pillar of a new health delivery system that ensures all Canadians get the right care at the right time."
>
> *–Dr. Sacha Bhatia (Population Health and Value Based Care Executive, Ontario Health) and William Falk (Adjunct Professor, University of Toronto; Innovation Fellow, Women's College Hospital)*

Virtual care offers a myriad of potential benefits relating to reduced wait times, improved clinical outcomes, cost and efficiency, and the ability to expand access to services (e.g., enhance access to primary and specialist services in rural and remote regions, timely care)[10]. Over the years, virtual care has been recognized as a key feature of high-performing health systems (e.g., Kaiser Permanente), and is seen as a critical tool to enhance access to comprehensive, patient-centered integrated care and improve health outcomes. Prior to the COVID-19 pandemic, Canadian health systems were slow to shift towards virtual services, despite evidence of the value of virtual care both to providers and patients. Uptake was relatively slow due to range of governance, policy and technical barriers, including a lack of physician remuneration codes for virtual care. Despite these barriers, in 2018, 63% of Canadians wanted to receive care services virtually[10].

The COVID-19 pandemic has been a catalyst for the adoption of virtual care, with provinces and territories moving quickly to enable access, including:
- Rapid deployment of virtual services across almost all domains of care;
- Introduction of temporary billing codes to compensate physicians for virtual care delivery;
- Online self-assessment tools for COVID-19 and other mobile applications.

A national poll by CMA-Abacus found that approximately half of Canadians (47%) have used virtual care since the COVID-19 pandemic was declared – 91% of which were satisfied with their experience[11]. In contrast, according to a survey commissioned by Canada Health Infoway, only 10-20% of Canadians reported using

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[10] Canada Health Infoway. 2020. Analysis of the current and potential benefits of virtual care in Canada. https://infoway-inforoute.ca/en/component/edocman/3819-analysis-of-the-current-and-potential-benefits-of-virtual-care-in-canada/view-document?Itemid=101
[11] Abacus Data (commissioned by CMA). 2020. What Canadians Think about Virtual Health Care? https://abacusdata.ca/wp-content/uploads/2020/06/CMA-Abacus-May-2020-Jun-4-ENv2.pdf

virtual care in 2019[12]. While there is variation in modality by geographic region, age, and sex, communication with care providers was most likely to occur over telephone, followed by video, then secure messaging[13]. Provincial and territorial efforts to increase access to virtual care in response to the pandemic has resulted in significant increase in virtual visits, with about 60% of visits being virtual (telephone, videoconferencing, texting/email) in April 2020 (compared to 10-20% in 2019). While this figure has fallen to 36% in April 2021[14], it continues to be an important modality of care. Meanwhile, in-person visits for non-COVID related issues decreased from 68% in August 2020 to 61% in April 2021[14].

Modality of Most Recent non- COVID-19 Related Visit

Legend: In-person, Video, Telephone, Messaging/e-mail, All virtual (phone, video, messaging)
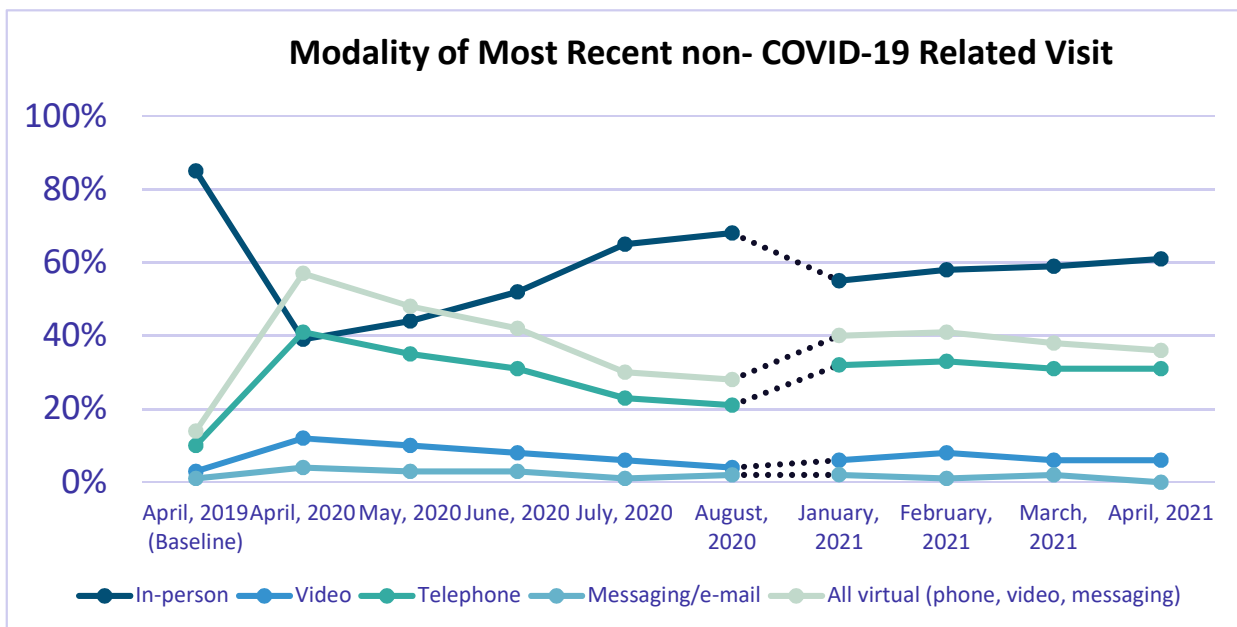
Figure 2- Source: Canada Health Infoway, 2021

While provinces and territories significantly enhanced virtual services within the publicly funded health care system during the pandemic, virtual care has largely been implemented as a stop-gap/temporary measure without significant consideration given to how it can be seamlessly integrated into service workflows and existing technology, or designed with patient or provider experience in mind. In response, federal, provincial and territorial governments are working together to build on progress to date, with the recognition that virtual care needs to become a permanent and integrated facet of publicly-funded health service in Canada.

In this context, there was interest among FPT governments to explore the issue of equity in access to virtual care. Concern has been expressed that the rapid adoption of virtual care during the COVID-19 pandemic could potentially amplify existing health care inequities by exacerbating pre-existing gaps in digital literacy, access to

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[12] Canada Health Infoway, 2020. Consulting Canadians on the Future of Their Health System. https://www.infoway-inforoute.ca/en/component/edocman/3850-a-healthy-dialogue-executive-summary/view-document?Itemid=0

[13] Canada Health Infoway, 2020. Canadians' Health Care Experiences during COVID-19. https://www.infoway-inforoute.ca/en/component/edocman/3828-canadians-health-care-experiences-during-covid-19/view-document?Itemid=0

[14] Canada Health Infoway, 2021. Canadians' Health Care Experiences during COVID-19 (May 2021 Edition). https://infoway-inforoute.ca/en/component/edocman/3828-canadians-health-care-experiences-during-covid-19/view-document?Itemid=101

broadband, and by compromising continuity of care. The capacity of social determinants of health (e.g., gender, income, ethnicity) and digital determinants of health (i.e., policy alignment, access to broadband and virtual care technology) to hinder access to care for underserved populations is well recognized.

Further, private health care vendors have been able to capitalize on the recent growth in virtual care in Canada to deliver service that is frequently episodic in nature, often not linked to in-person health services, and subjects patients to a fee for access to private virtual care platforms that provide services that are now insured by provincial and territorial health care insurance plans. These private virtual care platforms often target the needs of unattached patients and those patients who have difficulty accessing timely care. Given the significant and increasing number of private vendors of virtual care services, there is concern that out-of-pocket charges for health care services is further exacerbating the aforementioned inequities. In addition, it is suggested that some health providers providing care through private virtual care platforms may not have adequate knowledge of community-based health care services and resources, and as a consequence the interaction with the patient is not connected with the broader patient record or shared with the patient's regular health provider (e.g., family physician or specialist). Taken together, there is an urgent need to address issues relating to equitable access to virtual care to prevent further fragmentation of care.

The demand for virtual care services remains very high; 92% of Canadians want technology that makes health care more convenient and 86% of Canadians believe that technology can help solve issues within our health care systems[12]. Yet, there are glaring gaps that need to be addressed in order for digital health equity to be achieved. For instance, 60% of surveyed Canadians feel that they do not have adequate knowledge of digital health applications and services, and over a quarter of Canadians do not have reliable access to internet service[12]. As a result, there is a pressing need to promote a rational digital health architecture that mitigates health service inequities to ensure that all residents of Canada are able to reap the benefits of virtual care.

Task Team on Equitable Access to Virtual Care – Current pan-Canadian Context

Since March 2020, FPT governments have been working cooperatively to align and accelerate efforts on virtual care. To support pan-Canadian collaboration, the FPT Virtual Care/Digital Table was struck to discuss digital health and virtual care in response to the COVID-19 pandemic, including areas where efforts at a federal or national level could support rapid deployment of regional virtual care services. In addition, to better inform the work of the FPT Virtual Care/ Digital Table, the Virtual Care Expert Working Group ("Expert Working Group") was created to provide advice and guidance on FPT work to rapidly deploy virtual care in Canadian health systems.

In May 2020, the Government of Canada announced an investment of $240.5M, of which $200M is helping provinces and territories accelerate their efforts to meet health care needs through virtual tools and approaches. The same month, FPT Deputy Ministers of Health agreed to a shared agenda for the work focused on three streams:
- Five shared priority areas for investments in technology and infrastructure, with federal funding ($150M) through bilateral agreements and support by Canada Health Infoway ($50M)
  - Secure messaging and information-sharing platforms or supports for end-to-end messaging;

- o Secure video-conferencing technology;
- o Remote patient monitoring tools;
- o Patient access to COVID-19 and other lab results; and,
- o The integration and alignment of new platforms, tools or approaches into existing digital health systems.
- Evaluation of the impact of virtual care
- Policy supports for virtual care

Equity in access to virtual care became a major theme in discussions at both the FPT Virtual Care/Digital Table and Expert Working Group. The Table members expressed strong interest to ensure that governments are well-positioned to address/avoid unintended consequences related to equity arising from the widespread uptake and use of virtual care.

As part of the FPT work, governments are working collaboratively to develop a shared policy framework, which identifies barriers and opportunities for the long-term adoption of virtual services as a mode of health care delivery and a critical aspect of publicly funded health care. Equity is identified as one of the key policy enablers for the effective long-term adoption of publicly insured, universal, and integrated quality virtual care.

Given the significance of equity and the need to do targeted work, the FPT Virtual Care/Digital Table created the Equity Task Team under the Expert Working Group to do focused work on equity, with a mandate to provide:

- A principle-based pan-Canadian vision for equitable virtual care in Canada; and
- Recommendations on concrete actions that FPT governments can take to achieve the vision.

OVERVIEW OF EQUITY TASK TEAM

The mandate of the Task Team on Equity is to develop a principle-based framework for equitable access to virtual care and provide guidance and recommendations on the concrete actions that FPT governments could take to ensure that virtual care is equitable, as a critical dimension of quality.

The efforts of the Task Team were divided into four key thematic areas:

1. **Problem Definition:**

   Identify and define barriers and obstacles to equitable access to virtual care health services, particularly for rural and remote populations, Indigenous peoples, disabled, as well as for other underserved populations.

2. **Best Practices:**

   Identifying best practices and standards of excellence within Canada and internationally that support the equitable delivery of virtual health care.

3. **Define Principles:**

   Considering steps 1 and 2, develop a principle-based vision for virtual care equity in Canada.

4. **Recommended Actions:**

   Propose recommendations and pragmatic actions that will promote the realization of the vision for equitable virtual care in Canada.

Approach

Several approaches were used to advance the work of the Task Team:

- **Task Team deliberations –** The Task Team held monthly meetings to discuss ideas and deliberate upon the work in progress.

- **Input from external experts –** Monthly meetings often featured presentations by external experts (e.g., Association of Faculties of Medicine of Canada, Women's College Hospital Institute for Health System Solutions and Virtual Care) (See Annex B for list of expert presentations).

- **Internal surveys –** A series of surveys were conducted with participation from Task Team members, as well as members of the Expert Working Group. The surveys focused on each of the key thematic areas of work, with the survey results playing a key role in defining equity, identifying barriers to equitable access and domestic and international best practices, defining principles, and developing recommendations. The survey results also informed Task Team discussions.

- **Literature review –** A high-level literature review was conducted to inform various elements of the Task Team's activities and to complement the overarching ideas that stemmed from survey results.

Deliverable

A final report with concrete recommendations on actions that governments and others can take to enhance equity in virtual care will be delivered to the FPT Virtual Care/ Digital Table for consideration.

SECTION 1: BARRIERS TO EQUITABLE ACCESS TO VIRTUAL HEALTH CARE SERVICES

Virtual care offers significant potential to address both the short-term needs related to COVID-19, as well as increasing access to high-quality health services over the longer-term. Despite the potential of virtual care, patients that most stand to benefit are also often those least able to access and take advantage of care delivered virtually. There is consensus that certain populations have inequitable access to virtual care due to a diverse range of characteristics (e.g., based on age, geography, language, income and education, gender). Evidence suggests that this divide reflects barriers to accessing care delivered virtually, rather than preferences regarding the use of virtual care among different groups[15].

> "Out of necessity, virtual care was adopted to preserve some form of access to care. Going forward, we need to make sure that virtual care is effectively integrated and delivered equitably. Our pivot to virtual care was swift and at times reliant on temporary measures that must now be made permanent and stable."
>
> **–Dr. Ann Collins (CMA President, 2020-2021)**

Based on internal survey results and a literature review, there are three broad and interconnected categories of factors that impact the equitable access to virtual care. These factors all fall under the rubric of social determinants of health. The World Health Organization defines social determinants of health as "the conditions in which people are born, grow, live, work and age[16]." The three factors are:

- **Individual characteristics** – An individual's socioeconomic status (determined by factors such as, among others, age, gender, race/ethnicity, income, education level) plays a critical role in influencing equitable access to virtually delivered health services. The WHO notes that "these circumstances are shaped by the distribution of money, power and resources [and] are strongly linked to health inequities - the unfair and avoidable differences in health status[16]".

- **Digital and systemic factors** – Structural factors that impact access to virtual care, are comprised of technical determinants (i.e., interoperability, connectivity, access to technology) and systemic factors such as governance, policies, regulations, and legislation that guide virtual health and impact the equitable allocation of resources and infrastructure. These structural/systemic factors can exacerbate

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[15] OECD Library. 2019. Putting Data to Work for Stronger Health Systems: Health in the 21st Century. https://www.oecd-ilibrary.org/social-issues-migration-health/health-in-the-21st-century_e3b23f8e-en;jsessionid=rtCzOXGR4cH4lV8CQV6Nb1p1.ip-10-240-5-104

[16] World Health Organization. About social determinants of health. https://www.who.int/social_determinants/sdh_definition/en/

and amplify already existing inequities in access to virtual care services for underserved populations[17]. For example, while a lack of common approaches to licensure broadly impacts the effective adoption and use of virtual care, it may be of particular concern for those who live in rural/remote locations needing access to virtual services not offered in their jurisdiction (e.g. residents in remote locations needing specialist care). Similarly, the issue of data ownership and sharing of data across jurisdictional boundaries is a general concern in Canada, but it has a disproportionate impact on groups such as Indigenous populations, and those living in remote, northern locations. In common parlance, structural and systemic factors are often captured by the term "the digital divide".

- **Pre-existing inequities** – A third factor that must be considered when addressing inequities in the delivery of virtual care is the presence of pre-existing inequities in core Canadian health service. The individual and digital determinants listed above impact all core health services, not only virtual care. For instance, national statistics on morbidity and mortality demonstrate that Indigenous people living in Canada have a greater burden of illness and substantially shorter life-spans that non-Indigenous people[18]. Without acknowledging pre-existing inequities, the deployment of virtual care services risks amplifying long-standing disparities in core health services.

To achieve equity of access and quality care, integrating virtual care into public health systems will require careful consideration of the variability in available resources and infrastructure in different communities and contexts. An intersectional perspective, which involves examining these factors in relation to other social stratifiers, such as class, race, ethnicity, and sexual orientation, is essential to understand how these social categories interact to create specific experiences of inequity in accessing and using virtual care services. In addition, digital/systemic issues need to be added to the matrix in order to achieve a just appraisal of the complex dynamic equity ecosystem, and identify mitigating strategies for the just deployment of equitable virtual care. The Task Team identified the following principle factors for consideration.

Individual Determinants of Digital Health:

- **Age:** Age is a key dimension in digital health literacy, with important consequences for virtual care adoption and use. As one example, OECD statistics indicate around 61% of people aged 25 to 54 years old used the internet to search for health information, compared to 40% of individuals aged between 55 and 74. More specifically, due to barriers such as a lack of digital/technical knowledge in using technologies, and cognitive decline/ impairments[19], older individuals may also be less comfortable with accessing care through virtual means. For instance, Canada Health Infoway's recent analysis on digital health equity (2021) found that younger adults were more likely to use virtual care (i.e.,

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[17] Crawford, A., & Serhal, E. 2020. Digital Health Equity and COVID-19: The Innovation Curve Cannot Reinforce the Social Gradient of Health. Journal of medical Internet research, 22(6), e19361. https://doi.org/10.2196/19361

[18] Greenwood, M., de Leeuw, S., & Lindsay, N. 2018. Challenges in health equity for Indigenous peoples in Canada. The Lancet. 391(10131), 1645-1648.

[19] Vaportzis, E., Clausen, M. G., & Gow, A. J. 2017. Older Adults Perceptions of Technology and Barriers to Interacting with Tablet Computers: A Focus Group Study. *Frontiers in psychology*, 8, 1687. https://doi.org/10.3389/fpsyg.2017.01687

videoconferencing and email/text messaging) compared to older adults during the pandemic[20]. At the same time, given the digitization of other mundane tasks (e.g. social interactions, grocery shopping, manage and maintain health through applications.), recent evidence suggests that the proportion of older individuals who incorporate technology in their daily lives is increasing[21].

- **Race/ethnicity:** Health care disparities among racialized communities and ethnic minorities have multidimensional causes, which include health system factors (e.g., patients having difficulty navigating the health care system), provider factors (e.g., challenging doctor-patient communication due to language barriers, cultural/faith-based beliefs, provider stereotyping of patients), and patient factors (including trust and digital literacy). These could be exacerbated in the context of virtual care delivery.

- **Indigenous populations:** For Indigenous persons, a range of factors can contribute to inequity in access to health care services, which could be potentially amplified in virtual care. Adverse health experiences of Indigenous peoples in Canada are not only linked to social determinants, but also to systemic racism in society and the health system, which creates barriers to accessing care at the delivery level. Medical services and public health have been "tool[s] of colonization"; historical practices that contribute to "contemporary social suffering and continue to affect the way that some First Nations, Inuit and Métis communities view public health and public health recommendations"[22]. This was reflected in Infoway's digital health equity analysis (2021), which indicated that, while disparities in access between Indigenous populations and non-Indigenous people have decreased during the pandemic, Indigenous people were more likely than other Canadians to experience difficulty with accessing services and having information needed to manage their health effectively[20].

  In addition, there are significant gaps in health data for First Nations populations on- and off- reserve, which hamper the delivery of health services including virtual care. This relates to fragmented technology platforms, health management and issues/misunderstanding with balancing the First Nations principles of OCAP (Ownership, Control, Access, and Possession) with the intent to use anonymized data to guide health service decision-making.

- **Gender Identity and Sexual Orientation:** As noted by in a recent article on gender and health equity, "digital health interventions are often carried out in contexts where gender inequalities, biases, class disparity and uneven power dynamics prevail[23]." As there is a lack of research on virtual care services

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[20] Canada Health Infoway. 2021. Digital Health Equity Analysis: Access to Electronically-Enabled Health Services. https://www.infoway-inforoute.ca/en/component/edocman/3883-digital-health-equity-analysis-access-to-electronically-enabled-health-services/view-document?Itemid=101

[21] Age-Well. 2020. COVID-19 has significantly increased the use of many technologies among older Canadians: poll. https://agewell-nce.ca/archives/10884

[22] Richardson, L., Crawford, A. 2020. COVID-19 and the decolonization of Indigenous public health. CMAJ Sep 2020, 192 (38) E1098-E1100; https://www.cmaj.ca/content/192/38

[23] Sinha, C., & Schryer-Roy, A. M. 2018. Digital health, gender and health equity: invisible imperatives. Journal of Public Health, 40(2), ii1–ii5. https://doi.org/10.1093/pubmed/fdy171

that incorporates a sex-gender based analysis, there is a need to better understand possible inequities in virtual care, especially for underserved populations such as women[24] and LGBTQ2IA+ patients. However, Infoway's recent analysis suggested that young women were more likely to experience barriers to accessing virtual care during the pandemic compared to older women and men due to a range of issues, such as a lack of health literacy. Given the evidence that suggests a wide digital divide exists on an international level, especially for underserved populations, the United Nations Human Rights Council[25] identified a strong need to bridge the digital divide amongst various groups, especially women and girls.

- **Geography:** In many OECD countries, broadband internet access is more common in households in urban areas than in rural areas and in households with higher incomes. In Canada's north, the uptake of virtual care has been slow and remains significantly underdeveloped. This was reflected in Infoway's recent analysis, which suggested that Canadians living in urban regions were more likely to access virtual care compared to those living in rural regions[20]. The Report of the Task Group on Expanding Virtual Care Capacity and Tools in the North noted that "capacity limitations across multiple domains - technical, infrastructure, knowledge and human resources - impact the deployment and sustainability of virtual care[26]." The report went on to highlight that "bandwidth shortfalls limit digital capacity, and expertise is often lacking in information system design and deployment[26]."

- **Income and Education:** Lower income and educational status plays an important role in terms of impact on use of virtual care services. Individuals with lower income and low educational attainment are more likely to lack the health and digital literacy necessary to use virtual care services. Across the OECD, poor and less educated individuals were respectively, 65% and 50% less likely to use the internet to seek health information compared to wealthy and more educated citizens. In addition, smartphones/tablets and other forms of technologies are often unaffordable for many in low socioeconomic status communities, let alone video-conferencing capability that requires costly high-speed internet connectivity. This was reflected in Infoway's recent analysis, which found that high income groups were more likely to access virtual care than low income groups[20].

- **Pre-existing Health Conditions and Disabilities:** Patients with disabilities (e.g., visual or hearing impairments) may have trouble benefiting from virtual care services to the same degree as those without disabilities. More specifically, Infoway's digital health equity analysis found only 50% of Canadians with disabilities reported having access to care delivered virtually[20]. This disparity in access

[24] Brisson-Boivin, K. & McAleese, S. 2021. How digital literacy can help close the digital divide. Policy Options. https://policyoptions.irpp.org/magazines/april-2021/how-digital-literacy-can-help-close-the-digital-divide/
[25] United Nations General Assembly. 2016. The promotion, protection and enjoyment of human rights on the Internet. https://www.article19.org/data/files/Internet_Statement_Adopted.pdf
[26] Task Group on Expanding Virtual Care Capacity and Tools in the North. Proposed Approach for Rapid Deployment: Expanding Virtual Care Capacity in Canada's Northern Regions. 2020. https://www.nccih.ca/Publications/lists/PublicationsExternal/Attachments/9/Expanding%20Virtual%20Care%20Capacity%20in%20Canadas%20Northern%20Regions%20FINAL%20EN%20May%202020.pdf

demonstrates the need for careful attention to how virtual care services/digital tools are designed to be accessible for those with disabilities.

- **Culture:** A review of Canadian, U.S., British and Australian publications[27] found that differences in cultural patterns of "help-seeking and a lack of culturally-sensitive services or delivery modes were barriers to accessing health care or to gaining full benefits from that care". As noted in a research article exploring racial inequities in access to health care: "in an environment largely determined by dominant cultural values, some groups face health risks stemming in part from a lack of access to culturally appropriate health care and services[27]." As such, it is evident that the current model of care does not facilitate health equity amongst various ethnic and cultural groups. Therefore, virtual care services modelled on existing approaches to health care can exacerbate inequities for both Indigenous peoples and other cultural groups in Canada.

Structural and Systemic Determinants of Digital Health:

- **Governance:** The governance of health services, and health data in Canada has an impact on the capacity to furnish comprehensive virtual care services. The constitutional responsibility for the administration, organization, and delivery of health care falls under provincial and territorial jurisdiction. The federal government plays a range of roles in health, including providing financial support to the provinces and territories to deliver publicly funded health care and direct funding for delivery of health care services to specific groups, including First Nations people living on reserves, Inuit and a range of other federal populations (e.g., members of the Canadian Armed Forces, eligible veterans). This effectively promotes race-based and jurisdictional fragmentation of health governance, prompting a variation in factors including legislation, remuneration, workflow, policy and technology, and a patchwork approach to health service design and management. Mature and equitable virtual care services require data, technology and workflow interoperability to be effective, properties that are challenging to realize in a fragmented governance environment. The end-product of this disjointed governance model is the fragmentation of, and potential promotion of inequities in virtual care services.

- **Legislation, Policy, and Regulation:** The suite of regulatory standards, legislation and policies that support and/or impact virtual care services are jurisdiction specific and frequently not internally aligned nor up to date with respect to digital health services. Health Information Acts, are framed around a custodial model of health data management that arguably is an impairment to the effective virtualization of health services. In turn, professional regulatory standards in provinces are frequently not aligned around a common vision for virtual care, prompting conflicting advice to different members of a patient's circle of care. These factors constitute policy inconsistencies that can obstruct interjurisdictional virtualization, and lead to local variation in services depending on the maturity of

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[27] Ontario Human Rights Commission. Racial inequality in access to health care services http://www.ohrc.on.ca/en/race-policy-dialogue-papers/racial-inequality-access-health-care-services

the digital policy suite of a given jurisdiction. By way of example, there is a differential approach to compensation for virtual care services between jurisdictions in Canada, and until the advent of COVID-19 many jurisdictions did not compensate for virtual care service at all. The by-product of this variation in compensation is the inequitable distribution of virtual care services across the country.

Another emerging example is the lack of a common pan-Canadian approach to identifying the appropriate role, and regulation of the rapid expansion of virtual "walk-in" clinics, many of which are offered directly to Canadians by private vendors. The private sector has offered new and expanded solutions in response to recent temporary fee codes implemented by provinces and territories, with Canadians now having access to over forty private-sector virtual care services. While some of the health services offered by these virtual care platforms are now covered by public insurance plans (with variation across jurisdictions), others have partnered with employers/insurers. Given that many of these services require Canadians to pay out-of-pocket, or have employer health insurance, there is significant concern that these private sector providers could exacerbate existing inequities within health systems. It is important to note that physician services offered through in-person walk-in clinics are publicly-insured by provincial and territorial plans, yet variation exists across jurisdictions in terms of whether physician services offered through these virtual care platforms are publicly-insured.

While the virtual walk-in clinic model fills a need for Canadians who lack access to services – particularly where they do not have a primary care physician – the care is usually siloed, episodic and disconnected from primary care. Taken together, this policy disorder can promote inequities in virtual care service.

- **Resources:** The financial and knowledge resources dedicated to the provision of virtual care differ by location based on local digital health strategic planning, management and capacity. This results in a patchwork of virtual care efforts that are often non-aligned and can result in inequities of service for those patients living in resource-poor locations.

- **Virtual care technology:** The core virtual care technologies are phone, secure messaging, videoconferencing, and remote monitoring. There is differential deployment of these technologies in Canada by jurisdiction, health authority or health service, which results in inequities in virtual care service. Further, the lack of access to reliable, affordable high-speed internet has been a longstanding issue in rural/remote regions of Canada. According to the latest CRTC Communications Monitoring Report, only 37% of rural households and 27.7% of First Nations households on reserves have access to 50/10 Mbps service, compared to 84.1% of other Canadians[28]. These technical variability and limitations results in compromised capacity for virtual care in certain demographics.

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[28]Canadian Radio-television and Telecommunications Commission. 2019. Communications Monitoring Report. https://crtc.gc.ca/pubs/cmr2019-en.pdf

- **Interoperability:** Equitable, patient-centric virtual care is enabled by the capacity of all members of the patient's circle of care to exchange information on a need to know basis to promote the welfare of the patient. To accomplish this, technical and data interoperability is required. In particular, there is a need to recognize that interoperability should occur between different types of providers within a patient's circle of care, regardless of the types of platforms they use. Likewise, there are challenges associated with integrating third party tools to exchange and collect health information across platforms, health services and jurisdictions. Unfortunately, the Canadian health care ecosystem is hobbled by a systemic lack of interoperability which presents an obstacle to mature, full-service and integrated virtual care. Differing levels of technical and data interoperability in different locations and services in Canada promote inequities in the availability and usefulness/efficiency of integrated, high-quality virtual care service.

- **Provider literacy:** The training of the health workforce in Canada, across professional groups, is lacking in virtual care curricular content. Digital health literacy is a determinant of competency to provide quality virtual care service. Included in the training should be an exploration of health equity in the context of digital health. A lack of digital literacy impairs provider capacity or comfort with virtual care, potentiating inequities in service. There is a paucity of research and data on provider digital health literacy in Canada, suggesting that further study in the area is required.
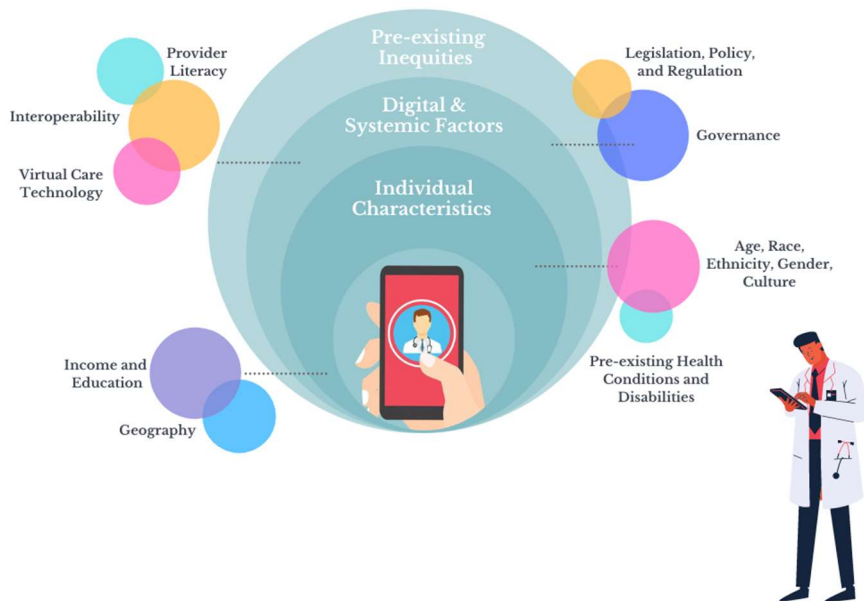
Data and Evidence on Inequities in Access to Virtual Care in Canada

With specific regard to virtual care, disaggregated data on use by various social groups (i.e., age, gender, income, geographic region) and the extent to which these groups face access barriers are extremely limited. However, some emerging data from the Centre for Digital Health Evaluation suggests that all groups in Ontario

(regardless of age and income) have been just as likely to use virtual care throughout the COVID-19 pandemic[29]. This is likely linked to the fact that the vast majority of virtual care was delivered through a modality of communication that is almost universally accessible, the telephone, as opposed to other modalities such as video conferencing or secure messaging[30]. This was reflected in a recent finding from Infoway, which suggested that older adults were more likely to use telephone to seek virtual care compared to younger adults across Canada. Expectedly, it also found that younger adults were more likely to use secure messaging and video-conferencing compared to older adults[20].

The lack of comprehensive disaggregated data by specific demographic, province and territory poses challenges to assessing the extent to which certain groups face difficulties in accessing virtual care services. This is compounded by the fact that limited research exists to provide a comprehensive understanding of the difficulties that specific social groups encounter in accessing virtual care, including the diverse needs within social groups. While it is widely accepted that a broad range of social and structural barriers (e.g., lack of digital literacy, access to broadband and technology, limited culturally appropriate services) impacts equitable access to virtual care for underserved populations, the

> "The pandemic has exacerbated existing disparities related to the social determinants of health. Where we live, how we earn a living, our educational opportunities, financial circumstances affect our health outcomes in dramatic ways. We need to make certain that digital solutions are solutions for those we serve."
>
> – Ann Heesters, Ph.D. (Professor, Dalla Lana School of Public Health, University of Toronto)

deficiency in the availability of data and research makes it difficult to effectively characterize the problem. This work is especially important given evidence that the needs of underserved populations are often neglected not only in virtual care, but in the health care system as a whole.

As one example, the paucity of data on digital health literacy amongst the population has been a longstanding issue, with the lack of data being of particular concern now that virtual care has been widely deployed in response to COVID-19 in Canada. For instance, while the OECD found that between 36%-60% of Canadian adults had low health literacy levels in 2018[30], this paper did not include information specifically relating to digital health literacy. Moreover, efforts made in 2012 to collect data on digital literacy skills of Canadian adults (e.g. problem solving with technology, overall levels of reading), such as the *Programme for the International Assessment of Adult Competencies*, have not specifically measured digital health literacy[31]. Since virtual care will continue to remain a core modality of care post-pandemic, there is a strong need to collect data relating to digital health literacy to facilitate digital health equity amongst all groups.

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[29] Centre for Digital Health Evaluation. 2020. A National Strategy for Digital Health Evaluation: Update.
[30] Moreira, L. 2018. Health Literacy for People-Centred Care: Where do OECD countries stand? Directorate for Employment, Labour, and Social Affairs Heath Committee. Organisation for Economic Co-operation and Development.
https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DELSA/HEA/WD/HWP(2018)4&docLanguage=En
[31] Statistics Canada. 2013. Programme for the International Assessment of Adult Competencies (PIAAC).
https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4406

Although there is clear documentation of certain digital/systemic determinants of virtual care accessibility such as high speed internet capacity and cost, many digital/systemic determinants of digital health remain unstudied. A means of evaluating the index of integration or interoperability of a digital health ecosystem and relating that to indices of quality of care, including health equity, would be a very valuable exercise. Similarly, a study of the impact of provider digital literacy on quality of care, or an evaluation on the extent and impact of policy variations on the integrity of virtual care capacity and accessibility would help inform curricular and policy development and alignment.

SECTION 2: BEST PRACTICES FOR EQUITABLE ACCESS TO VIRTUAL CARE

The purpose of this section is to provide a high-level overview of domestic and international best practices in equitable virtual care, with a view to exploring approaches that could inform the development of principles and solutions to the barriers identified in the previous section. These best practices were identified through an internal survey, as well as a high-level literature review.

A majority of pragmatic approaches to optimizing equitable virtual care found in this section involve modification of the digital /systemic determinants of virtual care equity. Individual determinants of health inequity - which for the most part transcend virtual care and impact all health service - are by their very nature more complex and challenging issues to address.

Examples of potential large-scale changes, which are especially relevant in the Canadian context, include the development of a **pan-Canadian vision** for equitable virtual care, and shifting from a provider-centered to **patient and caregiver-centered** health information approach[32]. Other key areas of relevance to enhancing equity in access to virtual care include **data and evidenced based policy development/design, interoperability,** and the need to promote **continuity of care.**

Overarching Vision for Digital Health Equity:

Governance and Strategy for Implementation

There are various requirements needed to deploy and manage an equitable pan-Canadian digital health network. These include a national framework, clear oversight, and a strategy for implementing digital health care in an equitable manner. Governance, in particular, is central to reforming this modality of care. According to the WHO, "governance in the health sector refers to a wide range of steering and rule-making related functions carried out by governments/decisions makers as they seek to achieve national health policy objectives that are conducive to universal health coverage[33]". In the Canadian context, this involves working across jurisdictions and with the private sector to ensure transparency and accountability within the health care sector.

[32] Desveaux, L., Soobiah, C., Bhatia, S., Shaw, J. 2019. Identifying and Overcoming Policy-Level Barriers to the Implementation of Digital Health Innovation: Qualitative Study., Journal of Medical Internet Research, 21(12), e14994, https://www.jmir.org/2019/12/e14994/
[33] World Health Organization, Governance, Health Systems. https://www.who.int/healthsystems/topics/stewardship/en/#:~:text=Governance%20in%20the%20health%20sector,conducive%20to%20universal%20health%20coverage.

- **Denmark** has implemented a national framework[34] for administering virtual care, including standardization of terminology for providers, data sharing amongst health care providers, and general regulations for virtual care. This national framework allows for a greater focus on population health and preventative measures by analyzing national trends. Their digital health strategy emphasizes data collection, preventative medicine, integration of care, and a national database for IT architecture informing their health initiatives to serve their population.

> "Beyond the design of research and clinical services, it is important to have ongoing quality improvement processes that ensure rapid identification and iterative improvement of equity and safety within virtual care."
>
> – *Dr. Allison Crawford (Associate Chief, Virtual Mental Health and Outreach, The Centre for Addiction and Mental Health; Professor, Dalla Lana School of Public Health, University of Toronto)*

- **Australia** also has a national digital health strategy[35] that features a secure and efficient model for high-quality care. This includes creating specific goals relating to patient-centered care, coordination of services, and reducing administrative errors. To make health care more equitable for underserved populations (e.g. Indigenous groups, low income groups, and older adults), greater resources have been allocated to groups based on their specific needs. Further, an important component of their framework involves providing inclusive, culturally appropriate health care for Indigenous groups.

- **Kaiser Permanente** is renowned for their design of a patient-centered, integrated model of care. They have successfully integrated virtual care as a modality of care in their integrated, coordinated continuum of health care services. They have done so through the use of a single electronic medical record, video-conferencing, electronic prescriptions, diagnostic imaging, and secure messaging[36]. Moreover, patients are able to receive coordinated primary care and specialized services, along with remote patient monitoring. This has facilitated an increased use of virtual services, patient satisfaction, and improved health outcomes[37].

Data and Evidence-Based Policy for Equity

The virtualization of care is rapidly generating a significant volume of data, which can provide valuable insight on patient and provider experiences, health outcomes, and other indicators of system performance. Collecting this health data, particularly for underserved populations, can help identify specific health care needs. Likewise, understanding the population health needs of underserved groups can help identify barriers to

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[34] Connected Health. 2018 Denmark – a telehealth nation. https://www.healthcaredenmark.dk/media/r2rptq5a/telehealth-v1.pdf
[35] Australian Government, 2020. Australia's National Digital Health Strategy. Safe, seamless, and secure: evolving health and care to meet the needs of modern Australia. https://www.digitalhealth.gov.au/sites/default/files/2020-11/Australia%27s%20National%20Digital%20Health%20Strategy%20-%20Safe%2C%20seamless%20and%20secure.pdf
[36] Kaiser Permanente. 2020. A Breakout moment for virtual care. https://about.kaiserpermanente.org/our-story/our-care/a-breakout-moment-for-virtual-care

implementing health equity initiatives. By using an interdisciplinary approach consisting of health, social care, behavioural, and socioeconomic data, the needs of underserved groups can be better understood. In turn, this facilitates effective, efficient, and equitable care within the health care system.

- **Denmark** prioritizes national secure data sharing through its *Danish Health Data Network* platform[37]. This platform ensures their health care system reflects the changing demographics of the Danish population, notably the growing aged population. Beyond collecting health care data, Danish patients also have the opportunity to submit feedback for health care services provided by various levels of government. This data ultimately facilitates both qualitative and quantitative evidence-based preventative measures and general improvement to the quality of care. For example, by collecting data on *TeleCare Nord*, Denmark was able to scale up this successful virtual care strategy for patients with Chronic Obstructive Pulmonary Disease (COPD) on a national level. This has resulted in equitable access to care for patients regardless of geographic location and age, as well as opportunities for patient-centered care and prevention of COPD.

- An independent company evaluated **England's** Babylon GP at Hand (BGPaH) initiative by collecting and analyzing quantitative and qualitative data, and brought forth a range of issues relating to health inequity[38]. For instance, this evaluation found that younger, educated patients were much more likely to use BGPaH compared to older, less-educated patients. The evaluation also outlined equity issues related to lack of digital literacy and access to technology which had disproportionate impacts on underserved populations. The study noted future considerations for the design of the application, which include widening the scope of medical conditions as well as designing and implementing patient-centered approaches to reflect the ethnic, socioeconomic, and geographic diversity of their population.

Patient and Caregiver-Centered Approaches to Equitable Virtual Care:

Inclusive design of virtual care and needed supports for patients and providers to fully take advantage of virtual care

Inclusive design of health technology, which focuses on user-friendly platforms, cultural/faith-based diversity, and accessibility, is central to ensuring patient- and caregiver-centred virtual care. There are domestic and international examples of jurisdictions building virtual care platforms that are targeted to address the needs of specific underserved populations, and develop patient-centric digital systems that are aimed at enhancing coordinated, longitudinal patient care. Patients and providers will also need targeted supports to ensure that they are able to effectively leverage the virtual care to improve care, with a particular focus on digital literacy.

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[37] Health Europa. 2019. Enhanced data sharing and continuity of care in Denmark. https://www.healtheuropa.eu/enhanced-data-sharing-and-continuity-of-care-in-denmark/90990/
[38] Ipsos MORI, YHEC. 2019. Evaluation of Babylon GP at hand: Final Evaluation report. https://www.hammersmithfulhamccg.nhs.uk/media/156123/Evaluation-of-Babylon-GP-at-Hand-Final-Report.pdf

As the COVID-19 pandemic continues, digital health literacy has become increasingly relevant to support virtual care. For instance, there has been a growing need to ensure that both patients and providers can access, understand, and use appropriate devices and applications for health-related purposes (i.e. virtual appointments)[39] to engage in quality care in a physically distanced manner. Higher levels of digital health literacy for patients are associated with increased levels of engagement, which helps to ensure that patients are able to take greater advantage of the various benefits of virtual care[40]. As digital health literacy remains a barrier to accessing virtual care, especially for underserved populations, there is a need for structural measures that promote digital health literacy.

- In **Canada,** some jurisdictions are deploying patient-centric digital platforms to promote coordinated, seamless care. For instance, all Albertans are now able to access their lab results through their *MyHealth Portal[40]*. Yukon is embarking on a project to build one unified modular charting system for all health care services[41]. Likewise, Prince Edward Island is working on a project to have one single outpatient chart within the province[42]. The Northwest Territories currently has the most integrated digital system in Canada with a single patient-centric outpatient chart for all residents of the Territory shared by all service providers, complete with intrinsic secure messaging[43].

- In **British Columbia,** the First Nations Health Authority's *Virtual Doctor of the Day* program provides service to First Nations populations to address systemic shortfalls in timely, culturally safe virtual care for Indigenous residents[44]. This program integrates the virtual care with an electronic medical record to facilitate continuity of care[45].

- The *Integrated Comprehensive Care* service at St. Joseph's Healthcare Services in Hamilton, **Ontario** offers seamless, coordinated care through one care coordinator, one electronic medical record, and one health care team for patients who are recovering from surgery[46]. Specifically, this service offers virtual care (e.g., secure messaging, phone calls, and video-conferencing) as a complementary modality of care and method of communication to patients and their caregivers, which is associated with increased patient satisfaction, fewer hospitalizations, and efficiency of service.

[39] Canada Health Infoway. Supporting Patients' Digital Health Literacy. https://www.infoway-inforoute.ca/en/what-we-do/blog/digital-health-records/8724-supporting-patients-digital-health-literacy

[40] Alberta. MyHealth Records. https://myhealth.alberta.ca/mhr-features

[41] Yukon News. 2019. Improvements planned for Whitehorse General Hospital. https://www.yukon-news.com/news/improvements-planned-for-whitehorse-general-h

[42] Prince Edward Island. 2021. Electronic Medical Records. https://www.princeedwardisland.ca/en/information/health-pei/electronic-health-records-ehrs

[43] Northwest Territories leads Canada in electronic medical record coverage, 2017. CMAJ, 189:E1469. doi: 10.1503/cmaj.109-5511

[44] First Nations Health Authority. 2020. First Nations Virtual Doctor of the Day – Health Care Professionals. https://www.fnha.ca/what-we-do/ehealth/virtual-doctor-of-the-day/health-care-professionals

[45] Tedesco, Eyrin. 2021. [Presentation to FPT Virtual Care Table]. *First Nations Virtual Doctor of the Day Programs. First Nations Health Authority.*

[46] St. Joseph's Healthcare Hamilton. Integrated Comprehensive Care. https://www.stjoes.ca/hospital-services/integrated-comprehensive-care-icc-

- **Estonia** is a world leader in digitizing government operations, ranging from paying for parking tickets to online medical services. The Estonian government has prioritized digital literacy as a key component of their education curriculum, facilitating greater understanding and increased trust in the digital system[47]. The Estonian government has also prioritized provider literacy, requiring physicians and nurses to attend training programs to ensure they are up-to-date with the ever-changing health care programs and applications[48].

- **WHO:** The Regional Committee for Europe published a roadmap in 2019[49] highlighting potential initiatives for increasing digital health literacy. Equity is prominently featured in their effort, which employs user-friendly platforms and programs that can be easily adjusted based on the needs of underserved populations. More broadly, data-collection initiatives, such as data collection through national surveys, are critical to informing future policy and developing frameworks by capturing the needs of minority groups.

- Researchers from the **United States** have recommended[50] creating virtual care support platforms for deaf and hard of hearing patients to overcome barriers to care during and post-COVID-19. In addition, this article recommends that virtual care platforms leverage existing accommodations for persons with disabilities (e.g., communication boards, closed captioning, video platforms with group chat options for interpreters) to accommodate the needs of their patients. These inclusive measures contribute to the increased comfort of persons with disabilities, improved privacy and a general decrease in medical errors[51].

- **Australia** has implemented measures to increase equitable access for Indigenous peoples[36]. Specifically, these measures are aimed at decreasing health disparities between Indigenous and non-Indigenous populations, which are derived from challenges accessing quality health care. As such, language barriers, lack of digital health literacy, and overall access to virtual care services have been at the forefront when designing health care services and guidelines. This involves designing user-friendly applications and collecting greater data on Indigenous health for future policy and intervention.

Infrastructure, Interoperability and Technology

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[47] E-Estonia. 2017. Creating the next generation of digital state developers. https://e-estonia.com/creating-next-generation-of-digital-state-developers/

[48] ERR News. 2020. Digital skills training to be provided for 500 family doctors and nurses. https://news.err.ee/1031094/digital-skills-training-to-be-provided-for-500-family-doctors-and-nurses

[49] World Health Organization. 2019. Draft WHO European roadmap for implementation of health literacy initiatives through the life course. https://www.euro.who.int/__data/assets/pdf_file/0003/409125/69wd14e_Rev1_RoadmapOnHealthLiteracy_190323.pdf

[50] McKee, M., Moran, C., Zazove, P. 2020. Overcoming Additional Barriers to Care for Deaf and Hard of Hearing Patients During COVID-19. *JAMA Otolaryngol Head Neck Surg.* 2020;146(9):781-782. doi:10.1001/jamaoto.2020.1705

A review of international and domestic policies showcases the need to ensure that the right infrastructure is in place along with interoperable systems and appropriate technology to enable the effective adoption and use of virtual care. Interoperability is defined as "the ability of two or more systems or components to exchange information and to use information that has been exchanged[51]". Inclusive and nimble data interoperability that enables enterprise health information exchange, is an essential feature of comprehensive patient-centric virtual care. Further, interoperability within and across health care systems, promotes the capacity to collect large datasets, which support clinical decision support, analytics, machine learning, and artificial intelligence[4].

> "Virtual care focuses on the use of technology to support patients in the community and to deliver care directly to them. Used well, it improves access to care and can greatly enhance the patient experience."
>
> -- Dr. Edward Brown (Founding CEO, Ontario Telemedicine Network)

Major virtual care modalities, meaning telephone, video, secure messaging and remote monitoring, coupled with high-speed internet are the core elements of a mature virtual care environment.

- **The Ontario Telemedicine Network** has increased public access sites to virtual care equipment and support from a trained telemedicine coordinator, which has been an ongoing initiative for over ten years. They have also collaborated with Indigenous health care networks to provide equipment and support for fly-in communities to benefit patients from remote regions.

- In **Canada,** various initiatives exist that help to bridge the digital divide for low income households. On a federal level, in Budget 2019, the Government of Canada announced a $1.75 billion investment through the Universal Broadband Fund to enhance access in high-speed internet for all Canadians by 2030[52]. More recently, in Budget 2021, the federal government announced an additional $1 billion over six years for the Universal Broadband Fund, with a view to accelerating the implementation of broadband projects. As another example, the federal initiative *Connecting Families* invested $13.2 million over five years, starting in 2017-2018 to support Canadian families who struggle to afford access to home Internet.

  Connected for Success, launched by Rogers, offers high-speed, low-cost internet to subsidized tenants, and to individuals receiving income or disability support in Ontario, New Brunswick and Newfoundland. *Internet for Good*™ is a program launched by Telus in partnership with the governments of BC and AB, and provides affordable internet to low-income single parent households. Some provinces, such as New Brunswick, Saskatchewan, and Nova Scotia, have plans to supply devices

[51] Lehne, M., Sass, J., Essenwager, A., Schepers, J. Thun, S. 2019. Why digital medicine depends on interoperability. NPJ Digi Med, 2(79),1-5, https://www.nature.com/articles/s41746-019-0158-1
[52] Prime Minister of Canada. 2020. Connecting all Canadians to high-speed Internet. https://pm.gc.ca/en/news/news-releases/2020/11/09/connecting-all-canadians-high-speed-internet

to older adults in nursing homes for access to virtual care and to address loneliness due to physical distancing.

- **Estonia** has used a national e-healthcare system called the *Estonian Nationwide Health Information System*[53] since 2008. Estonia has credited its resounding success to digital infrastructure that allows for the fast, secure transmission of data between all government systems. The single secure patient charting system allows providers to share a patient's complete medical history, which assures patient safety, and efficiency of care. This has been associated with improved health outcomes, fewer medical errors, and improved overall patient satisfaction[54].

- **Iceland** has adopted the use of a user-friendly, free patient health portal named *Heilsuvera*[54] for coordinated, seamless care amongst all health care providers to facilitate patient empowerment and safety regardless of geographic location. Patients from both rural and urban regions are able to access their electronic health records, and subsequently receive quality care through this health portal. This single record includes all information including patient history, allergies, prescriptions, immunization records, and scheduling for future appointments. As each patient has access to their own electronic health records, they are able to access their medical history along with health literature that corresponds to their health status[55]. Not only does this interoperable platform allow for coordination between services, but it also allows for providers to collect and monitor health outcomes to inform health care system improvement.

- **Finland** has also introduced an electronic health record named *MASSE*[55], which is designed specifically for patients with chronic conditions. As patients with chronic care needs require additional health care services from various providers, an added layer of coordination is required. While this program is quite new and is still in development, it ultimately aims to coordinate care between all categories of providers as well as monitor health conditions.

- **U.S Veterans Affairs**[56] prioritizes homecare by providing veterans with point-of-care devices that are connected to video platforms for virtual care. Providers are able to conduct remote exams using Bluetooth-connected peripheral devices, such as stethoscopes and blood pressure monitors, with minimal patient involvement. In the absence of home-based technology, community access points are also available to ensure that veterans have access to care. Beyond primary care, regionally-owned clinical resource hubs also provide health care services tailored specifically to the needs of veterans, which include mental health and rehabilitation services. Resource hubs are typically placed where in-person care is limited, which has been associated with an increase in mental health service use by

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[53] Health Europa. 2019. Learning from Estonian e-health system, https://www.healtheuropa.eu/estonian-e-health-system/89750/
[54] E-health services available for everyone and at all times in Iceland. Heilsuvera.IS. https://www.healthcareatdistance.com/media/1121/e-health-services-available-for-everyone-and-at-all-times-in-iceland.pdf
[55] Business Finland, 2020. Virtual Care Management Improves the Treatment of Chronic Diseases. https://www.businessfinland.fi/en/whats-new/news/2020/virtual-care-management-improves-the-treatment-of-chronic-diseases
[56] U.S. Department of Veterans Affairs. VA Telehealth. https://telehealth.va.gov/

veterans who have low incomes and/or are chronically ill, disabled, or homeless[57]. Moreover, consultations with patients led to an informed system design, which has supported greater access to care.

[57] Centers for Disease Control and Prevention, 2020. [Clinician Outreach and Communication Activity Webinar]. Impact of Telehealth on Health Equity Perspective of Large Healthcare Systems during COVID-19.

SECTION 3: HIGH-LEVEL DESIGN PRINCIPLES

The development of high-level virtual care equity *Design Principles* was informed by the findings outlined in sections 1 and 2, an internal survey, and subsequent Task Team written input and deliberations. The Task Team recognized that a priority in the crafting of Design Principles was the need for a **national vision** and **framework for equitable care**, and the necessity to shift from a provider-centered to **patient- and caregiver-centered digital** health focus.

These high-level Design Principles articulate the key elements of a national vision for equitable virtual care. Virtual care equity is considered a subset of digital health equity, which we have defined as *the provision of equitable health service using digital communication or information tools for the collection, exchange and use of health-related information for purposes of promoting quality care.*

The Design Principles are arranged in five domains, followed by sub-principles. The five domains are:

> "Virtual care has the power and ability to not only improve patient care — improve access to care — it can also make physicians' practices more efficient."
>
> *-- Dr. Gigi Osler (CMA President, 2019-2020; Professor, University of Manitoba; ENT Surgeon)*

- o Pan-Canadian Vision
- o Patient and Caregiver Centeredness
- o Provider Competency
- o Technology
- o Monitoring and Evaluation

Virtual Care Equity Design Principles

1. There is a shared and agreed upon ***pan-Canadian vision*** for digital health equity

    a. There is a common and agreed-upon pan-Canadian definition of digital health equity.

    b. Digital health equity is central to the quality of virtual care with other domains being safety, effectiveness, efficiency, timeliness and patient-centered care.

    c. Virtual care design principles should align with, and uphold, a pan-Canadian vision for digital health equity, and a commitment to equitable universal, publicly-funded health care.

    d. Health care regulations, standards, policy, and legislation will be in alignment with the vision for Canadian digital health equity.

    e. Virtual care will be integrated with and supported by publicly-funded health care.

2. All residents of Canada, irrespective of age, race, ethnicity, gender, sexual orientation, location, income, housing, education, disability, faith, health status, citizenship, culture, stigmatizing conditions, and other socio-demographic characteristics will benefit from ***patient and caregiver-centered*** virtual care design.

   a. Patients from diverse communities will have meaningful representation at all oversight levels of virtual care design, implementation and management.

   b. Virtual care service will be inclusively designed with the active involvement of *underserved groups* to ensure effectiveness and relevance to their communities.

   c. All patients will have access to training and knowledge resources to enhance and strengthen their digital health literacy in a manner that accommodates their diverse needs.

   d. All Canadians will have ownership of and access to their complete, composite health and social service information.

   e. All Canadians will have their comprehensive health information follow them through their longitudinal health journey.

   f. All patients and their caregivers will have access to team-based virtual care and be recognized and treated as central members of the team.

3. Health care providers will be ***competent*** to deliver equitable virtual care

   a. The competency of providers to deliver appropriate and equitable virtual care will be assured through education, training, licensure, and regulation;

   b. Comprehensive team-based care that supports continuity and transition of care is recognized as a core component of equitable virtual care.

   c. The competency of providers to deliver equitable virtual care will be enabled by coherently designed platforms that promote ease of use, and limit provider burnout.

4. Supporting infrastructure and virtual care ***technology*** will foster digital health equity

   a. All Canadians, including patients and providers, will have access to a safe space, affordable high-speed internet, and virtual care technologies required to eliminate the digital divide;

b. Virtual care technology platforms will be interoperable or functionally integrated to allow for patient information to flow effectively to all Canadians, according to set standards of patient safety, privacy and security;

c. Virtual care technology procurement should follow set pan-Canadian standards that uphold digital health equity;

d. Digital health equity, as a subset of digital quality of care should help drive technology requirements.

5. The collection and sharing of data to ***monitor and evaluate*** virtual care for indices of digital health equity will support transparency, accountability and continuous quality improvement***.***

a. Data collection and data sharing should be according to set principles of patient and community control, and in alignment with their diverse needs, including First Nations data governance principles of Ownership, Control, Access, and Possession (OCAP).

b. Data collection should acknowledge and promote the importance of multi-source data, including that arising from outside the domain of traditional health care, to capture an accurate picture of the diverse Canadian health care mosaic.

SECTION 4: PRAGMATIC RECOMMENDATIONS

The final deliverable of the Virtual Care Equity Task Team was to draft concrete recommendations to deliver upon the Principle-based vision for pan-Canadian virtual care. The recommendations were the by-products of the findings outlined in sections 1, 2 and 3 of this report, an internal survey of committee members, and a high-level literature review. Recommendations are arranged according to the five Design Principle domains.

Principle 1: There is a shared and agreed upon *pan-Canadian vision* for digital health equity.

Recommendation 1

- Federal, provincial and territorial governments work collaboratively with representative stakeholders, including patients, and Indigenous groups to:

    1. Establish a pan-Canadian Digital Health Equity Working Group that:

        a. Establishes a model for pan-Canadian Digital Health Equity oversight and accountability.

        b. Establishes a national Digital Health Equity Accord.

        c. Sets a common and agreed-upon pan-Canadian definition of digital health equity.

        d. Establishes a pragmatic framework for the pan-Canadian alignment of health care legislation, regulations, standards, and policy to support vision for Canadian digital health equity.

        e. Conducts a business case for a fully equitable virtual care system in Canada.

        f. Reports to the Federal, Provincial and Territorial Virtual Care/Digital Table.

Principle 2: All residents of Canada, irrespective of age, race, ethnicity, gender, sexual orientation, location, income, housing, education, disability, faith, health status, citizenship, culture, stigmatizing conditions, and other socio-demographic characteristics will benefit from *patient and caregiver-centered* virtual care design.

Recommendation 2

2. The above proposed pan-Canadian Digital Health Equity Working Group will:

    a. Include meaningful representation from individuals from traditionally underserved groups.

b. Enshrine the obligation to design virtual care to benefit all residents of Canada including those traditionally underserved.

c. Work with provincial and territorial governments, industry partners, patients, providers, and other stakeholders to:

  I. Promote patient virtual care literacy through the creation of training and knowledge resources.

  II. Promote standards of virtual care design that enshrine:

   i. Patient ownership and timely access to their health information;

   ii. Patient-centric health information integration;

   iii. Team-based virtual care.

Principle 3: Health care providers will be *competent* to deliver equitable virtual care.

Recommendation 3

3. The above proposed pan-Canadian Digital Health Equity Working Group will:

  a. Develop model core competencies for equitable virtual care to be promoted to all health professional educational faculties and certifying bodies, and a resource guide that can inform curriculum development for undergraduate, postgraduate and continuing professional development.

  b. Leverage best practices in digital age education from other countries.

  c. Partner with professional colleges and education groups to promote virtual care literacy curricula and programing for providers.

  d. Develop a framework for inter-professional teamwork to support equitable pan-Canadian virtual care.

  e. Work with accreditation bodies, sector specific associations and organizations to promote staff competency in virtual care equity.

Principle 4: Supporting infrastructure and virtual care *technology* that fosters digital health equity.

Recommendation 4

4. The above proposed pan-Canadian Digital Health Equity Working Group will:

    a. Leverage and work with Innovation, Science and Economic Development Canada to ensure that Canadians, including those that live in rural and remote populations, will have access to reliable high-speed internet by 2030.

    b. Work with appropriate partners, to conduct a review and set recommendations for equitable and *affordable access to* high-speed internet for all people living in Canada.

    c. Collaborate with appropriate partners across various sectors to foster technology interfaces that promote accessible design for those with unique needs (including but not limited to language barriers, and disabilities).

    d. Collaborate with appropriate partners across various sectors to establish a plan to promote universal access to virtual care for those with insufficient access to the technology, broadband, digital literacy skills, or other factors, including but not limited to the potential use of public-facing virtual care kiosks.

    e. Identify and promote procurement standards that support equity in virtual care service.

    f. Promote the pan-Canadian integration of technology to support equitable care.

Principle 5: The collection and sharing of data to *monitor and evaluate* virtual care for indices of digital health equity will support transparency, accountability and continuous quality improvement

Recommendation 5

5. The above proposed pan-Canadian Digital Health Equity Working Group will:

    a. Collaborate with pan-Canadian health organizations and other organizations such as the Centre for Digital Health Evaluation to collect comparable data to measure and evaluate the equity of virtual care using core indicators according to set principles of patient and community control, including Indigenous data governance principles (ownership, control, access, and possession).

    b. Partner with the Canadian Institute for Health Information (CIHI) in collaboration with the provinces and territories to report regularly on equity in virtual care.

    c. Partner with Statistics Canada to collect statistics on digital health equity and virtual care, through its Canadian Community Health Survey.

d. Identify and seek to address data gaps in virtual care equity for certain populations including but not limited to Indigenous people.

e. Seek to identify legislative and policy barriers that impair the sharing of data around virtual care equity.

f. Promote the use of standardized metrics and benchmarks for collecting equity based virtual care stratifiers across Canada.

CONCLUSION

The unprecedented interest in virtual care catalysed by the advent of the COVID-19 pandemic has prompted a focus on health equity that is long overdue. Digital health technology is not a panacea; it has the capacity to amplify or reduce pre-existing inequities in health service, depending on how it is deployed and supported. To assure that digital health technology optimizes equity of health services, clear parameters of quality-based design must be established based on evidence and best practice.

> "[Digital Health Equity is] essential for our success and the sustainability of digital health overall."
>
> *-- Dr. Jorge Rodriguez (Health Technology Equity Researcher and Hospitalist at Brigham and Women's Hospital Department of General Internal Medicine.)*

Explicit in the commitment to provide equitable health services is an obligation to assure an absence of avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically. In the Canadian context, this means that irrespective of one's location within the federation, language, or cultural tradition, one can benefit from access to equitable levels of health services.

It is very challenging to promote equity of virtual care service if the policy and technology parameters that support equity are not defined, endorsed and broadly applied in practice. Unfortunately, this is the current practice in Canada, where – however well intentioned– a fragmented approach to virtual care design has been the norm, promoting broad variation in system architecture, capacity and service provision, and potentially amplifying health inequities. There is a high likelihood that the virtual care service available to an individual living in one location in Canada will differ substantially from that in another location as the service design is not based on any evidence-based standards of quality of care, including equity.

The Equity Task Team has set out to define high-level principles for virtual care equity that can serve as a benchmark of excellence for virtual care system design. The design principles form an aspirational policy suite that informs equity-based design , and can serve as common ground; a point of reference around which constituent members of the federation can meet to frame and align their approaches to digital health equity. Alignment of virtual care policy around a common goal will promote a unifying approach to service design and deployment, economies of scale, and equity and transportability of virtual care services.

To this end, the central recommendation of this report is the creation of a *pan-Canadian Digital Health Equity Working Group* that leads and coordinates the implementation of recommendations under five thematic areas: a pan-Canadian vision for digital health equity, patient and caregiver-centered virtual care design, digital health literacy for providers, infrastructure and virtual care technology, and data collection for continuous improvement. Without a broad health service commitment to defined and consensual principles of equitable care, health equity will remain a theoretical artifact rather than a practical reality.

ANNEX A: List of Expert Presentations

Update from Canadian Institute for Health Information, Canada Health Infoway, and the Institute for Health System Solutions and Virtual Care at Women's College Hospital on their work relating to equity:

- **Shivani Chandra,** Policy Research Coordinator III, The Women's College Hospital Institute for Health System Solutions and Virtual Care (WIHV) & Co-Chair of WIHV's Equity Committee**; Dr. James Shaw,** Scientist, Women's College Research Institute, Women's College Hospital Institute for Health System Solutions and Virtual Care; **Dr. Sacha Bhatia,** Population Health and Value Based Care Executive, Ontario Health (former Director of the Institute for Health System Solutions and Virtual Care (WIHV) at Women's College Hospital)

- **Sara Allin,** Senior Researcher, Population Health, Canadian Institute for Health Information

- **Waldo Beauséjour,** Analyst, Performance Analytics, Canada Health Infoway

Presentation on Virtual Care in Medical School Curriculum:

- **Dr. Anna Karwowska,** Vice-President, Education, Association of Faculties of Medicine of Canada

Presentation on Culturally-Safe Virtual Care:

- **Dr. Alika Lafontaine,** Indigenous physician, president-elect of the Canadian Medical Association

Presentation on Digital Health Equity from a Rural Lens:

- **Kirsten Mattison,** Director General, Centre for Rural Economic Development, Infrastructure Canada

- **Allison Wildgust,** Manager of Collaboration, Centre for Rural Economic Development, Infrastructure Canada